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Financial Constraints Influence How Consumers Evaluate Approach- versus Avoidance-Framed Messages

Abstract

Many people experience financial constraints in their lives that affect their well-being and behaviors. This raises the question of whether individuals' financial constraints will affect their responses to positive approach-framed (vs. negative avoidance-framed) messages in ads. We examined the effects of consumers' financial constraints on their responses to ads that had positive approach-framed (vs. negative avoidance-framed) messages. We hypothesized that consumers with financial constraints would have more positive responses to an ad that had a positive approach-framed (vs. a negative avoidance-framed) message and that the depth of information processing would mediate their responses to an ad that had a positive approach-framed message. Across six studies, including field and online experiments, these findings supported the predictions. The findings advance the literature on both message framing in ads and financial constraints, and they generate actionable guidelines for marketing practice and public policy.

Conventional wisdom in advertising is that advertisers should predominately use appeals that are framed positively. For example, Coke makes you happy, Nike advises to “just do it”, and the California Milk Processor Board wants you to have milk (and a milk mustache). Positive emotional appeals tend to work best on those who feel emotions more intensely (Moore and Harris 1996). Specifically, to ensure that advertising appeals remain positive in the minds of the audience, advertisers opt for intensive, dramatic, and shocking emotional ads (Moore 1989), for instance, with high sensual appeals that positively affect the emotions of the audience.

Such examples all align with an approach orientation of positively framed appeals in advertising, but an avoidance orientation with negatively framed appeals is also possible. For example, Wisk laundry detergent warned about the embarrassment of dreaded rings around the collar, while Listerine mouthwash admonished the social evil of halitosis. Advertisers often employ negative emotional advertising in social marketing campaigns to warn against alcohol and drug abuse, the use of child labor in manufacturing, or to encourage healthy eating habits to prevent dangerous diseases such as cancer or heart failure (Gallagher and Updegraff 2012; Rothman et al. 2006).

Presumably, these negatively framed ads are more irritating, but this has apparently not stopped them from being successful, as with the many negatively framed ads used in political campaigns (Pinkleton 1997; Pinkleton, Um and Austin 2002). Specifically, research that examines the effect of using negative appeals in advertising on individual information processing, individual affective responses, and behaviors such as the audience’s perception of political candidates, suggests that negative information is weighted more heavily than positive information (Hamilton and Huffman 1971; Hamilton and Zanna 1972; Pinkleton 1997; Pinkleton et al. 2002). However, today such appeals are viewed as decidedly uncreative, with research showing that voters find negatively framed ads in political

campaigns unfair, disgusting, useless, unethical, deceptive, and uninformative (Merritt 1984; Pinkleton et al. 2002).

Our objective in this paper is to show that evoking different approach/avoidance orientations using positively and negatively framed appeals is often more complex than expected. We focus on one context where consumers experience financial constraints. Our rationale in using this context is that advertising is essentially a call to spend money, and thus, those under more financial constraints should respond to advertising differently than those who have few constraints. Positive, upbeat messages can be seen as manipulating those in the direst of financial situations to buy things they don't need. Although we feel that such a result is entirely unintentional on the part of advertisers, it goes some distance in explaining why consumers dislike advertising so much. They might want to exercise control over their spending when viewing ads, but they may eventually get worn down and give in to spending.

We also chose this area to study because most consumers occasionally feel economic deprivation, and some consumers feel those constraints far more than others. Indeed, in 2017 the Money Advice Service announced that over 8.3 million adults in the United Kingdom were experiencing financial difficulties or had debt problems. The situation does not look brighter in the United States. According to a recent survey from the Federal Reserve Bank of New York, the majority of US households predict that their financial situation will be worse in a year (De Lea 2019). While financial constraints are prevalent in everyday life, there is limited empirical research that examines how financial constraints influence consumers' attitudes toward different marketing communications. That is the focus of this research. Specifically, what scholars need is a better understanding of how positive approach-framed or negative avoidance-framed appeals in ads work for those individuals who experience financial constraints.

Hypotheses

Financial Constraints

Even individuals who may be typically considered middle-class by their incomes experience financial constraints at some point in their lives (Schor 1998). Not surprisingly, studies in economics, psychology, and consumer behavior have extensively investigated the antecedents and consequences of being financially constrained (Mullainathan and Shafir 2013; Sharma and Alter 2012; Tully, Hershfield and Meyvis 2015).

Individuals' financial constraints influence their well-being (Diener et al. 1999) and preferences for products. They motivate consumers to attend to and prefer goods over experiences (Tully et al. 2015), necessities over discretionary products (Cole, Thompson and Tufano 2008; Durante and Laran 2016), and scarce goods over abundant goods (Sharma and Alter 2012). Financial constraints have a negative effect on cognitive functioning (Mani et al. 2013), resulting in attentional neglect (Shah, Mullainathan and Shafir 2012). To solve the problem of being financially constrained, enhance their financial state, and mitigate the effects, individuals focus on their restrictions and adopt a constrained mindset (Mullainathan and Shafir 2013).

Overall, the established evidence suggests that financial constraints can be distracting, resulting in worse self-control and a lack of the cognitive resources needed to carefully process information—something individuals would need when they receive attempts at persuasion from marketers.

Message Framing in Advertising

Existing research suggests that the attributes of ads influence their effectiveness (Feber, Tims, and Schmitt 1993). In this research, we focus on one attribute of ads, namely,

the framing of the message in the ad, which has been researched extensively in the persuasive communication literature (see Table 1; Levin, Schneider and Gaeth 1998; Loro 2007).

Message framing refers to a negative or positive manner in which the information in the ad is presented to the consumer (Lee, Liu and Cheng 2018; Levin and Gaeth 1988). It involves the strategies of the marketers to focus on the benefits of adopting a behavior, or the losses from failing to adopt a behavior (Maheswaran and Meyers-Levy 1990; Rothman and Salovey 1997). In general, a positive frame includes what the consumer will gain or avoid losing by engaging in a certain consumption activity, and a negative frame includes a forgone gain by the consumer or a lost experience by not engaging in a certain consumption activity (Maheswaran and Meyers-Levy 1990; Obermiller 1995; Yi and Baumgartner 2008).

Research has largely investigated the effects of positive and negative framing in different domains, including political campaigns and social marketing. In social marketing, to encourage certain behaviors such as exercising (Jones, Sinclair and Courneya 2003; Robberson and Rogers 1988), stopping smoking (Kim 2006), and using sunscreen (Detweiler et al. 1999), the effects of different message framing show that, in general, positive messages are more effective in assisting individuals to maintain their health, and negative messages are more effective when used to target detection behaviors that investigate the presence of an illness (Gallagher and Updegraff 2012; Rothman et al. 2006).

In the context of political campaigns, negative framing in ads is widely used, offering mixed findings. Negative ads can create negative opinions of the target candidate (Boydston and Kaid 1983; Garramone 1985; Merritt 1984). Yet research shows that voters dislike negative ads and consider them uninformative, unethical, and deceptive (Garramone 1985; Johnson-Cartee and Copeland 1989; Merritt 1984; Pinkleton and Garramone 1992; Surlin and Gordon 1977). There can also be some backlash effects against the sponsoring candidate who

uses negative information counter to what people are accustomed to or expect from advertising messages (Faber et al. 1993).

Whether an ad uses a positively or negatively framed message, there is consensus in the literature that the effect of framing depends on the topic and situational characteristics, such as the involvement of the consumer (Krishnamurthy et al. 2001; Levin and Gaeth 1988; Rothman et al. 1993). Our hypotheses in this paper are informed by this research on framing, however with a particular emphasis on how financial constraints affect the processing of positive approach-framed and negative avoidance-framed messages in advertising and how being exposed to these positive approach-framed and negative avoidance-framed messages in advertising influences the behaviors (e.g., ad attitudes, ad choice, product preference, purchase intentions, willingness to donate, saving intentions) of consumers with financial constraints.

Hypotheses

There is evidence that individuals with financial constraints have depleted cognitive resources (Mani et al. 2013). How do people process information when their cognitive resources are low? The limited capacity model of motivated mediated message processing (LC4MP; Lang 2000, 2006) helps us to answer this question.

