Unraveling the Socioeconomic Layers Leading to Materialism: Exploring the Mediating Role of Happiness and Moderating Influence of Gratitude on Materialism

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Abstract

Unraveling the Socioeconomic Layers Leading to Materialism: Exploring the Mediating Role of Happiness and Moderating Influence of Gratitude on Materialism

Grace Miller

In a world where consumption is becoming increasingly accessible with online retailers, where social media influencers equate material possessions to happiness, convenience, or success, and where shopping has been proven to boost our mood, it is no wonder that consumers are struggling to control their buying behaviour. This research examines the impact of social classes on materialism, focusing on the mediating role of happiness and the moderating role of gratitude. An experimental research design was implemented, and two online surveys were utilized to collect data. In study 1, an unexpected, though interesting, effect of perceived social class on materialism was found. It was also found, as predicted, an effect of perceived social class on happiness, which in turn, predicted materialistic values; however, the mediating effect of happiness was not found to be significant. In study 2, as predicted, an effect between perceived happiness and gratitude was found. Additionally, gratitude had an effect on materialism. However, the moderating effect of gratitude was not found to be significant. The findings of this study will provide valuable insights into how different social classes impact happiness levels, how happiness plays a role in materialism, and how practicing gratitude can influence your materialism levels. This study also offers practical implications for marketers to effectively target and position marketing messages, and for consumers to make more thoughtful purchase decisions that may enhance their well-being, as well as society's.

Key words: Social Class, Happiness, Materialism, Gratitude, Marketing, Well-being

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Table of Contents

List of Figures

List of Tables

Introduction

With more and more shopping malls and online retailers appearing, along with the desire for a luxurious and leisurely lifestyle increasing, consumers struggle to control their purchasing behaviour (Rudykh, 2018). People are becoming victim to oniomania, the compulsive desire to shop regardless of needs, 'thingism', the addiction to materials rather than values, and affluenza, a social condition to desire more but then succumb to overload, debt, anxiety, and waste (Rudykh, 2018). Not only is overconsumption and materialism more present because of its ease of accessibility, but shopping has been psychologically proven to boost our mood and make us feel better (Parker-Pope, 2005) and is therefore sought after. This is because it is traced to the dopamine chemical in our brains which plays a crucial role in our physical and mental health as it is associated with feelings of pleasure and satisfaction (Parker-Pope, 2005).

One question that came to mind during this preliminary research was what makes someone possess or succumb to more materialistic values and behaviours? Their wealth, education, or job? Their perception of where they "fit" in society? Their ideas surrounding success and happiness? Or maybe they lack general happiness and life satisfaction and are looking for that dopamine boost via shopping? Furthermore, is there a way interrupt these materialistic thinking patterns and behaviours? For example, if people engaged in activities that produce the same happiness chemicals that shopping does, they may not feel the need to purchase or consume anything. Research has actually found that dopamine is released when practicing mindfulness techniques (Esch, 2013). Mindfulness techniques can include breathing exercises, meditation, and practicing gratitude (Hirshberg at al., 2018). More specifically, practicing gratitude has been linked to the production of dopamine and elevating positive emotions such as happiness (Solaka, 2016). It has also been found to increase positive affect

significantly more than other mindfulness techniques such as breathing (Hirshberg at al., 2018). Furthermore, gratitude has been found to decrease the craving for things we do not have or need (Solaka, 2016). Practicing gratitude could therefore be a way to increase dopamine levels, and subsequently reduce materialistic values and behaviours.

This preliminary research guided the topic of this paper to be focused on materialism, social class, happiness, and wellbeing. The central questions that will be investigated throughout my thesis are as follows: Does social class affect one's materialistic values and tendencies? And is this relationship explained by one's happiness levels? Furthermore, does being more grateful have an effect on one's emotions and therefore change the outcome of the way they view consumption?

In this research, perceived social class will therefore be the independent variable and manipulated in my studies. Materialism will be the dependent variable which will allow us to understand if there is a shift in materialistic values and tendencies depending on one's perceived social class. I will further test whether the proposed effect of perceived social class on materialism will be mediated by perceived happiness. And lastly, I will examine if gratitude moderates the effect.

Theoretical Background

Social Class and Materialism

As previously mentioned, materialism is becoming more present in today's society. Materialism is a value that places emphasis on material wealth in which material possessions are considered to be one's measure of success, the center of one's life, and the source of one's

happiness (Li et al., 2018). Richins and Dawson (Richins, 2004) created the well-known Materialistic Values Scale to measure one's materialism based on three components: success, centrality, and happiness. The success subscale refers to the concept that people will judge their own success, and the success of others, based on the quantity and quality of material possessions they have. The centrality subscale refers to how much emphasis and importance someone places on material items. Lastly, the happiness scale refers to the belief that owning material items will bring more happiness to one's life, for example, having the mentality of "I will be happier if I could afford to buy more things" (Sirgy et al., 2021). Breaking down materialism into these three subscales allows for a more detailed understanding of someone's materialistic values, for example, maybe someone realizes material possessions won't make you happy, but they also think that if you do have them, you must be successful as you were able to afford them. There are different factors that can make someone more or less materialistic, in fact, there is increasing evidence that one's social class can have a profound and lasting effect on their psychological state and behaviour, which could in turn impact their desire for material wealth (Li et al., 2018). Social class encompasses both objective and subjective socio-economic status (SES) (American Psychological Association, 2015). Objective SES is one's economic and social position in relation to others based on their income, education, and occupation whereas subjective SES is how someone perceives their social position (i.e. their income, education, and occupation) in comparison to others (Huang et al., 2017). In this thesis, I will be looking at subjective SES as I want to know how someone views themselves in comparison to others in their society. For example, someone who is objectively in a high social class based on their income, education, and occupation, may still feel inferior to others, may not be as happy because they have more stress to deal with, may wish they lived a different lifestyle, and so on. Additionally, I also wanted to

look specifically at subjective SES as marketers can influence perceived socioeconomic status through advertising or brand positioning.

Previous research has found that social class and materialism have a negative relationship in that low social classes have higher materialistic tendencies, and high social classes have lower materialistic tendencies. Chaplin et al. (2014) provide a first look of consumer values in children of low-income families and found that impoverished youth, ages 11+, have been found to become more materialistic, which was also associated with their lower self-esteem. Furthermore, Li et al. (2018) based their research on the aforementioned study and confirmed these findings, however, adapted their research to look at the causal relationship between variables. Their research was based on college students and results found that those in lower social classes tended to have higher materialism levels compared to those in higher social classes as a way to compensate for their lower self-esteem. These studies on the materialism levels among children and adolescents have revealed how damaging it can be to the emotional well-being of the younger generations, but also how it manifests in adulthood, especially for those more vulnerable to materialism in lower-income social classes (Chaplin et al., 2014). While these studies primarily look at the relationship between social class and materialism amongst younger people including children, adolescents, and students, this study will focus on understanding this relationship in adults. Based on these studies, I can hypothesize the following:

> **H1**: Perceived social class will influence materialism such that consumers who perceive to be in a low social class condition, compared to those in a high social class condition, will experience (**a)** higher values on the success subscale of materialism, **(b)** higher values on the centrality subscale of materialism, and **(c)** higher values on the happiness subscale of materialism.

