
MARCELO VINHAL NEPOMUCENO AND MICHEL LAROCHE

Do I Fear Death? The Effects of Mortality Salience on Anti-Consumption Lifestyles

How are individuals who voluntarily resist consumption affected by death thoughts? We looked at the impact of mortality salience (MS) on anticonsumption lifestyles. We found that high anticonsumption individuals were equally unlikely to consume in the control and MS conditions. However, low anticonsumption individuals were more likely to consume after death was made salient. Finally, anticonsumption lifestyles did not correlate with self-esteem, a known buffer of the effects of MS. Because MS did not change the consumption-related behaviors of high anticonsumption individuals, our findings suggest that consumption is not a relevant method for such individuals to recover their self-esteem. The findings also suggest that the adoption of an anticonsumption lifestyle buffers the effect of MS on participants' consumption-related behaviors.

Humans are well aware of their impending mortality. To cope with the fear of death, individuals will more strongly defend their worldview to maintain their self-esteem (Pyszczynski et al. 2004). In consumer behavior, death thoughts increase the propensity to consume in highly materialistic societies (Arndt et al. 2004a) because in the West the worldview that possessions and material goods allow one to live happier lives is widely accepted (Richins 2004). This increase in consumption was evidenced before. For example, after the attacks on the Pentagon and the World Trade Center on 9/11, consumption soared in the United States (Arndt et al. 2004a). Similarly, after death thoughts consumers had a more positive attitude toward luxury products (Heine, Harihara, and Niiya 2002; Mandel and Heine 1999) and they became more likely to consume impulsively (Friese and Hofmann 2008). Taken altogether, these studies indicate that mortality salience (henceforth MS) increases one's propensity to consume.

Marcelo Vinhal Nepomuceno (marcelo.nepomuceno@hec.ca) is an Assistant Professor of Marketing, Department of Marketing, HEC Montreal. Michel Laroche (laroche@jmsb.concordia.ca) is a Royal Bank Distinguished Professor of Marketing, Department of Marketing, John Molson School of Business, Concordia University. The studies were supported with funding given to Marcelo Vinhal Nepomuceno by John Molson School of Business, Concordia University, and by ESCP Europe Research Funding (EERF).

Although these findings appear largely consistent, we do not believe that they will be replicated for high anticonsumption individuals. Anticonsumption lifestyles are voluntarily adopted by individuals who reduce the acquisition, use, and disposal of commoditized goods and services (Lee et al. 2011). Several anticonsumption lifestyles were studied in the literature (Hogg, Banister, and Stephenson 2009; Iyer and Muncy 2009). These lifestyles result in somewhat similar behaviors (i.e., to buy less or to save resources), and they are motivated by a rejection or a lack of endorsement of a worldview that consumption is desirable (Iyer and Muncy 2009). Therefore, low anticonsumption individuals endorse a worldview that consumption is desirable, whereas high anticonsumption individuals disagree with it or even reject this worldview entirely (Iyer and Muncy 2009). Given that high anticonsumption individuals do not endorse a worldview where consumption is desirable, we expect that MS has no effect on the propensity to resist consumption for individuals who endorse anticonsumption lifestyles.

We test the effect of MS on anticonsumption lifestyles in two studies. Study 1 examines the propensity to consume of high (and low) anticonsumption individuals after death is made salient. In this study we find that low anticonsumption participants become more inclined to increase consumption after death is made salient, whereas high anticonsumption participants do not have their propensity to resist consumption influenced by MS. Study 2 replicates Study 1, while ruling out two alternative explanations. First, Study 2 suggests that affect does not explain our findings. Second, the anticonsumption lifestyles studied did not correlate with self-esteem, a buffer of the effects of MS (Burke, Martens, and Faucher 2010; Routledge et al. 2010). This resilience of high anticonsumption individuals to the effect of MS might occur because consumption is not an important source of esteem for these individuals. A similar rationale was presented by other authors (Burke, Martens, and Faucher 2010; Ferraro, Shiv, and Bettman 2005), who concluded that the null effects of MS occurs when the dependent variable does not express a worldview or when it is not viewed as relevant for participants.

Our findings contribute to the field by extending our knowledge about the impact of MS on consumer behavior. We extend this knowledge by showing that the adoption of a consumption lifestyle makes one resilient to the effects of MS. Interestingly, this finding was unobserved by previous researchers, because studies focused mostly on understanding the reasons for consuming. By investigating the reasons against consuming, we identified a buffer for MS in consumer-related scenarios (see Chatzidakis and Lee (2013) for insights on how the study of anticonsumption may change

our understanding about consumer behavior). Also important, while previous research demonstrated that consumption is increased after death is made salient (Arndt et al. 2004a; Friese and Hofmann 2008), we suggest that such findings are true only for low anticonsumption individuals. This is an important extension of previous research, as it shows that the increase in consumption might occur only for low anticonsumption individuals.

Our studies are also in line with the goals of transformative consumer research. According to this movement, research in consumer behavior should investigate how consumption affects well-being, in order to inform consumers and allow them to live happier lives (Chakravarti 2006; Davis and Pechmann 2013; Mick 2008; Ozanne et al. 2011). Research has shown that thrifty consumers (Chancellor and Lyubomirsky 2011) and consumers who spend money wisely (Dunn, Gilbert, and Wilson 2011) tend to live happier lives. This might occur because when individuals refrain from consuming they are more likely to self-express (Black and Cherrier 2010), to experience positive emotions (Cherrier 2009) and a sense of authenticity (Zavestoski 2002). Given that resistance to consumption leads to increased well-being, by studying anticonsumption we indirectly contribute to the goals of the transformative consumer research movement. This is particularly true because we also study MS. As argued before, thinking about death amplifies one's materialism and propensity to consume (Arndt et al. 2004a); and in turn, materialism and excessive consumption have been associated with low well-being (Kasser 2003).

Anticonsumption Lifestyles and MS

In materialistic societies, MS increases the propensity to consume (Arndt et al. 2004a). However, what is the effect of MS on high anticonsumption individuals? To answer this question, we must understand what motivates consumers to adopt an anticonsumption lifestyle. For this study, to increase the external validity of the findings, we looked at anticonsumption lifestyles leading to fewer acquisitions in general. In particular, we study voluntary simplicity and frugality. Voluntary simplicity is adopted by those who reduce spending on goods and services to live a simple life and to obtain satisfaction by cultivating nonmaterialistic values (Etzioni 1998; Shama 1981). Frugality is a consumer lifestyle trait adopted by individuals who restrain their acquisition of goods and services to achieve long-term goals (Lastovicka et al. 1999). Frugal consumers are motivated by the pleasure of saving (Rick, Cryder, and Loewenstein 2008) and they will resourcefully use goods to refrain from purchasing (Lastovicka et al. 1999).