A key hypothesis in information processing theory is that systematic, deep information processing entails careful attention, deep thinking, and intensive reasoning about information; whereas, heuristic-driven and shallow information processing entails a focus on simple and salient cues (Chaiken and Ledgerwood 2012; Craik and Lockhart 1972). In other words, a deep level of processing is effortful and deliberate, which involves careful consideration of pieces of information by consumers before making their choices. In deep processing, information is processed in terms of its meaning, which may be analyzed in terms

of other associations, images, or past experiences that are related to the information being processed and require effort and deliberation.

According to LC4MP, people have only a limited number of cognitive resources to spend on the tasks of perceiving, encoding, understanding, and remembering the world they live in (Lang 2000, 2006). With depleted cognitive resources, individuals' ability and motivation to process information is low, resulting in shallow information processing. People automatically encode the stimulus that is motivationally relevant for them when their cognitive resources are depleted (Lang 2006; Lang et al. 2007).

Individuals have two basic motivational principles: approach pleasure and avoid pain (Higgins 1997, 1998). Consistently, individuals have two underlying motivational systems, the approach and the avoidance system, which activate automatically in response to stimuli that is motivationally relevant in the environment (Cacioppo & Gardner 1999; Lang 2006; Lang et al. 2007). According to LC4MP, an increase in positive stimuli leads to an increase in approach motivation and an increase in negative stimuli leads to an increase in avoidance motivation (Lang 2006).

How does LC4MP apply to individuals with financial constraints when they are exposed to positive approach-framed (vs. negative avoidance-framed) messages in an advertisement? With depleted cognitive resources, we suggest that the ability and motivation to process information will be low for individuals with financial constraints, meaning that their depth of information processing will be shallow. Consistent with LC4MP, these people with financial constraints will automatically encode stimuli that is motivationally relevant for them. Research in financial constraints suggests that reminders of financial scarcity activates an approach motivation (Fan, Li and Jiang 2019) and research in communications show that positive stimuli are related to an approach motivation, whereas negative stimuli are related to an avoidance motivation (Lang 2006). Consistent with this reasoning, we propose H₁ and H₂:

H₁: Consumers with financial constraints will have more positive responses to an ad with a positive approach-framed (vs. a negative avoidance-framed) message.

H₂: Depth of information processing will mediate their responses to an ad with a positive approach-framed (vs. a negative avoidance-framed) message.

Empirical Testing

We tested the hypotheses using six studies. Across the different studies, we report all variables collected and all conditions included in the study designs. The number of participants was decided before data collection. No participants who completed our studies were excluded from the analyses unless otherwise noted for reasons identified prior to conducting the research (and the number of excluded participants is reported in each study). No participants were added after the initial analyses were conducted. There were no significant gender or age differences across conditions in all six studies. Unless otherwise reported, none of these demographic variables interacted to have a significant influence on the predicted effects. All participants provided their informed consent before participating in the study.

Study 1

In Study 1, we tested the prediction that consumers with financial constraints would have more positive responses to an ad with a positive approach-framed (vs. a negative avoidance-framed) message (H₁). In this study, we tested the responses of consumers with financial constraints for an ad with a positive approach-framed (vs. a negative avoidance-framed) message by measuring ad choice.

Participants and Procedure

Two hundred and eleven adults (106 male; 69.7% aged between 26 and 54) participated in the experiment on MTurk in exchange for monetary compensation.

Participants were first randomly assigned to either the financial constraints condition or to the no financial constraints condition. Following past research (Tully et al. 2015), participants in the financial constraints condition considered factors that contribute to their financial constraints by reading the following prompt:

Everyone has financial constraints in their lives, but the factors that contribute to these constraints tend to vary. What are the factors that require you to be careful with how you spend your money? What limits your monthly discretionary income? Include the aspects of your current situation that most contribute to your financial constraints (e.g., mortgage or rent, family expenses, uncertainty of future income, health care costs, student loans, lack of income, limited savings, bills that need to be paid, expensiveness of entertainment...).

Participants were then asked to write a detailed response (minimum of 250 characters) to the prompt. To provide a similarly demanding task for participants in the no financial constraints condition, we asked them to list ten facts that they knew to be true (Vohs, Lasaleta and Chaplin 2015).

Next, participants were informed that they would be asked to indicate their preferences for advertisements that they would like the companies to use to promote products. All participants saw an ad of an airline company and an ad of a detergent brand. The order of the presentation was randomized. Both advertisements were taken from Shiv, Edell and Payne (1997).

For the airline category, participants read the following description for the positive approach-framed (vs. negative avoidance-framed) message:

We have been claiming all long that Cey is better than Yec (vs. Yec is worse than Cey) on on-time performance.
Flying Cey (vs. Yec) means fewer (vs. more) of those endless, frustrating waits for you and those expecting you at your destination. It also means being on-time (vs. late) for your appointments. And no more (vs. more) missed flights.

Participants then indicated their preference for the advertisement that compared the two airline companies, Cey and Yec.

For the detergent category, participants read the following description:

We have been claiming all long that Lin is better than Nil (vs. Nil is worse than Lin) in providing color-guard protection for your clothes. Using Lin (vs. Nil) means your clothes look new (vs. old) even after a few washes. With Lin (vs. Nil), your blacks will look black (vs. gray), your bold reds will remain vivid (vs. will be faded). Just think of the money you will save (vs. spend) by not having (vs. by having) to replace your favorite clothes.

Participants then indicated their preference for the advertisement that compared the two detergent brands.

As a manipulation check, we asked participants to indicate the extent to which they felt financially constrained (1 = “not at all,” and 7 = “very much”). Shiv, Edell, and Payne (2004) tested for the role of credibility, ease of comprehension, and informativeness of the stimuli used in this study and found no significant treatment effects, ruling out that the stimuli used was not confounded with the above variables. Participants then provided basic demographic information.

Results and Discussion

Manipulation check. Participants in the financial constraints condition indicated that they felt more financially constrained than did participants in the no financial constraints condition ($M_{FC} = 5.59$, $SD = 1.61$ vs. $M_{NOFC} = 4.63$, $SD = 1.78$; $t(209) = 4.01$, $p < .001$).

Ad choice for the airline company. We conducted our analyses using a Chi-square test of frequency distributions in SPSS. Our results indicated an overall effect of financial constraints (vs. no financial constraints) on ad choice for the airline company ($\chi^2(1, 209) = 8.59$, $p < .01$). As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely to prefer the airline company to use the ad with positive approach-framed message (85.2%) rather than the ad with negative avoidance-framed message (14.8%; $z = 43.682$, $p < .001$), see Figure 1a. In the control

condition, 67.5% and 32.5% ($z = 15.033, p < .001$) chose the ad with the positive approach-framed message versus the negative avoidance-framed message, respectively.

Ad choice for the detergent. Our results indicated an overall effect of financial constraints (vs. no financial constraints) on ad choice for the detergent ($\chi^2(1, 209) = 4.776, p < .01$). As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely to prefer the detergent company using the ad with positive approach-framed message (73.9%) rather than the ad with the negative avoidance-framed message (26.1%; $z = 20.045, p < .001$), see Figure 1b. In the control condition, 59.3% and 40.7% ($z = 4.301, p = .038$) chose the ad with the positive approach-framed message versus the negative avoidance-framed message, respectively.

INSERT FIGURE 1A ABOUT HERE

INSERT FIGURE 1B ABOUT HERE

Overall, the results of Study 1 support the prediction that consumers with financial constraints have more positive responses to ads with positive approach-framed (vs. negative avoidance-framed) messages.

Study 2

In Study 2, we examined H_1 in the behavioral realm. This study built on Study 1 in several ways. First, we tested our prediction in the field (i.e., supermarket), a natural consumption setting. Second, rather than asking participants to recall times when they felt financially constrained, we manipulated feelings of being financially constrained by asking participants about the amount of combined money in their checking and savings accounts and manipulating the choices of the amount of combined money. Third, we used product feature descriptions for five product categories (i.e., detergent, energy drink, shampoo, toothpaste, and yoghurt). In this study, we tested the responses of consumers with financial constraints

for an ad with a positive approach-framed (vs. a negative avoidance-framed) message by measuring preference for these five different products.

Participants and Procedure

Eighty-nine adults (53 female; $M_{\text{age}} = 31.38$, $SD = 10.60$) participated in the study voluntarily in a major supermarket in the center of a major European city. Two research assistants, who were blind to the hypotheses, collected data on two consecutive days.