The Mediator of Happiness

As mentioned, low self-esteem was a re-occurring variable relating to the relationship between social class and materialism. Low social classes were found to have lower self-esteem which led to higher materialism levels. Other studies have also found that negative emotional and mental states such as envy (Zheng et al., 2018), anxiety and depression (Otero-López & Villardefrancos, 2013), and negative affect (Roberts et al., 2015), have positive relationships with materialistic values. However, this research will alternatively focus on positive emotions; more specifically it will look at happiness as a mediator between perceived social class and materialism. According to the Oxford Happiness Inventory, happiness is comprised of three main psychological components: the frequency and degree of positive affect or joy, the average level of satisfaction over a period of time, and the absence of negative feelings such as anxiety and depression (Francis, 2014). The reason for looking at happiness specifically is that it has been found to have a strong relationship with self-esteem. Happiness is also one of the factors that helps to describe materialism, therefore, it seemed to be an interesting variable to investigate, especially when looking at the happiness subscale of materialism. Lastly, happiness is an overarching goal for many people, and an emotion that is hard to attain seeing as there are many factors and other emotions that could alter it (Baumeister et al., 2003), therefore gaining a better understanding on at least a few of the other elements that impact it will be beneficial for society and future literature.

Prior research has found that there is a negative relationship between social class and happiness. Piff and Moskowitz (2018) explored whether higher social class is associated with happiness and found that different social classes possess differences in the positive emotions that are central to happiness. Specifically, they found that upper class individuals have greater self-

oriented feelings of pride, commitment, and amusement whereas lower class individuals have more other-oriented feeling such as compassion, love, and awe. Furthermore, social class has been found to have a negative relationship with happiness in that those in lower social classes are happier and those in higher social classes are less happy (Lee & Baek, 2016). This leads us to hypothesize the following:

> **H2:** Consumers perceived to be in a low social class will have higher happiness levels than those perceived to be in a high social class.

Other studies have looked at the relationship between emotions and materialism. It has been found that an increase in material goods is not met with a corresponding increase in happiness and those who have materialistic aspirations will have decreased happiness and psychological health (Van Boven, 2005). Materialism has also been found to have a negative relationship with life satisfaction, positive affect, and gratitude (Roberts et al., 2015). Furthermore, a study conducted by Ryan and Dziurawiec (2001) found that those who have higher levels of materialism are less satisfied with their life in general. Additionally, the relationship between personal well-being and materialism has been researched in the context of a meta-analysis and has found that materialism was related to a significantly lower well-being (Dittmar et al., 2014). I can therefore hypothesize the following:

> **H3:** Perceived happiness will predict materialism such that perceived happiness will **(a)** negatively predict values on the success subscale of materialism, **(b)** negatively predict values on the centrality subscale of materialism, and **(c)** negatively predict values on the happiness subscale of materialism.

Lastly, a few studies have looked at this topic using similar variables to those in this study or some of the same variables, but in a different context. These studies provide further support and understanding to the current research being conducted. Yu et al. (2019) looked at the relationship between household income and satisfaction with standard of living (SOL), and subjective well-being (SWB), moderated by materialism. Results show that households with higher income experienced a positive influence on their standard of living, as well as on their subjective well-being. Furthermore, the income-SOL relationship was found to be negatively moderated by the happiness subscale of materialism. Additionally, a study conducted by Lee et al. (2018) looked at whether material or experiential purchases made people in different social class happier and found that lower social class individuals were made happier from material purchases or were equally happy with material and experiential purchases. I can therefore hypothesize the following:

> **H4**: Perceived happiness will mediate the relationship between perceived social class and **(a)** values on the success subscale of materialism, **(b)** values on the centrality subscale of materialism, and **(c)** values on the happiness subscale of materialism.

The Moderator of Gratitude

Practicing gratitude has been found to re-create the same chemical reaction in the brain, that is, producing dopamine, as shopping does, while also reducing the cravings for things we do not have or need (Solaka, 2016). Many studies have therefore looked at gratitude in relation to happiness and materialism. However, the relationship between gratitude and social class is a much less researched topic.

Looking at the relationship between social class and gratitude, one study (Anicich et al., 2022) has found that people in society with more or less relative power had a significant relationship with gratitude. Relative power in this case was measured by professional ranking and can be defined in this context as "the stability of one's vertical orientation based on the ratio of upward to downward interactions that one is like to experience given the composition of one's social network" (Anicich et al., 2022). More specifically, those with low power had more feelings and expressions of gratitude after benefiting from a favor than did those in high power. This can be explained by the reasoning that low-power individuals depend on the perceptions and evaluations of high-power individuals and therefore are more grateful when they have been evaluated positively or rewarded by those with high-power. Another experiment within this study revealed that part of the reason for this could be the increased psychological entitlement of individuals with higher power. This study helps us support and predict the relationship between perceived social class and gratitude as relative power, being how one perceived themselves in comparison to others in the vertical ranking of their possession, is a good representation of what is being measured in terms of social class. However, another study (Reckart, et al., 2017) has been found to have opposing results in that adolescents from lower socioeconomic backgrounds reported lower gratitude levels. A possible explanation for this could be that because those from lower SES backgrounds were found to have more stressful life events which in turn lowers well-being including gratitude. Furthermore, a study (Alam, 2023) examining the role of gratitude on the relationship between socioeconomic status and relationship functioning revealed that those lower in socioeconomic status reported lower gratitude levels. Lastly, Tong et al. (2022) conducted a study which found that those with higher income are more confident, proud, and content, and less sad, ashamed, and afraid than those with lower incomes, however, income did

not predict gratitude. Previous research has not looked at this relationship extensively and there are inconsistencies across the research available.

Furthermore, many studies have looked at the relationship between gratitude and materialism, yielding consistent results in that these two variables have a negative relationship. Chaplin et al. (2018) conducted two studies on the relationship between gratitude and materialism. It was found that not only are children and adolescents who have a grateful disposition less materialistic, but those who practice interventions designed to increase gratitude, such as journaling, were significantly less materialistic. Furthermore, Sadia et al. (2022) recruited a sample of married adults and studied how high materialistic values affect their satisfaction with marital life, and if gratitude could alter this relationship. Results found that gratitude mitigated the negative relationship found between materialism and marital satisfaction. Additionally, materialism has been found to be associated with negative emotions such as shame, regret, low gratitude, and hubristic pride, however shame was also strongly related to the envy aspect of materialism and was on the opposite end of the scale from gratitude (Watson, 2015). Therefore, I can hypothesize the following:

> **H5:** Gratitude will moderate the effect of perceived social class on materialism such that consumers who practice gratitude will report low levels of materialistic values, regardless of their perceived social class. However, among consumers who do not practice gratitude, those perceived to be in a low social class condition, compared to those in a high social class condition, will report higher values on all three subscales of materialism.

Gratitude and happiness have also been found to have a significant positive relationship in numerous studies across varying demographics including those conducted by Witvliet et al.

(2018), Kauser (2018), and Toepfer (2011). These studies all yield the same conclusion in that those who are more grateful or who practice gratitude are happier. Additionally, Watkins et al. (2003) conducted 2 experiments in which both yielded significant results indicating that grateful thinking improves one's mood and their overall subjective well-being. Subjective well-being and gratitude were also studied in 3 experiments conducted by Emmons and McCullough (2003) and similar results were found in that those in the gratitude outlook condition exhibited increased well-being relative to the hassle and control groups.

Past research has also studied gratitude both as a moderator and as a mediator between life satisfaction and materialism. Firstly, a study conducted by Tsang et al. (2014) revealed that gratitude was a direct mediator between materialism and life satisfaction. This relationship can be explained by the lower gratitude levels that people with high materialistic values have. Roberts et al. (2015) found gratitude as a significant moderator between materialism and life satisfaction. Individuals who had high materialistic values had decreased life satisfaction when either gratitude or positive affect were also low. Additionally, individuals who had high gratitude levels had less of a relationship between materialism and negative affect. Based on these studies, I can hypothesize the following:

> **H6:** The interaction between perceived happiness and gratitude will have a significant effect on the three subscales of materialism in that those in the high gratitude condition will have lower materialism levels than those in the control condition.