MS triggers a strong defense of one's own worldviews (Pyszczynski et al. 2004). This finding was confirmed in several domains (for reviews see Burke, Martens, and Faucher 2010; Greenberg, Solomon, and Pyszczynski 1997). Examples of worldviews that are strongly defended after MS include voting for a candidate that best represents a worldview (Cohen et al. 2005) and protecting one's religion from opposing worldviews (Greenberg et al. 1990). Individuals positively evaluate their worldviews after an MS prime as, by securing a meaningful worldview (Arndt et al. 2002), they meet or exceed the values and standards established by the reference group, which in turn allows them to cope with death thoughts by boosting their self-esteem (Rosenblatt et al. 1989).

The selected consumer lifestyles lead to fewer acquisitions, use and disposal of commoditized goods and services, but this is due to different motivations. High-frugality consumers believe that they feel pleasure when saving (Lastovicka et al. 1999), whereas voluntary simplifiers believe that materialistic values should be rejected (Etzioni 1998; Shama 1981). Because of these beliefs, frugals and simplifiers are not likely to endorse the predominant worldview in Western countries that consumption is desirable (Borgmann 2000; Richins 2004). Such conclusion is supported by previous research that found negative correlations between materialism and frugality (Lastovicka et al. 1999; Nepomuceno and Laroche 2015) and voluntary simplicity (Nepomuceno and Laroche 2015). Given that worldviews are further endorsed when death is made salient, and given that high anticonsumption individuals do not endorse a worldview that consumption is desirable, we expect that high anticonsumption individuals should not have their propensity to consume changed after death is made salient. Conversely, given that worldviews are further endorsed when death is made salient and considering that low anticonsumption individuals support a worldview that more consumption is desirable, we expect that low anticonsumption individuals should increase their propensity to consume in a MS condition. Therefore, we test:

H1a: Relative to the control condition, low-frugality individuals exposed to MS are less inclined to resist consumption, whereas high-frugality individuals are equally inclined to resist consumption in the MS and control conditions.

H1b: Relative to the control condition, low-voluntary simplicity individuals exposed to MS are less inclined to resist consumption, whereas high-voluntary simplicity individuals are equally inclined to resist consumption in the MS and control conditions.

One could argue that anticonsumption lifestyles do not entail a lack of endorsement, but rather a rejection of the worldview that consumption is desirable. Iyer and Muncy (2009) indicated that consumption might be reduced for societal reasons (e.g., for the benefit of society) or for

personal reasons (e.g., to avoid the pain of spending). Anticonsumers who are motivated by societal concerns believe that consumption damages the ecosystem and contributes to poverty problems in developing nations (Iyer and Muncy 2009); thus they are against a worldview where consumption is desirable. Nonetheless, anticonsumption lifestyles considered in this research reflect one's personal motivation to resist consumption, such as the motivation to feel personal pleasure when saving (i.e., frugality) or to live a simple life (i.e., voluntary simplicity). Because the lifestyles studied do not entail a rejection of a worldview where consumption is desirable, but are rather the result of one's personal reasons, we do not expect that anticonsumption individuals would strongly resist consumption to defend this worldview and retain their self-esteem in a MS condition.

It is worth noticing that we chose anticonsumption lifestyles adopted for personal reasons because our contribution to the literature would be limited if we selected lifestyles that represent societal concerns. Given that MS increases prosocial attitudes and behaviors (Jonas et al. 2002), it is very likely that individuals who resist consumption due to their concerns with the environment would be inclined to further resist consumption after thinking about death, as this would allow them to reaffirm their care about nature and engage in culturally accepted prosocial behaviors. Less predictable findings might be obtained when personal reasons for reducing consumption are considered. For example, frugal consumers might resourcefully use goods to achieve materialistic aspirations in the long term (e.g., to save today to buy a house in the future). Such consumers are materialistic and would be inclined to acquire a high-status product to increase their self-esteem. The same cannot be said of those who adopt voluntary simplicity, as consumers who reject materialistic values might not see a luxury product as a way to increase their self-esteem. Because the reasons for consuming are personal rather than societal, the effects of MS become less influenced by social norms and thus less predictable.

STUDY 1

Method

Study 1 tests H1a and H1b. We sampled 213 North American university students. Females totaled 108, and 106 participants were exposed to the MS condition. Replicating previous studies (Burke, Martens, and Faucher 2010), in the control condition participants were asked to: (1) briefly describe the emotions that the thought of visiting a dentist arouses in them and (2) jot down, as specifically as they could, what they think will happen to them the next time they have a painful procedure done at the dentist's

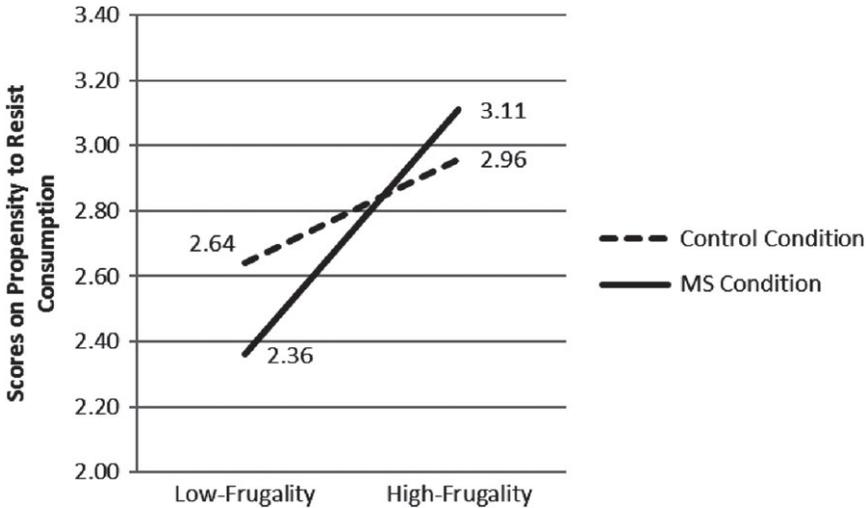
office. In the MS condition, participants were asked to (1) briefly describe the emotions that the thought of their own death arouses in them and (2) jot down, as specifically as they could, what they think will happen to them as they physically die and once they are physically dead. We first presented participants with the frugality (Lastovicka et al. 1999; Appendix 1) and voluntary simplicity scales (Iwata 1997, 1999, 2006; Appendix 2). Later, we presented individuals with either the MS or the control condition. After the manipulation, participants answered a mood scale (Watson, Clark, and Tellegen 1988) and some demographic questions. Finally, they were presented with 11 items that measured participants' propensity to resist consumption and save money (Appendix 3), without capturing one's motivations to do so. These motivations were captured by the lifestyle scales. The authors relied on Lastovicka et al. (1999) product usage items to create the items used in this study. In addition, Item 3 was adopted from Chartrand et al. (2008). In a pretest with 195 students, the Cronbach's alpha for these items was .72. For this study, it was .62. Note that for this measurement, the higher the score the lower the propensity to resist consumption and save money.