Participants were first randomly assigned to either the financial constraints or the no financial constraints condition, manipulated as in previous research (Briers and Laporte 2013; Haisley, Mostafa, and Loewenstein 2008; Nelson and Morrison 2005). Participants indicated the combined amount of money in their checking and savings accounts on nine-point scales. Participants in the no financial constraints condition were given a 9-point scale divided in 50€ increments, from 1 (“€0–€50”) to 9 (“over €400”). Participants in the financial constraints condition were given a similar 9-point scale divided in much larger increments from 1 (“€0–€500”) to 9 (“over €400,000”). Previous research suggests that participants in the no financial constraints condition would answer with the highest possible responses and participants in the financial constraints condition would use the bottom of the scale (Nelson and Morrison 2005). When participants respond toward the top or bottom of a scale, they tend to make inferences about their personal financial situation such that people at the top feel more satisfied than people at the bottom (Schwarz 1999).

Next, we showed participants product descriptions of five product sets that included a detergent, energy drink, shampoo, toothpaste, and yoghurt. For each product set, we provided participants with descriptions of two fictitious brands and asked them to indicate their preferences (see Appendix 1). For each product category, one of the brands was framed with a positive approach-framed feature description, and the other one was framed with a negative avoidance-framed feature description. For example, for the detergent category, participants

evaluated messages of two fictitious brands, Cey and Yec. Cey had a positive approach-framed feature description (“Cey gets rid of stains from your clothes”) and Yec had a negative avoidance-framed feature description (“Without Yec, there will be stains in your clothes”). Then, on a five-point scale, participants evaluated their preference for Cey versus Yec (1 = “more likely to buy Yec,” and 5 = “more likely to buy Cey”). Higher scores indicated preferences for a product that has a positive approach-framed product feature description. In five separate studies, we tested for the differences between credibility, ease of comprehension, and informativeness between the positive approach-framed and negative avoidance-framed messages used for these five product categories and found no differences.

As a manipulation check, participants reported how satisfied they were with their finances on a 100-point scale (Briers and Laporte 2013). Previous research suggests that participants responding to the €400 scale would feel more satisfied than participants completing the €400,000 scale (Schwarz 1999). Participants then provided basic demographic information.

Results and Discussion

Manipulation check. Participants who reported their amount of money on the €400 scale were more financially satisfied than were participants who reported their amount of money on the €400,000 scale ($M_{FC} = 38.37, SD = 31.61$ vs. $M_{NOFC} = 56.91, SD = 27.40$; $t(87) = -2.95, p < .01$).

Preference for the detergent. As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely to prefer the detergent that had a positive approach-framed product feature description, $M_{FC} = 3.72, SD = 0.88$ vs. $M_{NOFC} = 3.22, SD = 1.19, t(87) = -2.25, p = .027$.

Preference for the energy drink. As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely to prefer the

energy drink that had a positive approach-framed product feature description, $M_{FC} = 3.70$, $SD = 0.80$ vs. $M_{NOFC} = 3.22$, $SD = 1.19$, $t(87) = -2.22$, $p = .029$.

Preference for the shampoo. As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely, although statistically marginally, to prefer the shampoo that had a positive approach-framed product feature description, $M_{FC} = 3.65$, $SD = 0.84$ vs. $M_{NOFC} = 3.24$, $SD = 1.20$, $t(87) = -1.87$, $p = .065$.

Preference for the toothpaste. As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely to prefer the toothpaste that had a positive approach-framed product feature description, $M_{FC} = 3.84$, $SD = .69$ vs. $M_{NOFC} = 3.35$, $SD = 1.20$, $t(87) = -2.34$, $p = .021$.

Preference for the yoghurt. As predicted, participants in the financial constraints (vs. no financial constraints) condition indicated that they were more likely, although statistically marginally, to prefer the yoghurt that had a positive approach-framed product feature description, $M_{FC} = 3.63$, $SD = 0.85$ vs. $M_{NOFC} = 3.20$, $SD = 1.22$, $t(87) = -1.93$, $p = .057$.

The results of Study 2 further support the prediction that consumers with financial constraints have more positive responses to messages that are positive approach-framed (vs. negative avoidance-framed) (H_1).

Study 3

In Study 3, we used a real ad along with a fictitious ad to test H_1 . In this study, we tested the responses of consumers with financial constraints for an ad with a positive approach-framed (vs. a negative avoidance-framed) message by measuring ad attitudes and product purchase intentions.

Participants and Procedure

One hundred and eighty-three adults (130 female, $M_{\text{age}} = 35.05$, $SD = 12.00$) participated in the experiment on Prolific in exchange for monetary compensation.

Participants were first assigned to the financial constraints condition, as in Study 1. Next, participants were randomly assigned to either the positive approach-framed or the negative avoidance-framed message condition and informed that they would be asked to indicate their attitude toward the ad. All participants saw a page from New York Times magazine, including one article and two ads from Lin (i.e., the fake brand) and Nivea (i.e., the real brand) (see Appendix 2). Participants in the positive approach-framed message condition saw an ad of Lin surface cleaner spray with the approach-framed headline “Get the most cleanness! Go for it!” and an ad for Nivea deodorant, with the approach-framed headline “Be bold! Go sleeveless!” next to the article on New York Times page. Participants in the avoidance-framed message condition saw an ad of Lin surface cleaner spray with the avoidance-framed headline “Block the most dirt! Stop it!” and the Nivea deodorant ad with the avoidance-framed headline “Stop Shyness! Avoid Sleeves!” next to the article on New York Times page. The headline of the ad with an approach-frame message (i.e., “Be bold! Go sleeveless!”) was the one that was used in the real advertisement of Nivea in 2012. In a separate study with 200 participants, we tested whether there were any differences of credibility, ease of comprehension, and informativeness between the positive approach-framed (vs. negative avoidance-framed) messages and found no difference.

Participants then indicated the extent to which they think each ad was bad/good; unpleasant/pleasant; unfavorable/favorable; negative/positive on 7-point scales. We averaged the scores for each ad and used the average as the measure of ad attitude ($\alpha = .932$; Okazaki, Mueller and Taylor 2010). Participants also indicated the extent to which they would like to try the product; imagine themselves buying the product; and imagine the product being one of their most likely choices when they make a purchase on 5-point scales (1 = definitely not

and 5 = definitely yes). We averaged the scores on these three items and used the average as the measure of product purchase intentions ($\alpha = .909$; Okazaki et al. 2010). Participants then provided basic demographic information (i.e., age, gender, income level, and education).

Results and Discussion

Ad attitude. Supporting H_1 , the results of an independent samples t-test suggested that when participants saw the ads with positive approach-framed headlines (vs. negative avoidance-framed headlines), their attitudes toward the ads were more positive ($M_{\text{APPROACH}} = 4.264$, $SD = 1.407$ versus $M_{\text{AVOIDANCE}} = 3.857$, $SD = 1.178$; $t(181) = -2.118$, $p = .036$).

Product purchase intentions. Supporting H_1 , the results of an independent samples t-test suggested that when participants saw the ads with positive approach-framed headlines (vs. negative avoidance-framed headlines), their product purchase intentions were higher ($M_{\text{APPROACH}} = 2.703$, $SD = 0.927$ versus $M_{\text{AVOIDANCE}} = 2.443$, $SD = 0.828$; $t(181) = -1.998$, $p = .047$).

Overall the results of Study 3 support H_1 , which predicted that consumers with financial constraints would respond more favorably (in ad attitude and product purchase intention) to an ad that had a positive approach framed (vs. negative avoidance-framed) message.

Study 4

In Study 4, we tested H_1 using a real marketing campaign. All participants saw two different ads from the marketing campaign of the same cleaning brand, Cif Italia (see Appendix 3). Cifa Bella Italia campaign is an online social media campaign of Cif Italia to promote the cleanliness of the cities in Italy. We acquired the online ads from the Ad Library of Facebook (<https://www.facebook.com/ads/library>). The Ad Library includes all the ads

running on Facebook and it contains data on every active and inactive ad about elections, politics, or social issues.

In this study, we tested the responses of consumers with financial constraints for an ad with a positive approach-framed (vs. a negative avoidance-framed) message by measuring preference for the ad and willingness to donate.

Participants and Procedure

One hundred and one adults (42 female; $M_{age} = 30.55$, $SD = 9.84$) participated in the study on Prolific in exchange for monetary compensation. In this study, we only recruited participants who were fluent in Italian as we asked them to evaluate an active social ad campaign by Cif Italia.