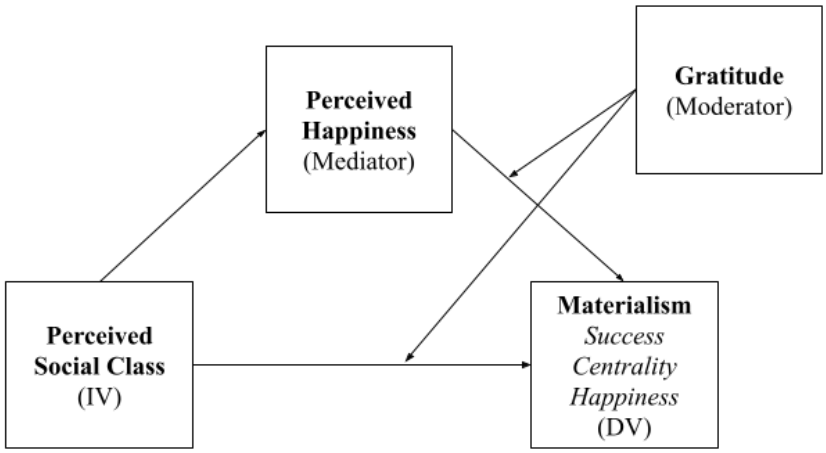
Based on the aforementioned studies, happiness, positive affect, or life satisfaction are all factors that have been found to have significant relationships with social class, gratitude, and

materialism (see figure 1 for a graphical depiction of the conceptual model), therefore, I can hypothesize the following:

> **H7**: Perceived happiness will mediate the relationship between perceived social class, and materialism in the control condition, however, in the high gratitude condition there will be no mediation effect as gratitude will interfere with the relationship between perceived social class and materialism.

Figure 1

Conceptual Framework



Studies Overview

The seven proposed hypotheses will be tested across two studies. The first study looks at the mediation effect of perceived happiness on perceived social class and materialism and tests hypotheses 1, 2, 3, and 4. The second study builds upon the findings from study 1 while testing hypotheses 5, 6, and 7 which explores the moderating role of gratitude in the relationship between perceived happiness and materialism.

Study 1: Examining the Impact of Perceived Social Class on Materialistic Values and the Mediating Role of Perceived Happiness

Study 1 looked at the effect of perceived social class on materialistic values, and whether this effect was mediated by perceived happiness. Hypotheses 1, 2, 3, and 4 were tested in this study; with hypothesis 1 focusing on the effect of perceived social class on materialism, hypothesis 2 focusing on the effect of perceived social class on perceived happiness, hypothesis 3 focusing on the effect of perceived happiness on materialism, and lastly, hypothesis 4 focusing on the mediation effect of perceived happiness on perceived social class and materialism.

Method

Design & Participants

In this study, participants were acquired through Amazon's Mechanical Turk (MTurk) platform and participated in a one-factor (perceived social class: low versus high) between-subject experiment. No specific inclusion or exclusion criteria was used to select participants. In total, 117 participants successfully completed this study and were compensated $1.00 USD for their participation. However, the monetary compensation was only given if the participant successfully completed the survey, meaning those who consented to participating, completed all the tasks, and answered the attention checks correctly.

Procedure

Participants were asked to complete three tasks in this study. In the first task, participants were asked to look at an image of a numbered ladder. The ladder represented the levels of social class within a society. This is known as the MacArthur Scale of Subjective Social Status which

has been used in numerous studies and across varying demographics, making its reliability and validity high (Piff et al., 2010; Li et al., 2018; Giatti et al., 2012; Ferreira et al., 2018). In order to manipulate the participants perceived social class, they were presented with one of two scenarios; those in the high social class condition were told to imagine someone either at the very bottom of the ladder and to write about how they believe an interaction with this person would go. This aims to make them feel as though they are higher on the ladder by thinking about and comparing themselves to someone at the very bottom. Those in the low social class condition were given the same instructions but instead were told to imagine someone at the very top of the ladder. This aims to make them feel as though they are lower on the ladder by thinking about and comparing themselves to someone at the top. This writing task has been often used in previous research to activate rank-related states (Piff et al., 2010). The instructions for this writing task can be found in Appendix A.

The second task was used to measure participants happiness levels (Etkin & Mogilner, 2016). Specifically, participants were asked, "How happy do you feel right now?" and "How satisfied do you feel right now?". Both questions were structured using a seven-point Likert Scale with 1 being "not at all" and 7 being "very."

The third task was used to measure participants materialistic values using the Materialistic Values Scale (Richins, 2004), a common measure of materialism in prior research (Dittmar et al., 2014; Otero-López & Villardefrancos, 2013; Roberts et al., 2015). This scale consisted of 18 items, subdivided into three subscales that measure three aspects of materialism: success, centrality, and happiness. All items were structured using a five-point Likert scale from 1 being "Strongly Disagree" to 5 being "Strongly Agree"; the complete list of items can be found in Appendix B.

In order to ensure that participants were engaged and attentive while completing the survey, and to guarantee the validity of the study, two attention check questions were asked at the end of the survey. The first asked about the item shown in the first task; "In the first task, you were shown an image of a ___", with the options being *ball*, *ladder*, and *rock*, and the answer being "ladder." The second question asked about the topic of the writing task; "In the first task, were you asked to write about the importance of music for children under the age of 10?" with the answer being "No". If both questions were answered correctly, then they moved onto the last section of the study.

The last section of the survey focused on demographic questions including age, gender, and income. Age was measured by asking the participants to simply write their age in the space provided. Gender was measured by asking participants to describe themselves given the following options: male, female, non-binary, prefer not to say, or prefer to self-describe. Household income was then measured by asking participants their household income ranging from less than $15,000 (lowest income = 1) to more than $150,000 (highest income = 7). Lastly, participants were asked two optional questions with an open-ended test box; firstly, what they believed the researcher wished to examine in this study, and secondly, if they have any comments for the researcher.

Results

Data exclusion

Prior to data analyses, some participants were excluded from the study in order to ensure the validity of the data. The exclusion criteria included the following: (1) writing "nonsense" in the writing task, meaning responses that did not answer the question or were completely

unrelated to the task, (2) participants whose income = 1 (lowest income), and (3) participants whose income = 7 (highest income). The reason for the two latter exclusionary criteria is because regardless of the condition they were assigned, the manipulation would not be effective. Specifically, those in the low social class condition were asked to compare themselves to individuals in a higher social class, with the understanding that this manipulation would make them feel like they are in a lower social class; however, if individuals who are already in the highest social class (i.e. the highest income level) are asked to compare themselves to someone in the same category as them, then it is likely that their perceived social class would remain stable. Furthermore, individuals in the lowest social class (i.e., the lowest income level) will already see everyone else as higher than them and therefore if they were asked to imagine someone at the top of the social class ladder, the manipulation would again be less likely to shift their perceptions of social class. Similarly, those in the high social class condition were asked to compare themselves to individuals in a lower social class, with the understanding that this manipulation would make them feel like they are in a higher social class; however, if individuals who are already in the lowest social class (i.e. the lowest income level) are asked to compare themselves to someone in the same category as them, then it is likely their perceived social class would remain stable. Furthermore, individuals in the highest social class (i.e., highest income level) will already see everyone else as lower than them and therefore if they were asked to imagine someone at the bottom of the social class ladder, the manipulation would again be less likely to shift their perceptions of social class.