Results and Discussion

Following Fitzsimons (2008), we ran regression analyses having frugality or voluntary simplicity as independent variables. We also included a dummy variable for the condition (MS or control) and the interaction between the condition and the focal lifestyle. The dependent variable in each regression was the composite score of items measuring the propensity to resist consumption and to save money (Appendix 3). As suggested by Fitzsimons (2008), when the interaction term is significant one has to run a "spotlight" analysis at one standard deviation above or below the continuous independent variable. In other words, only when the interaction term was significant, we compared the propensity to resist consumption between participants whose scores in the respective anticonsumption lifestyle were one standard deviation higher or lower than the average. Note that lower (higher) scores in the propensity to resist consumption and to save money mean a higher (lower) propensity to consume.

We found a significant interaction between frugality and condition ($\beta = -.14$; $p = .03$). Exploring this interaction, we examined the slopes of frugality for each condition (Figure 1). We conducted a spotlight analysis comparing the scores of participants at one standard deviation below the mean of frugality. We found that the low-frugality participants in the MS condition had lower propensity to resist consumption than those exposed

FIGURE 1
Scores on the Propensity to Resist Consumption as a Function of Frugality and Mortality Salience (MS): Study 1

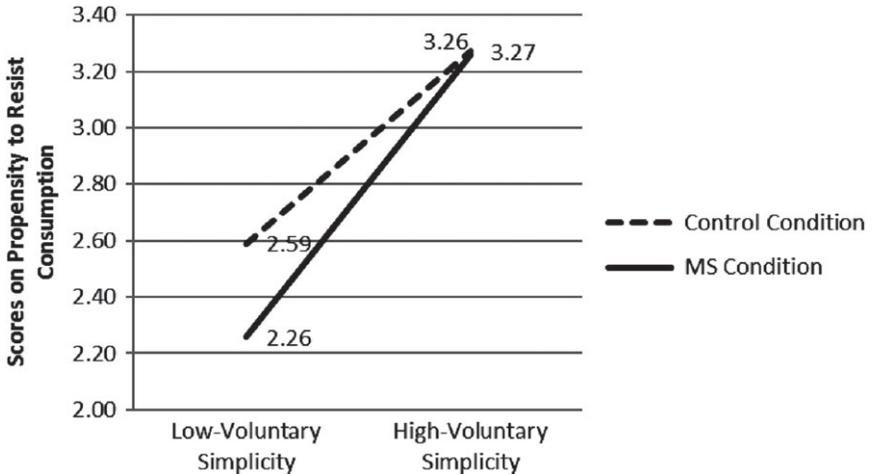


to the control condition, $M_{\text{control}} = 2.64$ vs. $M_{\text{MS}} = 2.36$, $F(1, 39) = 3.757$, $p = .06$; $\eta^2 = .09$. A similar spotlight analysis with participants at one standard deviation above the mean of frugality showed that the high-frugality participants exposed to the MS condition had similar propensity to resist consumption as those exposed to the control condition, $M_{\text{control}} = 2.96$ vs. $M_{\text{MS}} = 3.11$, $F(1, 38) = .705$, $p = .41$. These findings support H1a because MS does not change the propensity to resist consumption of high-frugality individuals, whereas it reduces the propensity of low-frugality individuals to resist consumption (i.e., it increases the propensity to consume of low-frugality individuals).

Finally, we found a significant interaction between voluntary simplicity and condition ($\beta = -.12$; $p = .04$; Figure 2). A spotlight analysis with participants at one standard deviation below the mean of voluntary simplicity showed that low-simplicity participants exposed to the control condition had a higher propensity to resist consumption than those participants exposed to the MS condition, $M_{\text{control}} = 2.59$ vs. $M_{\text{MS}} = 2.26$, $F(1, 35) = 4.136$, $p = .05$; $\eta^2 = .11$. No difference in the propensity to resist consumption was found between high-simplicity participants exposed to the control and MS conditions, $M_{\text{control}} = 3.27$ vs. $M_{\text{MS}} = 3.26$, $F(1, 32) = .001$, $p = .98$. These findings support H1b as the propensity to resist consumption decreases for low-voluntary simplicity participants after a death prime and remains unchanged for high-voluntary simplicity participants.

FIGURE 2

Scores on the Propensity to Resist Consumption as a Function of Voluntary Simplicity and Mortality Saliency (MS): Study 1



The results cannot be explained by the participants' lack of attention in any of the two settings. The participants in the MS and control conditions used a similar number of words to answer the questions asked, $M_{\text{control}} = 46.67$ vs. $M_{\text{MS}} = 42.21$, $F(1, 211) = 1.585$, $p = .21$. This indicates that they were equally focused on the task for both the MS and control conditions. Consistent with previous studies (Greenberg, Solomon, and Pyszczynski 1997), the negative and positive affects of participants did not differ significantly in the MS and control conditions ($p > .22$). Therefore, the findings cannot be explained by the positive, $M_{\text{control}} = 2.91$ vs. $M_{\text{MS}} = 2.80$, $F(1, 189) = .768$, $p = .38$, or negative, $M_{\text{control}} = 1.51$ vs. $M_{\text{MS}} = 1.59$, $F(1, 188) = 1.478$, $p = .23$, affects experienced by participants after the manipulation. To further explore this possibility, we ran regression analyses having the positive or negative affects as the dependent variable. The independent variables included were one of the anticonsumption lifestyles, a dummy for the manipulation, and the interaction between the respective anticonsumption lifestyle and the condition. A total of four regressions were conducted, two for positive affect and two for negative affect. Out of these regressions, the interaction between the anticonsumption lifestyle and the condition was significant only for frugality when positive affect was the dependent variable ($\beta = -.17$; $p = .02$). A spotlight analysis showed that low-frugality participants had lower scores on positive affect in the MS condition than in the control

condition, $M_{\text{control}} = 2.55$ vs. $M_{\text{MS}} = 3.08$, $F(1, 35) = 4.616$, $p = .04$; $\eta^2 = .12$, whereas high-frugality participants had higher positive affect in the MS condition than in the control condition, $M_{\text{control}} = 3.31$ vs. $M_{\text{MS}} = 2.69$, $F(1, 36) = 5.362$, $p = .03$; $\eta^2 = .13$. Overall, these results suggest that the interaction between participants' frugality and the condition increases the positive affect of high-frugality individuals while decreasing the positive affect of low-frugality individuals. However, this interaction has no effect on voluntary simplicity for positive and negative affect.