Participants were instructed that they would see ads from the same marketing campaign and answer questions related to the ads and the campaign. The first ad had two images that were separated clearly from each other as option A and option B. In option A, participants read: “vivere nel pulito,” meaning “to live in the clean” with a tick next to it (i.e., approach frame). In option B, participants read: “farla sporca,” meaning “to make it dirty” without a tick next to it (i.e., avoidance frame). In the other ad, participants again saw two images that were separated clearly from each other as option A and option B. In option A, participants read: “una città da vivere” meaning “a city to live” with a tick next to it (i.e., approach frame). In option B, participants read: “sopravvivere in città” meaning “to survive in the city” without a tick next to it (i.e., avoidance frame).

Participants were then asked to indicate how much they would be willing to donate to the campaign, from 0 to 100 euros ($M_{AD1} = 14.61$, $SD = 23.90$ and $M_{AD2} = 15.38$, $SD = 23.05$). Participants also indicated the extent to which they felt financially constrained (1 = not at all and 7 = to a great extent) and provided basic demographic information (i.e., age, gender, income level, and education).

Results and Discussion

Preference for the ad. The results of a binary regression failed to support our prediction that a greater extent of perceived financial constraints would lead to a greater likelihood of choosing a positive approach-framed message (vs. negative avoidance-framed message) for each of the ads ($p > .1$).

Willingness to donate. We tested participants' willingness to donate for the campaign using Model 1 in the PROCESS macro on SPSS with the Johnson-Newman technique. Results showed that there was an overall two-way interaction between perceptions of being financially constrained and message framing on the amount of willingness to donate ($b = 2.87, p = .027$). As expected, participants who indicated that they feel financially constrained to a greater extent were willing to donate less amount of money to the campaign ($b = -6.64, p < .001$). However, supporting H_1 , the negative relationship between perceptions of financial constraints and willingness to donate was attenuated when participants chose the ad with the positive approach-framed message ($b = -3.77, p = .013$) versus the one with the negative avoidance-framed message ($b = -9.52, p < .001$).

The results were also replicated with the second ad. Results showed that there was an overall marginal two-way interaction between perceptions of being financially constrained and message framing on the amount of willingness to donate ($b = 2.47, p = .084$). As expected, participants who indicated that they felt financially constrained to a greater extent were willing to donate a smaller amount of money to the campaign ($b = -6.64, p < .001$). However, supporting H_1 , the negative relationship between perceptions of financial constraints and a willingness to donate was attenuated when participants chose the ad with the positive approach-frame ($b = -4.17, p = .009$) message versus the one with the negative avoidance-frame message ($b = -9.11, p < .001$). VIF diagnostics showed no multicollinearity issues (VIFs < 1.02).

Study 5

In Study 5, we tested H_1 in an experimental context (H_1). In this study, we also tested whether the findings of our research could be used to help financially constrained consumers make better financial decisions (e.g., saving more). In this study, we tested the responses of consumers with financial constraints for an ad with a positive approach-framed (vs. a negative avoidance-framed) message by measuring ad attitudes and saving intentions. We further tested H_2 .

Participants and Procedure

One hundred and ninety-six adults (96 female; $M_{age} = 31.33$, $SD = 10.87$) participated in the experiment on Prolific in exchange for monetary compensation. Six participants failed to provide sensible answers (e.g., wrote nothing in the open-ended text question) and were excluded from the analyses. All analyses were conducted with the remaining one hundred and ninety participants (96 female; $M_{age} = 29.52$, $SD = 9.77$).

Participants were all initially assigned to the financial constraints condition, as in Study 1. Next, we asked participants to indicate the extent to which they felt financially constrained (1 = “not at all,” and 7 = “very much”). Participants were then randomly assigned to either the positive approach-framed or the negative avoidance-framed message condition. The stimuli were adapted from previous research on advertising framing (Yoon and La Ferle 2018). Participants in the positive approach-framed condition were presented an image of a smiling piggy bank listing the positive benefits of saving. Participants in the negative avoidance-framed condition were presented an image of a frowning and broken piggy bank listing the negative consequences of not saving (see Appendix 4). In a separate study with 100 participants, we tested whether there was any difference in terms of credibility, ease of comprehension, and informativeness between the positive, approach-framed and negative,

avoidance-framed messages used in this study and found no significant differences.

Participants then answered the ad attitude measures as in study 3 ($\alpha = .916$; Okazaki, Mueller, and Taylor 2010). Moreover, participants were asked to express what percentage of their monthly income they would be willing to put aside as savings in that particular moment ($M_{amount} = 29.52$, $SD = 9.77$).

Following research that suggests an association between memory of the stimulus and levels of information processing (Craik and Lockhart 1972), we controlled for the role of memory in this study. Participants first indicated how much they remembered the two ads (i.e., ad recall) together on a single 7-point scale (1=Far too little; 7=Far too much). To measure depth of processing, we used the procedure suggested by Yoon and La Ferle (2018), where participants indicated the extent to which they agreed with the following three statements on 7-point scales (1 = strongly disagree and 7 = strongly agree): “I was interested in what the ad had to say,” “I paid close attention to the ad’s arguments,” and “I didn’t let myself get distracted from focusing on the message content.” We averaged the three items to compose processing depth score ($\alpha = .69$) (Nabi, Moyer-Gusse and Byrne 2007; Yoon and La Ferle 2018). Since the inter-score reliability value was low (less than .7), we conducted a factor analysis. Factor analysis results using the principal components method of estimation and a varimax rotation and dropping item loading less than .50 (e.g., Malthouse, Calder and Tamhane 2007; Ohanian 1990; Zaichkowsky 1994) showed that three items loaded on two different factors. We labeled the first factor as *attention*, since it was composed of the two items: “I paid close attention to the ad’s arguments” and “I didn’t let myself get distracted from focusing on the message content” ($\alpha = .76$). We labeled the second factor as *interest*, since it was composed of one item: “I was interested in what the ad had to say.” We used these two measures to test H₂.

Finally, participants provided basic demographic information (i.e., age, gender, income level, and education).

Results and Discussion

Ad attitude. Supporting H₁, an independent samples t-test on ad attitude revealed that when participants saw the ad with a positive approach-framed message (vs. negative avoidance-framed message), their attitudes towards the ad were more positive ($M_{\text{APPROACH}} = 4.82, SD = 1.38$ versus $M_{\text{AVOIDANCE}} = 3.77, SD = 1.46; t(188) = 5.08, p < .001$).

Saving intentions. Supporting H₁, an independent samples t-test on saving intentions revealed that when participants saw the ad with positive approach-framed message (vs. negative avoidance-framed message), they were more willing to save a greater percentage of their monthly income in that particular moment ($M_{\text{APPROACH}} = 27.90, SD = 23.75$ versus $M_{\text{AVOIDANCE}} = 22.23, SD = 15.84; t(188) = 1.94, p = .058$).

Mediation by depth of processing. Results showed that participants who reported feeling more financially constrained also showed shallower processing when measured with factor 2 (i.e., *interest*) ($b = -.18, p = .043$), but not with factor 1 (i.e., *attention*, $p = .711$). Hence, in the next step, we tested for mediation by depth of processing using *interest* as proxy for depth of processing.

We first regressed saving intentions on depth of processing, including message frame as the predicted moderator, controlling for ad recall, using the PROCESS Model 14 of the Hayes macro (Hayes 2013). We used a bootstrap analysis with 10,000 samples and a confidence level of .05. As expected, the more participants felt financially constrained, the less they were willing to save ($b = -3.54, p = .002$). Results suggested that financial constraints reduced the depth of processing ($b = -0.18, p = .025$). Hence, the more one feels financially constrained, the shallower the processing will be. The shallower the processing, the less one is willing to save ($b = -2.16, p = .029$).

However, this was affected by message framing of the ad. While shallower information processing decreased intentions to save, when the message of the ad was framed in a positive approach way then this negative relationship was attenuated ($b = -4.37, p = .023$). Given that the interaction term was negative, it meant that the effect of the shallow processing on savings decreased as message framing came into action.

Overall, the results of the moderated mediation analyses confirmed a significant (95% CI: -0.18 to -0.01) indirect moderated mediation effect, thus supporting our prediction that the more favorable response of consumers with financial constraints to positive approach-framed messages would be mediated by their depth of information processing (H_2 ; please refer to Table 3). VIF diagnostics showed no multicollinearity issues (VIFs < 1.14).

We also repeated the analyses with ad attitude as the main dependent variable. However, we failed to replicate the moderated mediation effect with this dependent variable (95% CI: -0.22 to 0.23).