Based on this set of exclusion criteria, eight participants were removed for criteria 1 (writing "nonsense"), five were removed for criteria 2 (having the lowest income), and three were removed for criteria 3 (having the highest income). After these participants were removed,

a total of 101 participants remained. Additionally, the two awareness questions presented at the end of the survey about what participants believed the researcher wished to examine in this study, and if participants had any additional comments were also reviewed. After reviewing the answers to these questions, no participants guessed the purpose of the study, and there were no concerning comments, thus, no additional participants were removed. Therefore, the final sample used for this study is n =101 with 43 being females, 55 being males, 1 non-binary, and 2 who prefer not to say. The average age among these participants was 39.23 (SD = 11.15). See table 1 for additional details on the demographics of this study. By excluding participants based on the previously mentioned criteria, the validity and reliability of the data therefore increases.

Table 1

Demographics (Study 1)

Gender	Percentage
Male	54.5 %
Female	42.6%
Non-Binary	1.0%
Prefer not to say	2.0%

Income	Percentage
< $15,000	0%
$15,001 - $35,000	9.9%
$35,001 - $50,000	22.8%
$50,001 - $75,000	30.7%
$75,001 - $100,000	27.7%
$100,001 - $150,000	8.9%
> $150, 000	0%

Testing for Potential Covariates

Prior to conducting any analyses of the data, the three materialism subscales (success, centrality, and happiness) were created out of the eighteen-item scale by averaging the answers of the items that fell within each subscale. Some of these items had to be reverse coded before being averaged. Cronbach's alpha was used to measure reliability amongst these items. The success subscale, which included 6 items, had a Cronbach's $\alpha = .892$. The centrality subscale included 7 items and had a Cronbach $\alpha = .771$. The third subscale, happiness, composed of 5 items had a Cronbach $\alpha = .865$. For the subscales to have good reliability, Cronbach's alpha must be greater that .70, and all three subscales met this requirement. I will be analyzing these three subscales separately as to follow the conventional method used in prior research.

I considered two potential covariates that may have influenced the relationship between the independent variable (perceived social class) and the dependent variables (the three subscales of materialism): age and income. I did not predict that age would yield significant results, however for the sake of completeness, I conducted the appropriate statistical tests to confirm this. Income, however, was considered a potential covariate in the relationship as one's actual income may impact their perception of their social class as well as their materialistic values. It was determined, prior to data analyses, that if any of the correlations between the potential covariate and any of the three dependent variable subscales had a significant *p*-value of less than .05 and a correlation of greater than .5 (indicating a moderate, or strong relationship), then the potential covariate would be further investigated.

Age. The correlation between age and success ($r = -.159$, $p = .113$) was not significant while the correlation between age and centrality ($r = -.186$, $p = .063$) was moderately significant,

and the correlation between age and happiness (r = -.197, p = .049) was significant. Considering that all three correlations showed weak relationships, with all *r's* at less than .5, age was not included as a covariate in the analyses.

Income. None of the correlations between income and success (r = .001, p = .989), centrality (r =.096, p = .342) and happiness (r = -.138, p = .169) were significant, thus, income was not included as a covariate in the analyses.

Effects of Perceived Social Class on Materialistic Values related to Success, Centrality, and Happiness

A MANOVA was then conducted to analyze differences in participants' materialistic values relating to success, centrality, and happiness as a function of their perceived social class. Perceived social class condition (0 = low and 1= high) was entered as the independent variable, and the three subscales of materialism (all continuous) were entered as dependent variables. The results revealed that perceived social class did not have a significant effect on the success subscale of materialism (F(1, 99) = .38, p = .541), indicating that there was no statistical difference between participants materialistic values relating to success in the low social class condition (M = 2.55, SD = 1.06) relative to those in the high social class condition (M = 2.67, SD = .96). This result does not support H1a. Furthermore, perceived social class did not have a significant effect on the centrality subscale of materialism (F(1, 99) = .43, p = .514), indicating that there was no statistical difference between participants materialistic values relating to centrality in the low social class condition (M = 2.62, SD = .75) relative to those in the high social class condition (M = 2.72, SD = .77). This result does not support H1b. Lastly, the results revealed a moderately significant effect of perceived social class on the happiness subscale of

materialism ($F(1, 99) = 3.77$, $p = .055$), indicating that participants in the high social class condition were more likely to have higher materialistic values relating to happiness ($M = 3.21$, SD = 1.07) relative to those in the low social class condition ($M = 2.80$, SD = 1.04), which did not provide support for H1c. Please see figures 2, 3 and 4 for graphical depictions of the results.