We conducted a factor analysis to assess whether the items loading on frugality and voluntary simplicity loaded on the expected dimensions. As expected, the items for frugality and voluntary simplicity loaded on their expected factors. The factor loadings for frugality were between .46 and .79. In addition, the inter-item correlation was equal to .49 and the item-total correlation was equal to .61 for frugality, demonstrating convergent validity (Ferketich 1991; Nunnally and Bernstein 1994). For voluntary simplicity, the lowest factor loading was found for Item 6 (factor loading = .19) and Item 7 (factor loading = .25). The remaining items had factor loadings between .40 and .79. For voluntary simplicity, the item-total correlation was equal to .48 and the inter-item correlation was equal to .30, which are above acceptable levels to demonstrate convergent validity (Ferketich 1991; Nunnally and Bernstein 1994). The Cronbach alpha for frugality was equal to .86, whereas for voluntary simplicity it was equal to .79 with or without Items 6 and 7. To further test the convergent and discriminant validity of the factors, we used the method proposed by Fornell and Larcker (1981). The average variance extracted for each factor was equal to .51 for frugality and .39 for voluntary simplicity, showing marginal convergent validity for voluntary simplicity. In addition, we observed discriminant validity between the constructs, as the squared correlation coefficients between factors were significantly smaller than the average variance extracted (Table 1).

In line with our expectations, low anticonsumption individuals became more prone to consume (i.e., less prone to resist consumption) after a

TABLE 1
Tests of Discriminant and Convergent Validity: Anticonsumption Lifestyles (Study 1)

Construct	Voluntary Simplicity	Frugality
Voluntary simplicity	.39	
Frugality	.20	.51

Note: The diagonal entries show Fornell and Larcker's (1981) index of the average variance extracted by the construct. Entries below the diagonal are the squared correlation coefficients.

death prime. They appeared to accept worldviews in which consumption is desirable and become even more inclined to consume after death primes. Also in line with our expectations, high anticonsumption individuals do not have their propensity to resist consumption changed after death thoughts. These findings are in line with the rationale that frugal and simplifier consumers do not reject worldviews in which consumption are desirable. If that were the case they would likely further increase their propensity to resist consumption in the MS condition. Our findings appear to suggest that these anticonsumption lifestyles only entail a nonendorsement of a worldview where consumption is desirable. Because this worldview is less radical, and probably less esteem-relevant, MS did not have a significant impact on participants.

An issue not tackled by the current study is the correlation between self-esteem and anticonsumption lifestyles. Some authors indicated that consumers who consume less have high self-esteem (Kasser 2005; Zavestoski 2002) and high self-esteem shields individuals from the effects of MS (Harmon-Jones et al. 1997). If self-esteem correlates positively with anticonsumption lifestyles, then MS should have a limited effect on these lifestyles, because self-esteem buffers the effect of MS. We do not see a compelling theoretical reason why high anticonsumption individuals would have high self-esteem. However, given that previous studies identified a positive correlation between anticonsumption lifestyles and self-esteem, in Study 2 we measure participants' self-esteem to test alternative explanations for our findings.

STUDY 2

Study 2 assesses if high anticonsumption individuals have higher self-esteem and if self-esteem buffers the effect of MS. Finally, Study 2 replicates Study 1 to make sure that these findings were not obtained by chance.

Method

We sampled 290 North American university students. Of this total, 147 were men and an equal number was exposed to the control condition. First, participants answered the self-esteem scale (Rosenberg 1965). This scale was followed by the voluntary simplicity and frugality scales. Later, participants were presented with either the control or MS conditions. Both conditions used the same questions as in Study 1. This was followed by a mood scale (Watson, Clark, and Tellegen 1988) and some demographic

variables. Finally, participants indicated their propensity to resist consumption and save (Appendix 3). The Cronbach alpha of the measurements was equal to .66 for propensity to consume, .85 for self-esteem, .81 for voluntary simplicity, and .80 for frugality.¹

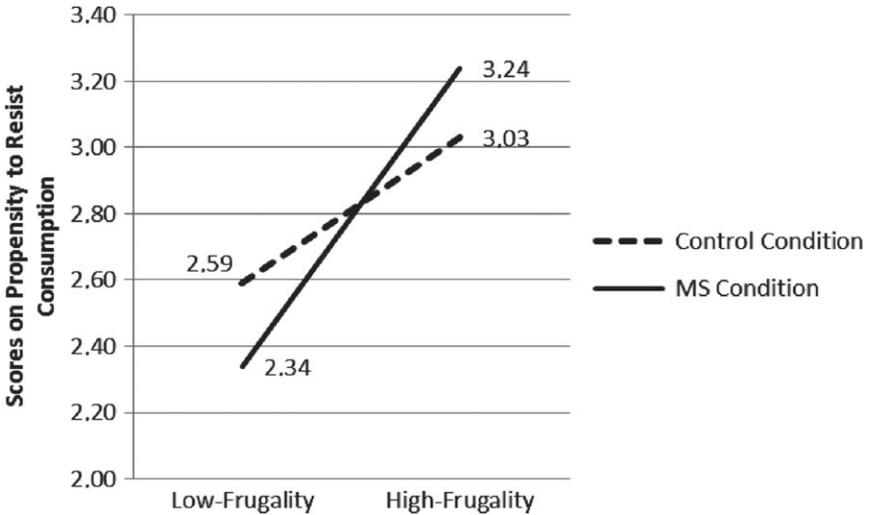
Results and Discussion

We ran a regression analysis with frugality or voluntary simplicity as independent variables. In addition, we included a dummy variable for the condition (MS or control) and the interaction between the condition and the consumer lifestyle. In each regression, the dependent variable was the propensity to resist consumption. As in Study 1, we found a significant interaction between frugality and condition on propensity to resist consumption ($\beta = -.12$; $p = .04$). We again conducted a spotlight analyses (Fitzsimons 2008) comparing the propensity to resist consumption for participants who score above or below one standard deviation of the mean of frugality. The results indicated that low-frugality participants exposed to the control condition had higher propensity to resist consumption than those in the MS condition, $M_{\text{control}} = 2.59$ vs. $M_{\text{MS}} = 2.33$, $F(1, 37) = 3.589$, $p = .06$; $\eta^2 = .09$. The propensity to resist consumption of high-frugality participants from both conditions was not significantly different, $M_{\text{control}} = 3.03$ vs. $M_{\text{MS}} = 3.27$, $F(1, 35) = 1.463$, $p = .23$. Finally, we found a marginally significant interaction between voluntary simplicity and condition ($\beta = -.09$; $p = .10$). However, we did not find a significant difference on the propensity to resist consumption between low-voluntary simplicity participants exposed to the control or MS conditions, $M_{\text{control}} = 2.43$ vs. $M_{\text{MS}} = 2.33$, $F(1, 41) = .597$, $p = .44$. We also did not find a difference between the two conditions for those who score high in voluntary simplicity, $M_{\text{control}} = 3.09$ vs. $M_{\text{MS}} = 3.28$, $F(1, 42) = 1.055$, $p = .31$. In sum, with the exception of low-voluntary simplicity participants, the current study replicated the findings obtained in Study 1 (Figures 3 and 4).