The results of Study 5 showed that positive approach-framed (vs. negative avoidance-framed) messages can be used to help financially constrained consumers make better financial decisions (e.g., saving more). The results also showed that the more favorable responses of consumers with financial constraints to positive approach-framed messages are mediated by their depth of information processing (H_2).

Study 6

In Study 6, we tested H_1 and H_2 in an experimental context using a real ad, just as in Study 3. In this study, we tested the responses of consumers with financial constraints for an ad with a positive approach-framed (vs. a negative avoidance-framed) message by measuring ad attitudes and product purchase intentions.

Participants and Procedure

Three hundred and eighty-seven adults (211 female; $M_{age} = 31.33$, $SD = 10.87$) participated in the experiment on Prolific in exchange for monetary compensation.

Participants were first assigned to either the financial constraints condition or the no financial constraints condition, as in Study 1. Next, participants were randomly assigned to either the positive approach-framed or the negative avoidance-framed message condition and informed that they would be asked to indicate their attitude toward the ad. All participants saw a page from the New York Times magazine, including one article and two ads from Lin (i.e., the fake brand) and Nivea (i.e., the real brand) as in Study 3 (see Appendix 3).

Participants then answered the ad attitude measures as in Study 3 ($\alpha = .87$; Okazaki et al. 2010). Participants also answered the product purchase intentions measures as in Study 3 ($\alpha = .89$ for the cleaning spray, $\alpha = .91$ for the Nivea deodorant, and $\alpha = .88$ for the two products together; Okazaki et al. 2010). We ran a mixed ANOVA analysis with the product category (Nivea deodorant, Lin surface cleaning spray) as the repeated measure, and financial constraints (vs. no financial constraints) and approach-framed (vs. avoidance-framed) messages as between-subject measures, and found no interaction effect on purchase intentions ($p = .767$). Hence, we aggregated the answers on product purchase intentions for the deodorant and surface cleaning spray into one variable and used it as a measure for product purchase intentions.

Participants then rated how well they recalled the ad, as in Study 5. Following that, they wrote down all the aesthetic elements (e.g., “blue font”, “two bottles”) and content elements (e.g., a “Be bold!” claim) that they remembered from each of the ads. Consistently with previous research that suggests the remembering of more aesthetic elements (compared to content ones) is an indicator of a shallower level of processing (Craik and Lockhart 1972), we composed a score for a shallow level of information processing (i.e., the inverse proxy of processing depth) by calculating the difference between the number of aesthetic elements and

the number of content elements ($M_{\text{SPRAY}} = 0.67$, $SD = 1.17$; $M_{\text{DEODORANT}} = 0.44$, $SD = 1.44$) that the participants wrote down. We again ran a mixed ANOVA analysis, with the product category (Nivea deodorant, Lin surface cleaning spray) as the repeated measure and financial constraints (vs. no financial constraints) and approach-framed (vs. avoidance-framed) messages as between-subject measures, and found no interaction effect on the depth of information processing ($p = .806$). Hence, we aggregated the answers on the depth of information processing for the deodorant and surface cleaning spray into one variable. Specifically, we summed together the depth of information processing for the two products, summing the number of elements that were coded as aesthetic (proxy for shallow processing), and subtracting from that number the sum of the elements that were coded as content (proxy for deep processing) elements. We used this measure as a measure of the depth of information processing, with higher values indicating shallower information processing ($M_{\text{BOTHADS}} = 1.11$, $SD = 1.98$).

One might argue that the results may be due to participants wanting to avoid the discomfort of feeling financially constrained (Briers et al. 2006). To test for this alternative explanation, participants indicated the extent to which they agreed on the following items while thinking about their financial constraints at the moment: “I can’t bear if they continue”; “I can’t get on with my life, or be happy, if things don’t change”; “I can’t bear to have certain thoughts”; the participants responded on three 7-point scales ($\alpha = .87$; Harrington 2005). We also measured participants’ positive ($\alpha = .91$) and negative ($\alpha = .89$) affect using PANAS (Watson, Clark and Tellegen 1988). Additionally, we measured participants’ socioeconomic status (Yoon and Kim 2017) by asking them to think of their relative socioeconomic status and to place themselves on an imaginary social ladder going from 0 (being the bottom of the relative socioeconomic status) to 100 (being the top of the relative socioeconomic status);

$M_{SES} = 52.49$, $SD = 16.81$). Participants also provided basic demographic information. (i.e., age, gender, income level, and education).

Results and Discussion

Ad attitude. An ANOVA on ad attitude did not reveal a two-way interaction between financial constraints (vs. no financial constraints) and approach-framed (vs. avoidance-framed) messages ($p = .127$). However, supporting H_1 , participants in the financial constraints condition had more positive attitudes toward the ad with a positive approach-framed message ($M_{APPROACH} = 4.09$, $SD = 1.13$ versus $M_{AVOIDANCE} = 3.79$, $SD = 1.11$; $F(1,383) = 3.27$, $p = .072$). Participants in the no financial constraints condition displayed no differences in their attitudes toward the ads with positive approach-framed (vs. negative avoidance-framed) messages, $F(1,383) = 0.14$, $p = .708$.

Product purchase intentions. An ANOVA on product purchase intentions did not reveal a two-way interaction between financial constraints (vs. no financial constraints) and approach-framed (vs. avoidance-framed) messages ($p = .217$). However, supporting H_1 , participants in the financial constraints condition had marginally more purchase intentions for the products when they saw an ad with a positive approach-framed message ($M_{APPROACH} = 2.69$, $SD = 0.80$ versus $M_{AVOIDANCE} = 2.44$, $SD = .84$; $F(1,383) = 3.31$, $p = .069$). Participants in the no financial constraints condition displayed no differences in their product purchase intentions when the ads for the products had positive approach-framed (vs. negative avoidance-framed) messages, $F(1,383) = 0.06$, $p = .812$.

Mediation by depth of processing – product purchase intentions. We first regressed the processing depth on the financial constraints (vs. no financial constraints) condition. The results showed that participants in the financial constraints condition processed information on a shallower level ($b = 0.43$, $p = .034$). We then regressed product purchase intentions on the depth of processing, including the message frame of the ad, as the predicted moderator

using the PROCESS Model 1 of the Hayes macro (Hayes 2013). The results showed a significant interaction effect of the message frame and depth of processing on product purchase intentions ($b = 0.09, p = .048$), suggesting that shallower processing increased product purchase intentions for positive approach-framed (vs. negative avoidance-framed) ads. Finally, Model 14 of the Hayes (2013) PROCESS macro was used to test the overall predicted moderated mediation model. We used a bootstrap analysis with 10,000 samples and a confidence level of .10. The results confirmed a positive (.04) and marginal (90% CI: .00 to .09) indirect moderated mediation effect supporting, albeit marginally, our prediction that the more favorable responses of consumers with financial constraints to positive approach-framed messages will be mediated by their depth of processing of the message (H_2). The results were robust upon inclusion of socioeconomic status, income level, education, positive and negative emotions, and emotional discomfort as covariates.

Mediation by depth of processing – ad attitudes. As previously mentioned, we regressed ad attitudes on the depth of processing, including the message frame of the ad, as the predicted moderator using the PROCESS Model 1 of the Hayes macro (Hayes 2013). While the interaction was not significant ($p = .120$), the Johnson-Neyman technique results suggested that shallower processing decreased positive ad attitudes for ads that had negative avoidance-framed messages ($b = -.09, p = .037$), but this negative effect did not persist for ads that had a positive approach-framed message ($p = .917$). We also repeated the moderated mediation analyses with ad attitude as the main dependent variable. While there was a negative effect of financial constraints on positive ad attitudes ($b = -.04$), mediated by shallow processing when the ad had a negative avoidance-framed message (90% CI: $-.09$ to $-.00$), this effect did not persist when the ad had a positive approach-framed message (90% CI: $-.03$ to $.04$; please refer to Table 3). The results were robust upon the inclusion of socioeconomic status, income level, education, positive and negative emotions, and

emotional discomfort as covariates. VIF diagnostics showed no multicollinearity issues (VIFs < 1.04).

Alternative explanations. A moderated mediation prediction was tested where emotional discomfort was the specified mediator, the financial constraint condition was the independent variable, message framing was the moderator, and product purchase intention was the dependent variable. Model 14 of the Hayes (2013) PROCESS macro was used. The results failed to confirm emotional discomfort as the mediating mechanism (90% CI: -.06 to .01), ruling out this alternative mechanism. The same effect persists when specifying ad attitudes as the dependent variable (90% CI: -.04 to .07).