Figure 2

Perceived Social Class on the Success Subscale of Materialism

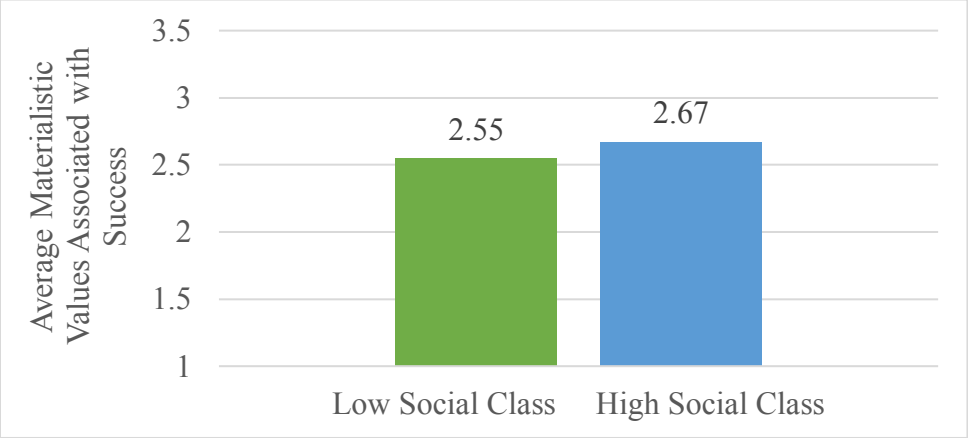


Figure 3

Perceived Social Class on the Centrality Subscale of Materialism

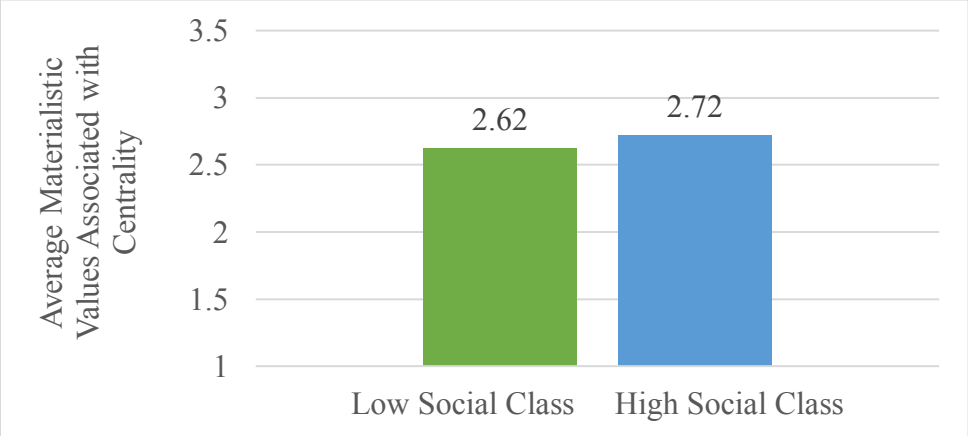
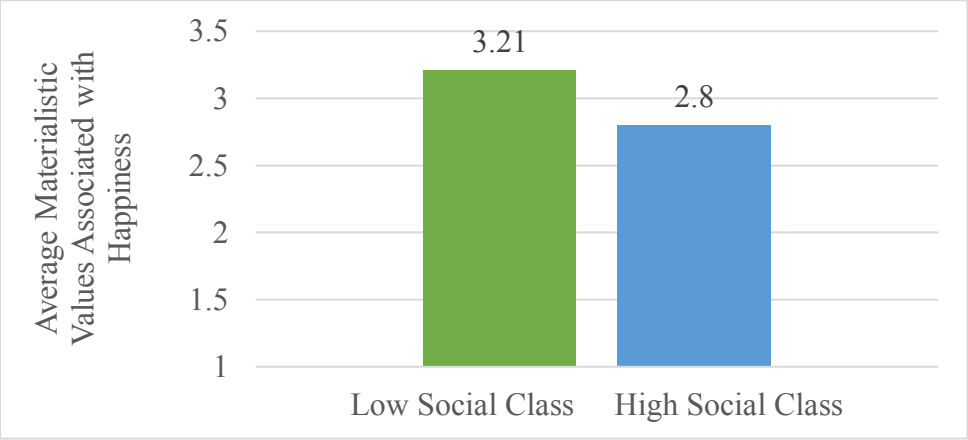


Figure 4

Perceived Social Class on the Happiness Subscale of Materialism



Effects of Perceived Social Class on Perceived Happiness

The mediator, perceived happiness, was measured using 2 items; "how happy are you right now?" and "how satisfied are you right now?". Pearson's correlation test was conducted to examine the relationship between these items. The results of this test revealed a strong positive correlation (r =.884, p < .001), indicating that individuals who scored high on measures of happiness also tended to score high on measures of satisfaction. This suggests that these two dimensions of happiness are highly related and likely measure similar underlying constructs. Therefore, the happiness and satisfaction variables were averaged to create a composite measure of perceived happiness.

An ANOVA was then conducted to analyze differences in perceived happiness as a function of perceived social class. The perceived social class conditions (0 = low and 1 = high) that participants were exposed to was entered as the fixed factor, and the perceived happiness measure was entered as a dependent variable. The results revealed no significant effect of

perceived social class on perceived happiness ($F(1, 99) = 2.45$, $p = .121$), indicating that there was no statistically significant difference in perceived happiness in individuals in the low social class condition ($M = 5.09$, SD = 1.50) relative to those in the high social class ($M = 4.62$, SD = 1.53). After reflection upon these results, using satisfaction as a measure for happiness may not have been the best way to assess perceived happiness. The two measures of happiness were then measured independently.

Firstly, an ANOVA using the satisfaction measure was conducted. The perceived social class conditions (0 = low and 1 = high) that participants were exposed to was entered as the fixed factor, and the satisfaction measure of perceived happiness was entered as a dependent variable. The results revealed no significant effect of perceived social class on overall happiness ($F(1, 99) = 1.69$, $p = .197$), indicating that there was no statistically significant difference in satisfaction in individuals in the low social class condition ($M = 5.04$, SD = 1.58) relative to those in the high social class ($M = 4.63$, SD = 1.61).

Secondly, an ANOVA using the happiness measure of perceived happiness was conducted. The perceived social class conditions (0 = low and 1 = high) that participants were exposed to was entered as the fixed factor, and happiness was entered as a dependent variable. The results revealed a marginally significant effect of perceived social class on happiness ($F(1, 99) = 3.05$, $p = .084$), indicating that participants in the low social class condition were happier ($M = 5.14$, SD = 1.51) relative to those in the high social class ($M = 4.16$, SD = 1.55). In summary, when the satisfaction measure was removed, and perceived happiness was measured using only "how happy do you feel right now?", the results were marginally significant, therefore marginally supporting H2, which states that those perceived to be in a low social class will have

higher happiness levels. This one-item measure of perceived happiness will be used in the subsequent analyses.

Effects of Perceived Happiness on Materialism

A series of linear regressions were conducted to analyze each subscale of materialism as a function of perceived happiness. Perceived happiness was entered as the fixed factor, and the three subscales of materialism were entered as the dependent variables. Firstly, the results revealed that perceived happiness had a significant and negative relationship with the success subscale of materialism (b = -.387, t = -4.178, p < .001), Secondly, results revealed that perceived happiness had a significant and negative relationship with the centrality subscale of materialism (b = -.318 t = -3.336, p = .001). Lastly, results revealed that perceived happiness had a significant and negative relationship with the happiness subscale of materialism (b = -.526, t = -6.154, p < .001). In summary, these results support H3a, H3b, and H3c as there was a significant negative relationship between perceived happiness levels and each of the three subscales of materialism.

Testing for Mediation (Perceived Happiness)

Given that perceived social class significantly influenced the happiness subscale of materialism, but in an opposite direction than predicted, I no longer expected that perceived happiness would be found to be a mediator. Further, due to the non-significant effects between perceived social class and the centrality and success subscales of materialism, I did not expect that perceived happiness would be found to be a mediator in these conditions either. Despite this, I conducted mediation analyses, using each sub-scale as dependent variables, for the sake of completion. To anticipate, there was no evidence of an indirect effect of perceived social class,

though perceived happiness, on any of the subscales of materialism, therefore, H4a, H4b, and H4c were not supported. Below, I report the results using the happiness subscale of materialism as the dependent measure, seeing as it was the only subscale with a significant relationship to materialism. The results for the other two subscales can be found in Appendix C. Please see table 2 for the complete results from the analysis.

Table 2

Perceived Happiness as a Mediator (Study 1)

	95% CI: Perceived Happiness (Indirect Effect)	a	b	c	c'
Success subscale	[-.0127, 3.140]	-.53*	-.005***	.12	-.005
Centrality subscale	[-.0098, .1771]	-.53*	.03***	.10	.03
Happiness subscale	[-.0188, .3969]	-.53*	-.33***	.41*	.23

Notes: (a) independent variable → mediator, (b) mediator → dependent variable, (c) independent variable → dependent variable, (c') independent variable → dependent variable when mediator is included in model. *$p < .10$, **p < .05, ***p < .01

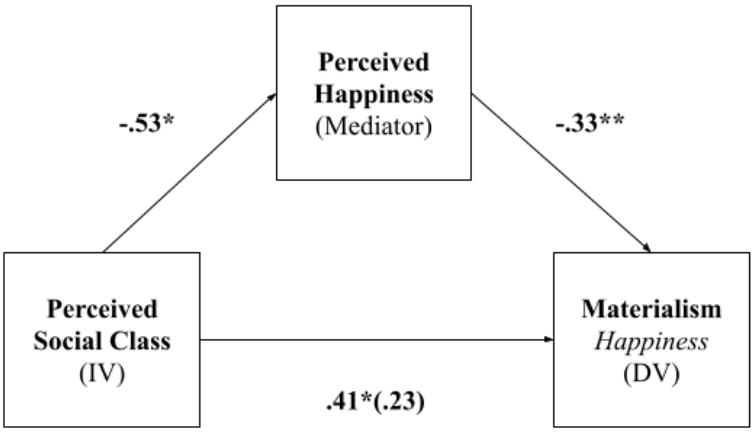
To test whether perceived happiness is a mediator between the happiness subscale and perceived social class, an analysis was conducted with PROCESS using Model 4 proposed by Hayes (2022). Thus, the perceived social class condition (0 = low and 1 = high) that participants were exposed to was entered as the independent variable, perceived happiness (continuous) as a mediator, and the happiness subscale of materialism (continuous) as the dependent variable.