We assessed whether self-esteem correlates with frugality or voluntary simplicity in our sample, as this might also explain the findings. Self-esteem does not correlate significantly with frugality, $r(271) = .09$,

1. Because previous research found that high-status products are more positively evaluated in a MS condition than in a control condition (Heine, Harihara, and Niiya 2002; Mandel and Heine 1999), in Study 2 we also tested the effect of MS on low anticonsumption participants. We expected that low anticonsumption individuals would evaluate high-status products more positively, as they are particularly materialistic (Etzioni 1998; Lastovicka et al. 1999; Rick, Cryder, and Loewenstein 2008; Shama 1981). However, we failed to replicate the findings despite using similar products as previous studies (i.e., a high(low)-status watch and a high(low)-status car). We invite research to further investigate the effects of MS on the attitudes of low and high anticonsumption individuals.

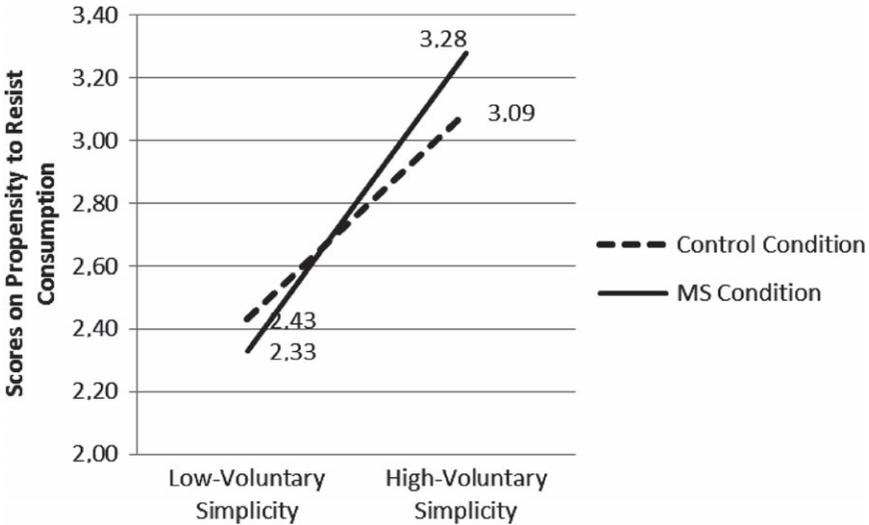
FIGURE 3
Scores on the Propensity to Resist Consumption as a Function of Frugality and Mortality Salience (MS): Study 2



$p = .15$, or voluntary simplicity, $r(273) = -.09$, $p = .14$. This refutes the alternative explanation that high self-esteem would buffer the effect of MS on frugals and voluntary simplifiers. We explored this hypothesis further by conducting regression analyses. In one analysis, we included frugality as one independent variable, along with self-esteem, a dummy variable for the condition (MS or control), the interaction between the condition and frugality, the interaction between the condition and self-esteem, and the interaction between self-esteem and frugality. We repeated this analysis by including voluntary simplicity instead of frugality. The objective of these analyses was to identify whether participants who have high self-esteem are less affected by MS because they have high self-esteem. In none of the analyses, the interaction of self-esteem with the corresponding lifestyle correlated significantly with the propensity to reduce consumption or with the attitudes toward each of the four products (all $ps > .15$). This nullifies the possibility that self-esteem might be acting as a buffer of MS in the current study.

We conducted a confirmatory factor analysis to assess the discriminant and convergent validity of frugality and voluntary simplicity. For frugality, we obtained factor loadings between .40 and .80 for all items with the exception of Item 2, which had a factor loading of .19. The Cronbach alpha for frugality was equal to .80 and it could be increased

FIGURE 4
Scores on the Propensity to Resist Consumption as a Function of Voluntary Simplicity and Mortality Saliency (MS): Study 2



to .82 if Item 2 was removed. Nonetheless, we kept Item 2 for the analyses as the marginal improvement in reliability would reduce the conceptual consistency of the construct. The average inter-item correlation for frugality was equal to .41, whereas the item-total correlation was equal to .51, supporting convergent validity (Ferketich 1991; Nunnally and Bernstein 1994). For voluntary simplicity, the factor loadings were between .30 and .77, whereas the Cronbach was equal to .81. Also supporting convergent validity for voluntary simplicity, the average item-total correlation was equal to .52 and the inter-item correlation was equal to .33. We again used Fornell and Larcker's (1981) method to assess discriminant and convergent validity. We found that the average variance extracted for frugality was equal to .43 and it was equal to .41 for voluntary simplicity. Thus, both constructs had marginal convergent validity. However, discriminant validity was obtained as the squared correlation between the constructs was significantly lower than the average variance extracted (Table 2).

Finally it is worth noting that the number of words used to answer the questions in the control and MS conditions were not statistically different, $M_{\text{control}} = 41.86$ vs. $M_{\text{MS}} = 46.78$, $F(1, 288) = 2.125$, $p = .15$, suggesting that the findings are not explained by the participants' levels of attention

TABLE 2

Tests of Discriminant and Convergent Validity: Anticonsumption Lifestyles (Study 2)

Construct	Voluntary Simplicity	Frugality
Voluntary simplicity	.41	
Frugality	.19	.43

Note: The diagonal entries show Fornell and Larcker's (1981) index of the average variance extracted by the construct. Entries below the diagonal are the squared correlation coefficients.

while answering the questionnaire. In addition, we found that the positive, $M_{\text{control}} = 2.93$ vs. $M_{\text{MS}} = 3.07$, $F(1, 273) = 1.996$, $p = .16$, and negative, $M_{\text{control}} = 1.69$ vs. $M_{\text{MS}} = 1.65$, $F(1, 263) = .169$, $p = .68$, affects of participants were not significantly different in the MS and control conditions, which suggests that our results are not explained by participants' affects according to the condition. We assessed this possibility further by running regression analyses having positive or negative moods as dependent variables. We included as independent variables one of the anticonsumption lifestyles, a dummy for the condition, and the interaction between the condition and the focal anticonsumption lifestyle. The interaction term was marginally significant only for the interaction between frugality and the condition when positive affect was included as a dependent variable ($\beta = .11$; $p = .06$). This time, the spotlight analysis showed that high-frugality participants had similar positive affect in the MS and in the control conditions, $M_{\text{control}} = 3.12$ vs. $M_{\text{MS}} = 2.97$, $F(1, 37) = .230$, $p = .63$, whereas low-frugality participants had higher positive affect in the MS condition than in the control condition, $M_{\text{control}} = 2.55$ vs. $M_{\text{MS}} = 3.48$, $F(1, 40) = 21.382$, $p < .001$; $\eta^2 = .35$. It is interesting to note that in Study 1, low-frugality participants experienced less positive affect in the MS condition than in the control condition, but in the current study, we observed the reverse. Given these contradictory findings and considering that the remaining regression analyses with affect came out as nonsignificant, we do not believe that positive or negative affects explain our findings.