The results of Study 6 supported our prediction that the more favorable responses of consumers with financial constraints to positive approach-framed messages would be mediated by their depth of processing of the message (H₂). For people who have financial constraints, ads with positive approach-framed messages have a more positive influence on both ad attitudes and product purchase intentions. We showed that processing depth was the significant mechanism that explained the relationship between financial constraints and message framing on both ad attitudes and product purchase intentions. Specifically, consistent with previous literature showing the relationship between shallow information processing and gain-framed ad effectiveness (Yoon and La Ferle 2018), the results of Study 6 showed that processing at the shallow level led to more positive ad attitudes and greater product purchase intentions for people who had financial constraints and who received positive approach-framed (vs. negative avoidance-framed) messages on ads.

General Discussion

Many people experience feelings of financial constraint. Despite the widespread prevalence of financial constraints, relatively little is known about how individuals respond to messages in ads when faced with financial constraints. Addressing this research gap, we developed and tested hypotheses regarding the effects of financial constraints on consumers' responses to positive approach-framed (vs. negative avoidance-framed) messages in ads. We further identified the depth of information processing as the underlying mechanism. We tested our hypotheses in a series of six studies that included online and field studies with fictitious and real ads and brands (see table 2 for overview of the studies).

According to McShane and Böckenholt (2017), it is common in behavioral research to analyze and interpret effects in isolated studies, even though multiple studies are used to test the effect. This is increasingly important in the advertising research (Eisend, Franke and Leigh 2016). Given the similarities across the studied phenomenon, this practice can improve its effectiveness by analyzing the studies of a paper jointly in a single-paper meta-analysis (SPM). The results of the SPM in this paper suggested a mean effect size of 0.23 [95% CI: 0.15 to 0.30]. The test of the mean effect size equaled 5.74 ($p < .001$). Heterogeneity calculated by Q equaled 24.14 (with 14 degrees of freedom, $p = .04$), suggesting that the explained variance due to the independent variable was significant (Ang and Eisend 2018). The heterogeneity I^2 equals 42%, which is to be considered a borderline low heterogeneity level (Higgins et al. 2019) and indicated that 42% of the variation in treatment effects was due to between-study heterogeneity. We added a calculation of the predictive interval, which suggested a significant effect [95% predictive CI: 0.02 to 0.43]. The results suggest that we can have confidence at a 95% level that a new study would produce results in the range between 0.02 and 0.43. This result considers the heterogeneity and the whole distribution of effects in the random-effects model.

Theoretical Contributions

The paper's findings contribute to the literature on financial constraints and message framing in advertisements.

Message framing in advertisements. Research has largely investigated the effects of positive and negative framing in different domains, including political campaigns and social marketing. The effect of framing depends on the topic and situational characteristics, such as consumer involvement (Krishnamurthy et al. 2001; Levin and Gaeth 1988). The findings of this research add to the extant research on message framing in advertisements by showing that consumers with financial constraints have more favorable responses to ads with positive approach-framed messages.

Second, research on the depth of information processing suggests that when consumers engage in shallow information processing, additional peripheral cues become more salient determinants of consumers' responses to the ad (Petty, Cacioppo, and Schumann 1983). However, there are mixed findings on whether positive approach-framed or negative avoidance-framed messages in ads are more effective when consumers engage in a shallow level of information processing. While some research shows that positive approach-framed messages are more persuasive when cognitive resources are low (Maheswaran and Meyers-Levy 1990) and negative avoidance framing is more effective when there are more cognitive resources (Block and Keller 1995), other research shows that when the decision involves deeper processing, the effectiveness of negative avoidance framing is reduced, while positive approach framing results in more brand selection (Shiv et al. 1997). The findings of this research add to the body of research on message framing in advertising by showing that for consumers with financial constraints, a shallow level of information processing results in more favorable responses to ads that have positive approach-framed messages.

Financial constraints. While there is a small yet influential body of research in the marketing literature on how financial constraints influence consumers' behaviors, past research has overlooked whether consumers' financial constraints influence their responses to ads with positive approach-framed (vs. negative avoidance-framed) messages. Our research on the effects of consumers' financial constraints on their responses to the framing of ad messages heeds the call of Hamilton and colleagues (2019), to explore further how individuals' resource scarcity influences their preferences. Across field studies and online experiments, the strong empirical support for the hypotheses highlights a novel insight – financially constrained consumers appreciate messages with positive and approach-framed messages.

We also note that this research is the first to demonstrate that consumers with financial constraints engage in shallower information processing. In doing so, we address a recent call by Hamilton and colleagues (2019), who question whether consumers with financial constraints need to be prompted to consider the opportunity costs (i.e., engage in deep information processing) of their purchases and to develop adaptive responses such that they consider opportunity costs spontaneously. Specifically, the findings indicate that when consumers with financial constraints are not prompted to use coping strategies, they engage in a shallow level of information processing, leading to more favorable responses to ads that have positive approach-framed messages. Future research on how the shallower level of information processing of consumers with financial constraints may influence other behaviors would be useful in developing theories on the behavior of consumers with financial constraints.

Public Policy Implications, Limitations and Future Research

Millions of people all around the world experience financial constraints, and public policymakers try to develop ways to convince financially constrained people to make better choices. We suggest that one of the ways to persuade financially constrained people to make better choices (e.g., saving) is to provide them with positive approach-framed (vs. negative avoidance-framed) messages in their marketing communications. Rather than using words such as “avoid,” “prevent,” and “reduce,” public policymakers should employ words such as “approach,” “allow,” and “increase” in trying to persuade financially constrained individuals to make better decisions. These communication strategies can also be used to help avoid overspending and prevent individual bankruptcies. For example, many financial consultants begin by showing their clients ways to reduce or avoid overspending. However, our results suggest that framing advice as ways to increase or allow spending in the future might be more persuasive.

As with any study, our research has some limitations that offer opportunities for further investigation. First, for empirical testing, we focused primarily on ads for utilitarian products (e.g., laundry detergent). Additional research that examines differences across different product categories (e.g., hedonic) and across different experiences and service categories, and considering other product-marketing and situational moderators, would be useful.

Second, in this study of financially constrained consumers’ responses to ads with positive approach-framed (vs. negative avoidance-framed) messages, we tested and found support for the underlying mechanism of processing depth to explain our findings. We eliminated the alternative explanation of emotional discomfort; however, we did not test for other alternative explanations, such as the role of approach or avoidance feelings on financially constrained individuals’ preferences for positive approach-framed versus negative avoidance-framed messages. We also did not test for the role of self-control that financially

constrained individuals may need to constantly exercise and, consequently, respond differently to, different frames in advertisements. Future research can further test for these alternative explanations.

Third, we do not address how consumers who do not have any spare income respond to positive approach-framed and negative avoidance-framed ads. Future research examining how these consumers respond to different advertising appeals can further add to and extend the findings of this paper.

Finally, the samples we used in our studies are described as Western, Educated, Industrialised, Rich, and Democratic (WEIRD) (Pollet and Saxton 2019). While research suggests that samples from WEIRD can be sufficient for generalizability (Pollet and Saxton 2019), future research can test for the effect of language, culture, and nationality differences on the effect of positive approach-framed and negative avoidance-framed messages for people with financial constraints.

In summary, we view this study as a useful step in exploring the responses of financially constrained consumers to ads with positive approach-framed (vs. negative avoidance-framed) messages. We hope that this research stimulates further work on the responses of financially constrained consumers to different advertisements, which is an important marketing strategy of any firm.