The results of this analysis indicate that perceived social class had a moderately significant effect on perceived happiness (b = -.53, $t(99)$ = -1.75, p =.084). Results also showed

that perceived happiness had a significant effect on the happiness subscale of materialism (b = -.33, t(98) = -5.37, p < .001). The impact of perceived social class on the happiness subscale of materialism was also moderately significant (b = .41, t(99) = 1.94, p = .054), but when perceived happiness was accounted for, the impact of perceived social class on the happiness subscale of materialism became non-significant (b = .23, t(98) = 1.24, p = .219). Unfortunately, there was no evidence of an indirect effect of perceived social class, though perceived happiness, on the happiness subscale of materialism (point estimate: .1748, 95% CI = -.0188 to .3969); figure 5.

Figure 5

Mediation Effect of Perceived Happiness on Perceived Social Class and Materialism



Notes: Direct effects represent the standardized regression coefficient. The values inside parenthesis represent the standardized regression coefficient when the proposed mediator, perceived happiness, is included in the model.
*p is between .05 and .10. **p < .001

Discussion

Overall, study 1 results do not support H1a, H1b or H1c which looked at the relationships between perceived social class and the three subscales of materialism. H1a and H1b were not

supported as there was no significant relationship between perceived social class and the materialism subscale of success or centrality. Interestingly, this study did reveal a significant effect of perceived social class on the happiness subscale of materialism, however the direction of the effect was opposite to what I had predicted–that is, the findings revealed that participants who were made to think that they were in a higher social class (versus a lower social class) reported higher materialistic values relating to happiness, suggesting that they may equate material possessions with happiness, compared to those who were made to think they were in a lower social class. Prior research provides evidence that those in low social classes are typically more materialistic however, a possible explanation for the opposing results could be that those in higher social classes are more materialistic because they can afford to purchase more or because being in those higher social classes requires them to maintain a certain standard of living (i.e. their bare minimum needs are higher). H2 was supported as there was a marginally significant negative relationship between perceived social class and perceived happiness. This relationship revealed that those perceived to be in low social classes had higher happiness levels than those in high social classes. H3a, H3b, and H3c were also supported in that there was a significant negative relationship between perceived happiness and all three subscales of materialism. Lastly, the mediation effect of perceived happiness on the relationship between perceived social class and the three materialism subscales were not significant and therefore H4a, H4b, and H4c were not supported. Although the mediation effect is insignificant, these results still shed light on how one's social class can impact their happiness, and furthermore how one's happiness can affect their materialistic values.

Study 1 unfortunately did not provide the results I was hoping for. Many participants either wrote "nonsense" or incomplete answers in the perceived social class manipulation task,

therefore this manipulation will be re-worked in study 2 to hopefully avoid this. Furthermore, the happiness measure in this study revealed that the satisfaction item may not be an adequate way to measure happiness and using a 1-item-only measure can cause for low validity and reliability. After reflecting, measuring state happiness, as in participants current level of happiness, may not have made the most sense either as the other variables in this study look at trait measures, meaning their general attitudes and emotions on any given day. There are also many individual and contextual factors that can alter someone's state happiness and therefore results can be easily skewed. Therefore, in study 2, I will use a well-known measurement tool for happiness, the Oxford Happiness Questionnaire that looks at trait happiness and will aim to generate better results and a more accurate depiction of one's happiness levels.

Study 2: Examining the Moderating Effect of Gratitude

Study 2 looked at the same variables and relationships as in study 1, i.e. perceived social class, perceived happiness, and materialism, however, there were modifications made to the measurement tools. Firstly, modifications were made in the way the perceived social class manipulation was conducted. Secondly, a more well-known, reliable, and valid measure was used to measure perceived happiness. Additionally, a new moderating variable, gratitude, was also added to this study's framework to determine if practicing gratefulness would alter the strength of the relationship between perceived happiness and materialism. Lastly, education was added to the demographic questions and tested as a potential covariate. This study was designed to build upon study 1, and will re-investigate H1 to H4, while also adding three more hypotheses, Hypothesis 5 predicts the moderation of gratitude between perceived social class and materialism, hypothesis 6 focuses on the interaction between perceived social class and gratitude,

and their effects on the materialism subscales. Lastly, hypothesis 7 looks at the mediation effect of perceived happiness on perceived social class, gratitude, and materialism.

Method

Design and Participants

In this study, participants were acquired through Amazon's Mechanical Turk (MTurk) platform and participated in a 2 (perceived social class: low versus high) × 2 (gratitude: high gratitude versus control) between-subject experiment. No inclusion or exclusion criteria was used to select participants. In total, 192 participants were compensated $1.50 USD for their participation. However, the monetary compensation was only given if the participant successfully completed the survey, meaning those who consented to participate, completed all the tasks, and answered the attention checks correctly.

Procedure

Participants were asked to complete four tasks in this study. In the first task, participants completed the same social class manipulation as in Study 1 in which they were shown the MacArthur Scale of Subjective Social Status ladder. Participants were asked to imagine interacting with the people at the top of the ladder in the high perceived social class condition, or with people at the bottom of the ladder in the low perceived social class conditions, and then write about what their interaction with this person would be like (see Appendix A). However, I re-formatted the question into two pages and added a visible timer. By separating the question with one page containing the introduction, and the second page with the actual question and answer box, there was less text and less time wasted reading on the answer page, giving

participants more time to immerse themselves in the imagination process and to write more thoughtful and complete answers. Additionally, I added a visible timer so that participants would be aware when the page would automatically advance, allowing them to better manage their writing time and to not be cut off without warning.

The second task was similar to study 1 in that it measures participants happiness levels, however, in this study, the Oxford Happiness Questionnaire will be used to measure participants happiness levels. The Oxford Happiness Inventory has been used in numerous studies and is a well-established tool (Cruise et al., 2006; Sidhu & Foo, 2015; Kharbanda & Mohan, 2021). This study used the shortened form of the tool, referred to as the Oxford Happiness Questionnaire which consists of 8 items (Hills & Argyle, 2002). A six-point Likert scale from 1 being "Strongly Disagree" to 6 being "Strongly Agree" was used for each item (see Appendix D).

The third task was used to test the moderation effect of gratitude on the relationship between perceived happiness and materialism (see Appendix E for scenarios). In the gratitude condition, participants were asked to practice gratefulness by listing 5 things in their life that they are grateful for, based on Emmons and McCullough's research (2003). Emmons and McCullochs study (2003), also included a low gratitude condition in which participants were asked to list hassles or irritants in their life, as well as a control group which asked them to list events or circumstances that affected them that week. Seeing as these life events could have been good or bad, they may affect the participants emotions, therefore, I adapted the control condition from a study conducted by Tully et al. (2015) with the hopes of keeping participants emotions neutral, in which participants were asked to list 5 objective facts they know to be true, such as the sky being blue. Emmons & McCulloch (2003) coded their participants responses as pleasant, unpleasant, or neutral to check that their control condition elicited a somewhat neutral response.

Therefore, the current research adapted this, and participants were asked to self-code their responses as negative, positive, or neutral, in which the self-coding method taken from Tully et al.'s research (2015). Furthermore, a secondary manipulation check was conducted which was derived from Emmons & McCullochs research (2003). Participants were asked how they were feeling based on three different gratitude-related affective states; grateful, appreciative, and thankful; each on 7-point scales, from "Not at all" to "Extremely".