GENERAL DISCUSSION, LIMITATIONS, AND FUTURE STUDIES

Although it is well established that MS increases the propensity to consume in materialistic societies (Arndt et al. 2004a, 2004b; Mandel and Heine 1999), no study looked at the effect of MS on anticonsumption lifestyles. Our research replicated previous findings by showing that low anticonsumption individuals are less willing to save when death is made salient. These results are consistent with studies on terror management

theory (Burke, Martens, and Faucher 2010; Greenberg, Solomon, and Pyszczynski 1997), reinforcing the understanding that MS increases the propensity to consume of individuals who endorse a worldview where materialism is desirable.

In addition to the replication of previous studies, our studies extend the current understanding regarding the effect of MS on consumer behavior. In both studies, we found that frugals and voluntary simplifiers have their propensity to consume unaffected by MS, whereas consumers who score low on these lifestyles are more prone to consume in MS conditions. These findings suggest that high anticonsumption individuals do not view consumption as a relevant source of self-esteem. Therefore, one's adoption of an anticonsumption lifestyle shields one from the effects of MS in consumption-related behaviors. This insight went unnoticed before, because researchers were focusing on the reasons for consuming. When studying the reasons against consuming, we obtained novel and interesting insights for the consumer behavior field as a whole (Chatzidakis and Lee 2013).

Three limitations must be taken into account to contextualize our findings. First, this study measures self-esteem using a self-reported scale. In previous studies (Landau and Greenberg 2006; Taubman-Ben-Ari and Findler 2006), self-esteem did not buffer MS when Rosenberg's self-reported scale was used. Thus, our findings in Study 2 could have been different if self-esteem were measured differently. Second, participants indicated the propensity to consume (Studies 1 and 2) not long after answering the scales on frugality and voluntary simplicity. In between the two tasks, participants answered the MS manipulation, the demographic questions, and a mood scale. Because of the delay, participants might have consciously attempted to answer the dependent variables consistently with what they indicated before the MS manipulation. This attempt to be consistent would explain why MS had no effect for high anticonsumption individuals. For example, participants might have indicated that they are more (less) inclined to resist consumption simply because they indicated that they were highly (lowly) frugal. However, it is curious to note that consistency was not observed with individuals who score low in the lifestyles in Studies 1 and 2, as low-frugality individuals became more prone to consume after a MS prime. These individuals should be just as likely as high-frugality and high-voluntary simplicity ones to seek consistency between the two parts of the studies, and given that individuals who are not willing to save were not affected by MS, we do not believe that this explanation has much validity.

A third limitation of our study is that it does not test whether anti-consumption lifestyles would be promoted in a MS condition. As discussed before, we could have tested this if we had investigated anti-consumption lifestyles that are motivated by societal goals (e.g., to resist consumption due to environmental concerns). Future research should test the assumption that anticonsumers motivated by societal goals would be further motivated to resist consumption after death is made salient.

An interesting research question unanswered by the current study is whether high anticonsumption individuals would have all their consumption-related behavior unaffected by MS. Although our study shows that MS does not motivate high anticonsumption individuals to further resist consumption, we were unable to generalize this finding to other situations. It is possible that high anticonsumption individuals will have higher propensity to acquire goods or services that are particularly relevant to their motivation to save. For example, high-frugality participants (e.g., those who feel pleasure when saving) may be inclined to increase their savings after death is made salient. Such behavior would allow them to feel further pleasure when saving, and retain self-esteem jeopardized by a MS prime. Future studies should investigate this possibility.

Future studies should also investigate the psychological mechanism behind the resistance to MS by high anticonsumption individuals. As argued by Burke, Martens, and Faucher (2010), null findings in the MS literature often occurs when the dependent variable is not a relevant way for participants to recover their self-esteem. We adopted this rationale to explain our findings, but we have yet to test the mechanisms that explain why high anticonsumption individuals resist the effects of MS.

In conclusion, as noticed by others (Mandel and Heine 1999), the study of MS on consumer behavior is loaded with ethical implications. One can easily realize that it is highly unethical to use MS to increase the sales of goods and services, particularly when individuals are not even conscious of this manipulation. Nonetheless, because our study pointed to consumer lifestyles that make one resistant to the effect of MS on consumption-related behaviors, we paved the way for future research that can further identify strategies for consumers to resist the effects of MS.

APPENDIX 1

Frugality Scale (Lastovicka et al. 1999). Please, indicate how much you agree with the statements below using the scale provided (1 = definitely disagree, 7 = definitely agree):

	1	2	3	4	5	6	7
1. If I take good care of my possessions, I will definitely save money in the long run							
2. There are many things that are normally thrown away that are still quite useful							
3. Making better use of my resources makes me feel good							
4. If I can reuse an item I already have, there is no sense in buying something new							
5. I believe in being careful in how I spend my money							
6. I discipline myself to get the most from my money							
7. I am willing to wait on a purchase I want so that I can save money							
8. There are things I resist buying today so I can save for tomorrow							

APPENDIX 2

Voluntary Simplicity Scale (Adapted From Iwata 1997, 1999, 2006). Please, indicate how much you agree with the statements below using the scale provided (1 = definitely disagree, 5 = definitely agree):

	1	2	3	4	5
1. I fully adhere to a simple lifestyle and only buy necessities					
2. I never buy impulsively					
3. I only shop after seriously considering whether or not an item is absolutely necessary					
4. I am more concerned with personal growth and fulfillment than with material possessions					
5. Even when I have money, I never buy things unexpectedly					
6. I want to grow my own food in the future					
7. In the future, I want to produce my own goods (such as clothes and tools)					
8. I would adopt a simple lifestyle even if I were able to live extravagantly					
9. A simple lifestyle makes you financially independent from others					

APPENDIX 3

Propensity to Resist Consumption and Save Money. Below you will see several purchasing scenarios. Please answer the questions imagining that you *can afford* both options.

1. You bought your laptop last year and it has been working perfectly since then. However, you notice a promotion of a laptop of the same maker twice as fast for \$500. What do you do?

- | | | | | |
|-------------------------------|--------------------------|------------|----------------------------|---------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Definitely buy the new laptop | Maybe buy the new laptop | Either one | Maybe ignore the promotion | Definitely ignore the promotion |

2. For some reason your old fridge is not working anymore. What do you do?

- | | | | | |
|----------------------------|----------------------------------|------------|------------------------|-----------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Buy a new fridge for \$600 | Maybe buy a new fridge for \$600 | Either one | Maybe fix it for \$200 | Definitely fix it for \$200 |

3. Imagine that you are renting an apartment. You can choose apartment A, with rent at \$810 per month, an excellent view (cityscape and a river), and a bright and sunny atmosphere; or you can choose apartment B, with rent at \$490 per month, a poor view (the back of another building), and a somewhat dark and dreary atmosphere. Which apartment would you choose?