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Table 1. Summary of Literature on Message Framing

Authors	Journal	Year	Frame	Finding
Wheatley and Oshikawa	Journal of Marketing Research	1970	Positive & Negative	High-anxiety students had a more favorable attitude shift towards a positive (vs. negative) life insurance copy, while low-anxiety students had more favorable attitude shift towards a negative (vs. positive) life insurance copy.
Merritt	Journal of Advertising	1984	Negative	People who identify themselves with the opponent's party show more positive evaluations for the opponent and more negative evaluations for the sponsor when they are exposed to negative political advertisements.
James and Hensel	Journal of Advertising	1991	Negative	Better understanding of the use of negative advertising in marketing of non-political goods and services is needed as the use of negative advertising is risky.
Homer and Yoon	Journal of Advertising	1992	Positive & Negative	Results show that feelings affect brand attitudes and brand-related thoughts are more important to form brand attitude when the message is negatively framed.
Faber, Tims & Schmitt	Journal of Advertising	1993	Negative	The impact of negative political ads on voting decisions increases both with enduring and situational involvement and attention to television news.
Keller and Block	Journal of Consumer Research	1996	Negative	Low levels of fear are ineffective because of the insufficient elaboration of the harmful consequences of engaging in destructive behavior. However, high levels of fear are ineffective when there is too much elaboration of the harmful consequences of engaging in destructive behavior.
Pinkleton	Journal of Advertising	1997	Negative	Although negative comparative advertising lowers targeted candidate evaluations, it does not lower sponsoring candidate evaluations.
Shiv, Edell and Payne	Journal of Consumer Research	1997	Positive & Negative	Claims-related cognitions have greater impact on choice when processing is limited. This results with sponsoring brand being chosen more when the ad claims are negatively (vs. positively) framed. Tactics-related cognitions become more accessible when processing is extensive. This results with attenuation of the advantage of negative framing over positive framing if it is perceived unfair.
Brown, Homer and Inman	Journal of Marketing Research	1998	Positive & Negative	Cognitive processing moderates the effect of negative feelings on ad and brand attitudes but does not moderate the effects of positive feelings on ad and brand attitudes.
Zhang and Buda	Journal of Advertising	1999	Positive & Negative	People who have low need for cognition are influenced more by negatively framed messages than by positively framed messages.

Pinkleton, Um and Austin	Journal of Advertising	2002	Negative	Negative advertising does not increase cynicism or apathy but increases disgust with campaigns.
Meirick	Journal of Advertising	2002	Negative	Comparative (vs. negative) ads provoke fewer source derogations and more counterarguments. Comparative (vs. negative) ads also prompt more support arguments, positive affect and source bolstering.
Faseur and Geuens	Journal of Advertising	2006	Positive	Ad and context-induced coziness, excitement, and romance has different influence on ad evaluations. Ads that were exciting, romantic, and cozy scored best in feeling-congruent contexts.
Yoon, Sarial-Abi, and Gurhan-Canli	Journal of Consumer Research	2012	Positive & Negative	Under high information load, relative reliance on positive (vs. negative) information is greater for promotion-focused (vs. prevention-focused) individuals. Under low information load, individuals also rely on information inconsistent with their regulatory orientation. Specifically, under low information load, relative reliance on positive (vs. negative) information is greater for prevention-focused (vs. promotion-focused) individuals.
Wyllie, Baxter and Kulczynski	Journal of Advertising	2015	Gain and Loss Framing	Messages that are gain framed and affirming leads to more positive attitudes and greater intention to adopt the target behavior in a behavioral adoption context. Messages that are loss framed is more effective in a behavioral cessation context.
Randle et al.	Journal of Advertising Research	2016	Positive	Positive emotions have more influence on the responses to advertisements. Processing motivation and preexisting attitudes also have an important role.
Lee, Liu and Cheng	International Journal of Communication	2018	Positive & Negative	Positive (vs. negative) framed ads have more influence on promotion-focused consumers. There is no effect of product type. Positive (vs. negative) framed ads are more effective for utilitarian products for the prevention-focused consumers.
Yoon and La Ferle	Journal of Advertising	2018	Gain and Loss Framing	Loss framing is effective when self-oriented appeal is matched with low collectivistic individuals and when family-oriented appeal is matched with high collectivistic individuals. Gain framing is more effective when collectivism is not matched with self or family message orientation.

Table 2: Results of Studies

Study	Key Variables	Results
1	Independent Variable: Financial Constraints (vs. No Financial Constraints) Dependent Variable: Ad choice with a positive approach-framed (vs. a negative avoidance-framed) message	The results support the prediction that consumers with financial constraints would have more positive responses to an ad with a positive approach-framed (vs. a negative avoidance-framed) message (H ₁).
2	Independent variable: Financial Constraints (vs. No Financial Constraints) Dependent Variable: Preference for a positive approach-framed (vs. a negative avoidance-framed) message on a product package	The results support the prediction that consumers with financial constraints have more positive responses to messages that are positive approach-framed (vs. negative avoidance-framed) (H ₁).
3	Independent Variable: Financial Constraints Moderator: Positive approach-framed (vs. negative avoidance-framed) message Dependent Variable: Ad Attitude; Product Purchase Intentions	The results support H ₁ that consumers with financial constraints respond more favorably (in ad attitude and product purchase intention) to an ad that has a positive approach framed (vs. negative avoidance-framed) message.
4	Independent Variable: Extent of Financial Constraints Dependent Variable: Preference for the positive approach-framed (vs. negative avoidance-framed) ad; Willingness to Donate	The results support H ₁ that consumers with financial constraints respond more favorably (in willingness to donate) to an ad that has a positive approach framed (vs. negative avoidance-framed) message.

5	<p>Independent Variable: Financial Constraints Moderator: Positive approach-framed (vs. negative avoidance-framed) message Mediator: Depth of Processing Dependent Variable: Ad Attitude; Saving Intentions</p>	<p>The results support H₁ that consumers with financial constraints respond more favorably (in ad attitude, saving intentions) to an ad that has a positive approach framed (vs. negative avoidance-framed) message. The results support H₂ that depth of information processing mediates the financially constrained consumers' responses (in saving intentions) to an ad with a positive approach-framed (vs. a negative avoidance-framed) message.</p>
6	<p>Independent Variable: Financial Constraints (vs. No Financial Constraints) Moderator: Positive approach-framed (vs. Negative avoidance-framed) message Mediator: Depth of Processing Dependent Variable: Ad Attitude; Product Purchase Intentions</p>	<p>The results support H₁ that consumers with financial constraints respond more favorably (in ad attitude, product purchase intentions) to an ad that has a positive approach framed (vs. negative avoidance-framed) message. The results support H₂ that depth of information processing mediates the financially constrained consumers' responses (in ad attitude, product purchase intentions) to an ad with a positive approach-framed (vs. a negative avoidance-framed) message.</p>

Table 3: Mediation Results of Study 5 and 6

Study	Dependent Variable	Message Framing Condition	Indirect Effect (SE) [Conf Interval]	a-path	b1-path	b2-path (cond effect at moderator)	c'-path (Direct)	
5	Ad attitudes	Approach	-0.09 (0.04) [-0.17 to -0.01]	0.18* (0.08)	-0.44* (0.07)	-4.44*** (0.08)	0.02 (0.07)	
		Avoidance	-0.09 (0.04) [-0.18 to -0.01]			-0.44*** (0.08)		
	Savings	Approach	-0.69 (0.47) [-1.81 to -0.02]	0.18* (0.08)	-2.08* (1.04)	-3.81** (1.39)	-3.54** (1.14)	
		Avoidance	0.10 (0.30) [-0.44 to 0.81]			0.58 (1.40)		
	6	Ad attitudes	Approach	-0.00 (0.02) [-0.04 to 0.03]	0.43* (0.2)	-0.09* (0.04)	-0.09* (0.04)	-0.05 (1.12)
			Avoidance	-0.05 (0.03) [-0.10 to -0.00]			-0.01 (0.04)	
Product purchase intentions		Approach	0.02 (0.03) [-0.01 to 0.05]	0.43* (0.2)	-0.5 (0.03)	0.04 (0.03)	-0.03 (0.09)	
		Avoidance	-0.02 (0.02) [-0.05 to 0.01]			-0.04 (0.03)		

Note. The table represents the unstandardized coefficients (with SE in parentheses). 95% CI is calculated on 10,000 bootstraps.