The fourth task was used to measure participants materialistic values using the same tool as in study 1, the Materialistic Values Scale, which includes 18 items that can be answered using a five-point Likert scale from 1 being "Strongly Disagree" to 5 being "Strongly Agree" (re-visit appendix B).

In order to ensure that participants were engaged and attentive while completing the survey, and to guarantee the validity of the study, two attention check questions were asked at the end of the survey as was done in study 1. The first question asked about the topic of the first writing task; "In the first task, were you shown a picture of a ladder (meant to represent where people stand in the United States in terms of money, education, and jobs) and then asked to think about how you are different from people at either the top, or bottom, of the ladder?", with the answer being "Yes". The second question asked about the topic of the second writing task; "In the list-writing task (i.e., task 3), were you asked to list 5 different marine animals?", in which the answer was "No". If both attention check questions were answered correctly, then they moved onto the last section of the study.

Similar to study 1, the last section of the survey focused on demographic questions including age, gender, income, and education. Age, gender, and income were measured in the

same way as in study 1, and education was measured by asking participants their highest level of education they have completed from the following options: some high school or less, high school diploma or GED, some college but no degree, associates or technical degree, bachelor's degree, graduate or professional degree, and prefer not to say. Education was coded with 1 being "some high school or less" (i.e. the lowest level of education) and 6 being "graduate or professional degree" (i.e. the highest level of education). Education was added as it is an easily measurable aspect of social class and could be a potential covariate that was not accounted for in study 1. Lastly, participants were asked two optional questions with an open-ended test box; firstly, what they believed the researcher wished to examine in this study, and secondly, if they have any comments for the researcher.

Results

Data exclusion

As in study 1, participants who wrote "nonsense" in either of the writing tasks, and participants who answered a 1(lowest) or a 7 (highest) on the income scale, were removed before data analyses for the same reasons explained in study 1. Based on this set of exclusion criteria, 28 participants were removed for criteria 1 (writing "nonsense'), 26 were removed for criteria 2 (having the lowest income) and 8 were removed for criteria 3 (having the highest income). After these participants were removed, a total of 130 participants remained. Additionally, the two awareness questions presented at the end of the survey about what participants believed the researcher wished to examine in this study, and if participants had any additional comments were also reviewed. After reviewing the answers to these questions, no participants guessed the purpose of the study, and there were no concerning comments, thus, no additional participants

were removed. The final sample used for this study was therefore n = 130 with 58 being females, 71 being males, and 1 who preferred not to say. The average age among these participants was 43.60 (SD = 11.63). See table 3 for additional details on the demographics of this study.

Table 3

Demographics (Study 2)

Gender	Percentage
Male	54.6 %
Female	44.6%
Prefer not to say	0.8%

Income	Percentage
<$25,000	0%
$25,000 – $50,000	31.5%
$50,001 - $75,000	30.8%
$75,001 – $100,000	20.0%
$100,001 - $150,000	17.7%
>$150,000	0%

Education Level	Percentage
High school diploma or GED	14.6%
Some college but no degree	17.7%
Associates or technical degree	7.7%
Bachelor's degree	43.8%
Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS, etc.)	16.2 %

Manipulation check for gratitude

Perceived gratitude was created by averaging the answers from a 3-item scale, in which the participants asked how thankful, appreciative, and grateful they were feeling. Cronbach's

alpha was used to test the reliability between these items in which Cronbach's α = .971, indicating very good reliability as α is much greater than .70. An ANOVA was then conducted to ensure the gratitude manipulation was successful. Perceived gratitude was entered as the dependent variable and the gratitude condition (0 = control and 1 = gratitude) was entered as the independent variable. The results revealed a significant relationship between perceived gratitude and the gratitude condition ($F(1, 128) = 17.242$, $p < .001$) indicating that participants in the gratitude condition were more grateful ($M = 3.96$, SD = .76) relative to those in the control condition ($M = 3.21$, SD = 1.17).

Furthermore, participants were asked to code the items in their list as negative, neutral, or positive. These responses were analyzed to ensure that the control condition was in fact neutral. In the control condition, 2.7% of the facts were self-rated as negative, 56.9% as neutral, and 40.6% as positive. With this balance, it seems that I was able to establish a reasonably neutral control condition. Interestingly, in the gratitude condition, 0% of the facts were self-rated as negative, 5.4% as neutral, and 94.6% as positive indicating a more positive condition which was the goal considering I wanted them to think about the things they are grateful for. In support of the previous analysis, I can conclude that the gratitude manipulation was successful.

Testing for Potential Covariates

As in study 1, prior to analyzing the data, the three materialism subscales (success, centrality, and happiness) were created from the eighteen-item scale. This was done by first reverse coding any items that needed to be reversed, and then by averaging the answers of the items that fell within each subscale. Cronbach's alpha was used to measure reliability amongst these items. The success subscale, which included 6 items, had a Cronbach's α = .901. The

centrality subscale included 7 items and had a Cronbach α = .854. The third subscale, happiness, composed of 5 items had a Cronbach α = .861. All three subscales have a Cronbach's alpha greater than 0.70 meaning they have good reliability.

I then considered three potential covariates that may have influenced the relationship between the independent variable (perceived social class) and the dependent variables (the three subscales of materialism): age, income, and education. I did not predict age and income to yield significant results as covariates based on the results from study 1, however, for the sake of completeness, I conducted the appropriate statistical tests to confirm this. Education, however, was considered a potential covariate in the relationship as it may impact their perception of their social class, materialism, and their abilities to self-reflect. As in study 1, it was determined prior to data analyses, that if any of the correlations between the potential covariate and any of the three dependent variable subscales had significant *p*-value of less than .05 and a correlation of greater than.5 (indicating a moderate or strong relationship), then these variables will be further investigated.

Age. The correlation between age and success ($r = -.279$, $p < .001$), centrality ($r = -.169$, $p = .054$) and happiness ($r = -.154$, $p = .081$) were all significant or moderately significant. However, all three analyses yielded very weak relationships with all *r*'s < .5, thus, age was not included as a covariate in subsequent analyses.

Income. The correlation between income and success ($r = .018$, $p = .841$), and centrality ($r = .027$, $p = .761$) were not significant, while the relationship between income and happiness ($r = -.190$, $p = .031$) was significant. However, all three analyses yielded very weak relationships, with all *r's* < .5, thus, income was not included as a covariate in the analyses.

Education. The correlation between education and success (r = .079, p = .371), and centrality (r = .028, p =.754) were not significant. While the relationship between education and happiness (r = -.1.66, p = .059) was moderately significant, all three subscales yielded very weak relationships, with all r's < .5 thus, education was not included as a covariate in the analyses.

Effects of Perceived Social Class and Gratitude on Materialistic Values related Success, Centrality, and Happiness

A two-way MANOVA was conducted to analyze the differences in participants' materialistic values related to success, centrality, and happiness as a function of perceived social class and gratitude. The perceived social class conditions (0 = low and 1 = high) and the gratitude condition (0 = control and 1 = gratitude) were entered as the independent variables, and the three subscales of materialism (all continuous) were entered as dependent variables. Perceived social class did not have a main effect on the success (F(1, 128) = .024, p = .878), centrality (F(1, 128) = 1.41, p = .238), or happiness (F(1, 128) = .168, p = .682) subscales of materialism. The results also revealed no significant main effects of gratitude on the success (F(1, 126) = .052, p = .820), centrality (F(1, 126) = .537, p = .465), and happiness (F(1, 126) = .001 p = .970) subscales of materialism.