- | | | | | |
|------------------------|-------------------|------------|-------------------|------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Definitely Apartment A | Maybe Apartment A | Either one | Maybe Apartment B | Definitely Apartment B |

4. Your office chair has broken, and your back hurts from using an inappropriate chair. You see two options. You can borrow some tools from friends and spend much of your limited free time trying to fix the chair by yourself, or you can spend \$100 buying a new chair. What would you do?

- | | | | | |
|---------------------------------|----------------------------|------------|-----------------------|----------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Definitely try to fix it myself | Maybe try to fix it myself | Either one | Maybe buy a new chair | Definitely buy a new chair |

5. You live alone and have a very generous income. Where would you live?

- | | | | | |
|--|-----------------------------------|------------|-----------------------------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Definitely in a large and luxury place | Maybe in a large and luxury place | Either one | Maybe in a nice, but modest place | Definitely in a nice, but modest place |

6. You need a new kitchen table. You have two options. You can spend \$600 to buy a wooden table that you liked, or you can spend \$100 on tools and parts and build the table yourself. What would you do?

- | | | | | |
|----------------------------------|-----------------------------|------------|-------------------------------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Definitely buy a table for \$600 | Maybe buy a table for \$600 | Either one | Maybe buy tools and parts for \$100 | Definitely buy tools and parts for \$100 |

7. You are walking downtown when you noticed that the thing you always wanted is 50% off. You have two options. You can enter the store and buy it, or you can ignore the promotion. What would you do?

- | | | | | |
|-------------------------|--------------------|------------|----------------------------|---------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Definitely buy the item | Maybe buy the item | Either one | Maybe ignore the promotion | Definitely ignore the promotion |

APPENDIX 3

Continued.

8. You enter a mall and notice that everything is at least half price. How would you react?				
1	2	3	4	5
Definitely buy everything	Maybe buy everything	Either one	Maybe avoid spending	Definitely avoid spending
9. You decided to go out for dinner with a friend. You can go to a fancy restaurant and spend \$50 on your meal; or you can go to another restaurant and spend \$20 on your meal. Which restaurant would you go?				
1	2	3	4	5
Definitely go to the fancy one	Maybe go to the fancy one	Either one	Maybe go to the other restaurant	Definitely go to the other restaurant
10. You have unexpectedly won \$500. How do you react?				
1	2	3	4	5
Definitely go on a shopping spree	Maybe go on a shopping spree	Either one	Maybe avoid spending	Definitely avoid spending
11. It took you some time to save enough money to buy the car of your dreams. What do you do?				
1	2	3	4	5
Definitely buy the car	Maybe buy the car	Either one	Maybe keep the money	Definitely keep the money

REFERENCES

- Arndt, Jamie, Jeff Greenberg, Jeff Schimel, Tom Pyszczynski, and Sheldon Solomon. 2002. To Belong or Not to Belong, That Is the Question: Terror Management and Identification with Gender and Ethnicity. *Journal of Personality and Social Psychology*, 83 (1): 26–43.
- Arndt, Jamie, Sheldon Solomon, Tim Kasser, and Kennon M. Sheldon. 2004a. The Urge to Splurge: A Terror Management Account of Materialism and Consumer Behavior. *Journal of Consumer Psychology*, 14 (3): 198–212.
- . 2004b. The Urge to Splurge Revisited: Further Reflections on Applying Terror Management Theory to Materialism and Consumer Behavior. *Journal of Consumer Psychology*, 14 (3): 225–229.
- Black, Iain R. and Helene Cherrier. 2010. Anti-Consumption as Part of Living a Sustainable Lifestyle: Daily Practices, Contextual Motivations and Subjective Values. *Journal of Consumer Behaviour*, 9 (6): 437–453.
- Borgmann, Albert. 2000. The Moral Complexion of Consumption. *Journal of Consumer Research*, 26 (4): 418–422.
- Burke, Brian L., Andy Martens, and Erik H. Faucher. 2010. Two Decades of Terror Management Theory: A Meta-Analysis of Mortality Salience Research. *Personality and Social Psychology Review*, 14 (2): 155–195.
- Chakravarti, Dipankar. 2006. Voices Unheard: The Psychology of Consumption in Poverty and Development. *Journal of Consumer Psychology*, 16 (4): 363–376.
- Chancellor, Joseph and Sonja Lyubomirsky. 2011. Happiness and Thrift: When (Spending) Less is (Hedonically) More. *Journal of Consumer Psychology*, 21 (2): 131–138.
- Chartrand, Tanya L., Joel Huber, Baba Shiv, and Robin J. Tanner. 2008. Nonconscious Goals and Consumer Choice. *Journal of Consumer Research*, 35 (2): 189–201.