*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .1$

Figure 1a. Ad Choice – Airline Company

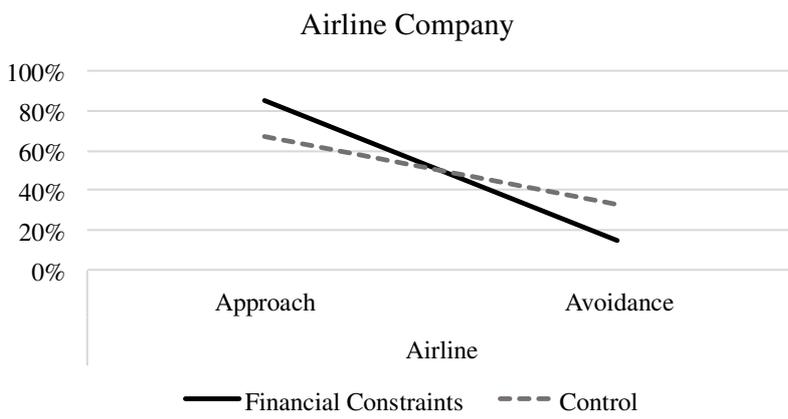
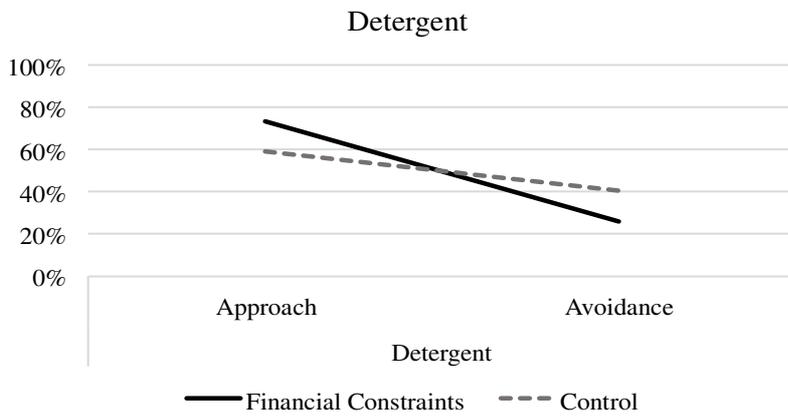


Figure 1b. Ad Choice – Detergent



Appendix 1 – Study 2 Stimuli

Positive Approach-Framed Message Condition

Cey gets rid of stains from your clothes.

To protect your hair from dandruff, purchase Mus.

Rit fights with germs in your mouth.

Aul gives you the energy that you need during the day.

Eating Emi, you will not have bone problems in the future.

Negative Avoidance-Framed Message Condition

Without Yec, there will be stains in your clothes.

Without using Sum, you cannot avoid dandruff from your hair.

Without Tir, you can have germs in your mouth.

Without Lua, you cannot have the energy that you need during the day.

Without eating Ime, there is no guarantee that you will not have bone problems in the future.

Appendix 2 (Study 3 and Study 6 Stimuli)

Positive Approach-Framed Message Condition

The New York Times

DeepMind Can Now Beat Us at Multiplayer Games, Too

Chess and Go were child's play. Now A.I. is winning at capture the flag. Will such skills translate to the real world?

Capture the flag is a game played by children across the open spaces of a summer camp, and by professional video gamers as part of popular titles like Quake III and Overwatch.

In both cases, it's a team sport. Each side guards a flag while also scheming to grab the other side's flag and bring it back to home base. Winning the game requires good old-fashioned teamwork, a coordinated balance between defense and attack:

In other words, capture the flag requires what would seem to be a very human set of skills. But researchers at an artificial intelligence lab in London have shown that machines can master this game, too, at least in the virtual world.

In a paper published in Science, the researchers reported that they had designed automated "agents" that exhibited humanlike behavior when playing the capture the flag "game mode" inside Quake III. Through thousands of hours of game play, the agents learned very particular skills. As human players know, the moment the opposing flag is brought to one's home base, a new flag appears at the opposing base, ripe for the taking.

By Code Matic
May 30, 2019

The New York Times

Monday
May 30, 2019



Get the most cleanliness!
GO for it!

BE BOLD.
GO SLEEVELESS.



By Code Matic
May 30, 2019

Negative Avoidance-Framed Message Condition

The New York Times

DeepMind Can Now Beat Us at Multiplayer Games, Too

Chess and Go were child's play. Now A.I. is winning at capture the flag. Will such skills translate to the real world?

Capture the flag is a game played by children across the open spaces of a summer camp, and by professional video gamers as part of popular titles like Quake III and Overwatch.

In both cases, it's a team sport. Each side guards a flag while also scheming to grab the other side's flag and bring it back to home base. Winning the game requires good old-fashioned teamwork, a coordinated balance between defense and attack:

In other words, capture the flag requires what would seem to be a very human set of skills. But researchers at an artificial intelligence lab in London have shown that machines can master this game, too, at least in the virtual world.

In a paper published in Science, the researchers reported that they had designed automated "agents" that exhibited humanlike behavior when playing the capture the flag "game mode" inside Quake III. Through thousands of hours of game play, the agents learned very particular skills. As human players know, the moment the opposing flag is brought to one's home base, a new flag appears at the opposing base, ripe for the taking.

By Code Matic
May 30, 2019

The New York Times

Monday
May 30, 2019



Block the most dirt!
Stop it!

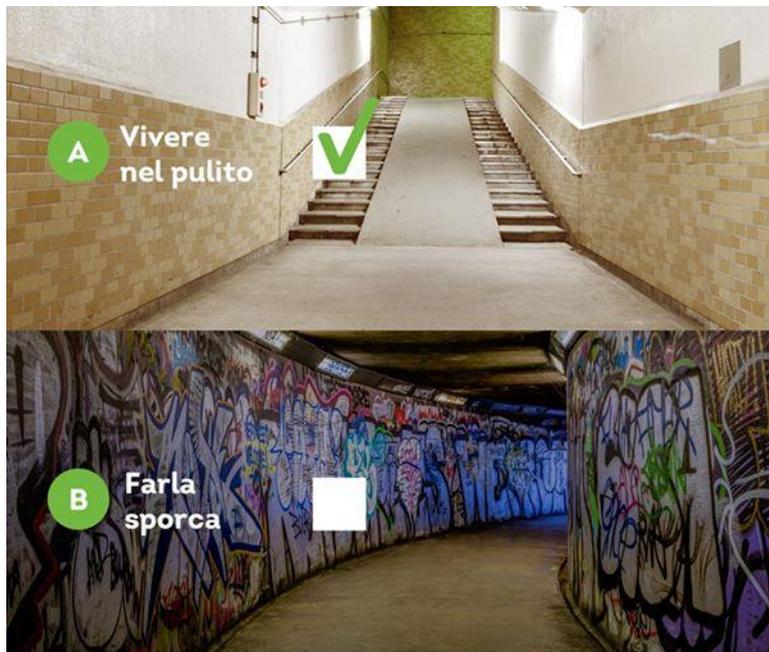
STOP SHYNESS.
AVOID SLEEVES.



By Code Matic
May 30, 2019

Appendix 3 (Study 4 Stimuli)

Ad 1



A Vivere nel pulito

B Farla sporca

SCENDI IN CAMPO CON **CifaBella ITALIA**

The image block contains two photographs. The top photograph shows a clean, well-lit staircase with a light-colored tiled wall on the left and a white wall on the right. A green checkmark is overlaid on the image, and the text 'A Vivere nel pulito' is positioned to the left of the checkmark. The bottom photograph shows a narrow, curved tunnel with walls covered in colorful graffiti. A white square is overlaid on the image, and the text 'B Farla sporca' is positioned to the left of the square. Below the photographs is a green banner with a megaphone icon on the left, the text 'SCENDI IN CAMPO CON' in white, and the 'CifaBella ITALIA' logo on the right.

Ad 2



A Una città da vivere

B Sopravvivere in città

SCENDI IN CAMPO CON **CifaBella ITALIA**

The image block contains two photographs. The top photograph shows a clean, narrow street made of cobblestones, flanked by tall brick buildings with arched doorways. A green checkmark is overlaid on the image, and the text 'A Una città da vivere' is positioned to the left of the checkmark. The bottom photograph shows a narrow, dirty alleyway with graffiti-covered brick walls. A white square is overlaid on the image, and the text 'B Sopravvivere in città' is positioned to the left of the square. Below the photographs is a green banner with a megaphone icon on the left, the text 'SCENDI IN CAMPO CON' in white, and the 'CifaBella ITALIA' logo on the right.

Appendix 4 (Study 5 Stimuli)

Positive Approach-Framed Message Condition



When you save,
you can earn interest and see your
money grow,
can protect yourself from future
uncertainties,
and can support yourself after retirement.
This way, you will lead a more happy and
confident life.

Visit our website
or call now for more information:
www.save/savenow or 1-800-NOW-SAVE

Negative Avoidance-Framed Message Condition



When you do not save,
you can't earn interest and see your
money grow,
you can't protect yourself from future
uncertainties,
and can't support yourself after
retirement.
This way, you will lead a more unhappy
and uncertain life.

Visit our website
or call now for more information:
www.save/savenow or 1-800-NOW-SAVE