- Chatzidakis, Andreas and Michael S.W. Lee. 2013. Anti-Consumption as the Study of Reasons Against. *Journal of Macromarketing*, 33 (3): 190–203.
- Cherrier, Helene. 2009. Anti-Consumption Discourses and Consumer-Resistant Identities. *Journal of Business Research*, 62 (2): 181–190.
- Cohen, Florette, Daniel M. Ogilvie, Sheldon Solomon, Jeff Greenberg, and Tom Pyszczynski. 2005. American Roulette: The Effect of Reminders of Death on Support for George W. Bush in the 2004 Presidential Election. *Analyses of Social Issues and Public Policy*, 5 (1): 177–187.
- Davis, Brennan and Cornelia Pechmann. 2013. Introduction to the Special Issue on Transformative Consumer Research: Developing Theory to Mobilize Efforts That Improve Consumer and Societal Well-Being. *Journal of Business Research*, 66 (8): 1168–1170.
- Dunn, Elizabeth W., Daniel T. Gilbert, and Timothy D. Wilson. 2011. If Money Doesn't Make You Happy, Then You Probably Aren't Spending It Right. *Journal of Consumer Psychology*, 21 (2): 115–125.
- Etzioni, Amitai. 1998. Voluntary Simplicity: Characterization, Select Psychological Implications, and Societal Consequences. *Journal of Economic Psychology*, 19 (5): 619–643.
- Ferketich, Sandra. 1991. Focus on Psychometrics. Aspects of Item Analysis. *Research in Nursing & Health*, 14 (2): 165–168.
- Ferraro, Rosellina, Baba Shiv, and James R. Bettman. 2005. Let Us Eat and Drink, for Tomorrow We Shall Die: Effects of Mortality Salience and Self-Esteem on Self-Regulation in Consumer Choice. *Journal of Consumer Research*, 32 (1): 65–75.
- Fitzsimons, Gavan J. 2008. Editorial: Death to Dichotomizing. *Journal of Consumer Research*, 35 (1): 5–8.
- Fornell, Claes and David F. Larcker. 1981. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18 (2): 39–50.
- Friese, Malte and Wilhelm Hofmann. 2008. What Would You Have as a Last Supper? Thoughts about Death Influence Evaluation and Consumption of Food Products. *Journal of Experimental Social Psychology*, 44 (5): 1388–1394.
- Greenberg, Jeff, Tom Pyszczynski, Sheldon Solomon, Abram Rosenblatt, Mitchell Veeder, Shari Kirkland, and Deborah Lyon. 1990. Evidence for Terror Management Theory II: The Effects of Mortality Salience on Reactions to Those Who Threaten or Bolster the Cultural Worldview. *Journal of Personality and Social Psychology*, 58 (2): 308–318.
- Greenberg, Jeff, Sheldon Solomon, and Tom Pyszczynski. 1997. Terror Management Theory of Self-Esteem and Cultural Worldviews: Empirical Assessments and Conceptual Refinements. *Advances in Experimental Social Psychology*, 29: 61–139.
- Harmon-Jones, Eddie, Linda Simon, Jeff Greenberg, Tom Pyszczynski, Sheldon Solomon, and Holly McGregor. 1997. Terror Management Theory and Self-Esteem: Evidence That Increased Self-Esteem Reduced Mortality Salience Effects. *Journal of Personality and Social Psychology*, 72 (1): 24–36.
- Heine, Steven J., Motoko Harihara, and Yu Niiya. 2002. Terror Management in Japan. *Asian Journal of Social Psychology*, 5 (3): 187–196.
- Hogg, Margaret K., Emma N. Banister, and Christopher A. Stephenson. 2009. Mapping Symbolic (Anti-) Consumption. *Journal of Business Research*, 62 (2): 148–159.
- Iwata, Osamu. 1997. Attitudinal and Behavioral Correlates of Voluntary Simplicity Lifestyles. *Social Behavior and Personality*, 25 (3): 233–240.
- . 1999. Perceptual and Behavioral Correlates of Voluntary Simplicity Lifestyles. *Social Behavior and Personality*, 27 (4): 379–386.
- . 2006. An Evaluation of Consumerism and Lifestyle as Correlates of a Voluntarily Simplicity Lifestyle. *Social Behavior and Personality*, 34 (5): 557–568.
- Iyer, Rajesh and James A. Muncy. 2009. Purpose and Object of Anti-Consumption. *Journal of Business Research*, 62 (2): 160–168.

- Jonas, Eva, Jeff Schimel, Jeff Greenberg, and Tom Pyszczynski. 2002. The Scrooge Effect: Evidence That Mortality Salience Increases Prosocial Attitudes and Behavior. *Personality and Social Psychology Bulletin*, 28 (10): 1342–1353.
- Kasser, Tim. 2003. *The High Price of Materialism*. London: MIT Press.
- . 2005. Frugality, Generosity, and Materialism in Children and Adolescents. In *What Do Children Need to Flourish?* edited by Kristin Anderson Moore and Laura H. Lippman, (357–373). New York, New York, US: Springer.
- Landau, Mark J. and Jeff Greenberg. 2006. Play It Safe or Go for the Gold? A Terror Management Perspective on Self-Enhancement and Protection Motives in Risky Decision Making. *Personality and Social Psychology Bulletin*, 32 (12): 1633–1645.
- Lastovicka, John L., Lance A. Bettencourt, Renee Shaw Hughner, and Ronald J. Kuntze. 1999. Lifestyle of the Tight and Frugal: Theory and Measurement. *Journal of Consumer Research*, 26 (1): 85–98.
- Lee, Michael S.W., Dominique Roux, Helene Cherrier, and Bernard Cova. 2011. Anti-Consumption and Consumer Resistance: Concepts, Concerns, Conflicts, and Convergence. *European Journal of Marketing*, 45 (11/12): 1680–1687.
- Mandel, Naomi and Steven J. Heine. 1999. Terror Management and Marketing: He Who Dies with the Most Toys Wins. *Advances in Consumer Research*, 26: 527–532.
- Mick, David Glen. 2008. Introduction: The Moment and Place for a Special Issue. *Journal of Consumer Research*, 35 (3): 377–379.
- Nepomuceno, Marcelo Vinhal and Michel Laroche. 2015. The Impact of Materialism and Anti-Consumption Lifestyles on Personal Debt and Account Balances. *Journal of Business Research*, 68 (3): 654–664.
- Nunnally, Jum C. and Ira H. Bernstein. 1994. *Psychometric Theory*. New York: McGraw-Hill.
- Ozanne, Julie L., Simone Pettigrew, Crockett David, A. Fuat Firat, Hilary Downey, and Melanie Pescud. 2011. The Practice of Transformative Consumer Research: Some Issues and Suggestions. *Journal of Research for Consumers*, 19: 1–7.
- Pyszczynski, Tom, Jeff Greenberg, Sheldon Solomon, Jamie Arndt, and Jeff Schimel. 2004. Why Do People Need Self-Esteem? A Theoretical and Empirical Review. *Psychological Bulletin*, 130 (3): 435–468.
- Richins, Marsha L. 2004. The Material Values Scale: Measurement Properties and Development of a Short Form. *Journal of Consumer Research*, 31 (1): 209–219.
- Rick, Scott I., Cynthia E. Cryder, and George Loewenstein. 2008. Tightwads and Spendthrifts. *Journal of Consumer Research*, 34 (6): 767–782.
- Rosenberg, Morris. 1965. *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.
- Rosenblatt, Abram, Jeff Greenberg, Sheldon Solomon, Tom Pyszczynski, and Deborah Lyon. 1989. Evidence for Terror Management Theory I: The Effects of Mortality Salience on Reactions to Those Who Violate or Uphold Cultural Values. *Journal of Personality and Social Psychology*, 57 (4): 681–690.
- Routledge, Clay, Brian Ostafin, Jacob Juhl, Constantine Sedikides, Christie Cathey, and Jiangqun Liao. 2010. Adjusting to Death: The Effects of Mortality Salience and Self-Esteem on Psychological Well-Being, Growth Motivation, and Maladaptive Behavior. *Journal of Personality and Social Psychology*, 99 (6): 897–916.
- Shama, Avraham. 1981. Coping with Stagflation: Voluntary Simplicity. *Journal of Marketing*, 45 (3): 120–134.
- Taubman-Ben-Ari, Orit and Liora Findler. 2006. Motivation for Military Service: A Terror Management Perspective. *Military Psychology*, 18 (2): 149–159.
- Watson, David, Lee A. Clark, and Auke Tellegen. 1988. Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54 (6): 1063–1070.
- Zavestoski, Stephen. 2002. The Social-Psychological Bases of Anticonsumption Attitudes. *Psychology & Marketing*, 19 (2): 149–165.