Furthermore, there was no significant perceived social class × gratitude interaction on any of the materialistic subscales (success: F(1,126) = .182, p = .670; centrality: F(1, 126) = .301, p = .584; happiness: F(1, 126) = .360, p = .550). The means and standard deviations for each subscale of materialism per condition are reported in table 4; also see figures 6, 7, and 8 for a graphical depiction of the interaction for each subscale of materialism. These findings therefore do not support H5.

Table 4

Means and Standard Deviations per Condition (Study 2)

	Control		High Gratitude	
	Perceived Low Social Class	**Perceived High Social Class**	**Perceived Low Social Class**	**Perceived High Social Class**
Success (Materialism)	2.57 (1.14)	2.47 (1.09)	2.53 (1.01)	2.6 (1.08)
Centrality (Materialism)	2.89 (.93)	2.62 (.98)	2.68 (.85)	2.6 (.76)
Happiness (Materialism)	3.0 (1.25)	2.98 (1.14)	2.88 (.85)	3.09 (1.02)

Note: The values in parentheses represent the standard deviations.

Figure 6

Perceived Social Class and Gratitude on the Success Subscale of Materialism

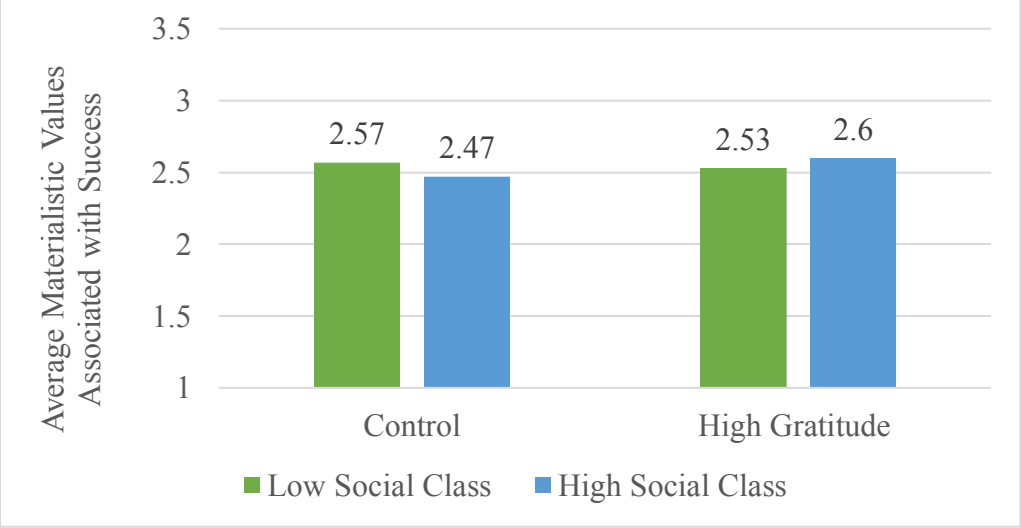


Figure 7

Perceived Social Class and Gratitude on the Centrality Subscale of Materialism

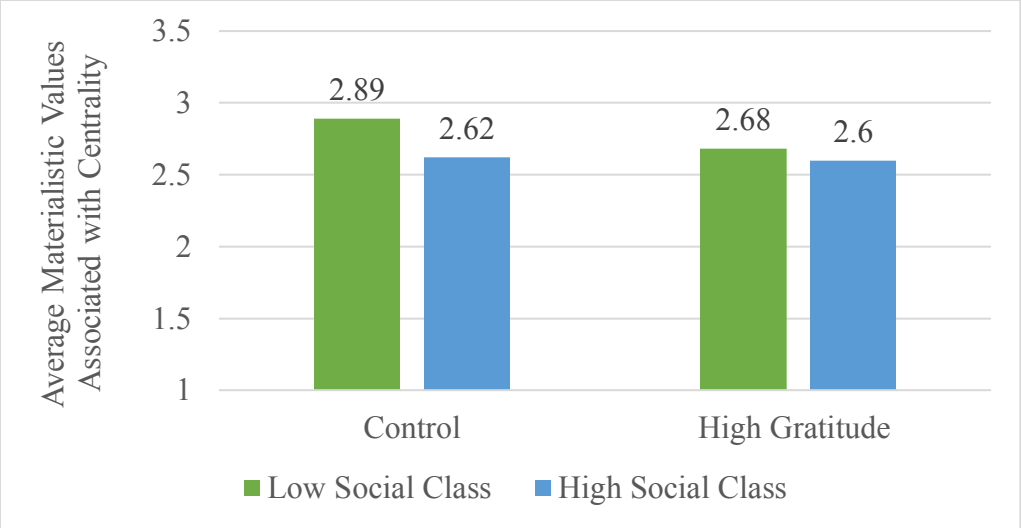
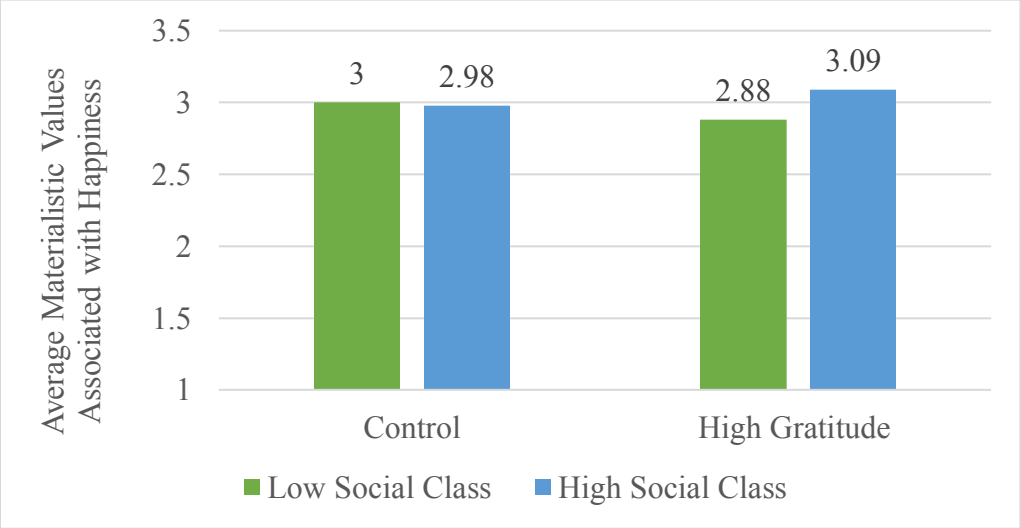


Figure 8

Perceived Social Class and Gratitude on the Happiness Subscale of Materialism



Effects of Perceived Social Class on Perceived Happiness

The mediator, perceived happiness, was measured and created using an 8-item scale. In order to use this scale in my analyses, any items that needed to be reverse coded were reversed, and then the items were averaged to create a single measurement tool. A reliability test was then

conducted in order to examine the relationship between the 8 items which yielded Cronbach's α = .858, indicating good reliability.

An ANOVA was then conducted to analyze differences in perceived happiness as a function of perceived social class. The perceived social class condition (0 = low and 1 = high) was entered as the fixed factor, and perceived happiness was entered as a dependent variable. The results revealed no significant effect of perceived social class on perceived happiness ($F(1, 128) = 1.04$, $p = .311$), indicating that there was no statistically significant difference in happiness in individuals in the low social class condition ($M = 4.50$, SD = .86) relative to those in the high social class ($M = 4.34$, SD = .91). These findings therefore do not support H2.

Effects of Perceived Happiness and Gratitude on Materialism

A MANOVA was conducted to analyze the differences in materialism as a function of perceived happiness and gratitude. Perceived happiness (continuous) and the gratitude condition (0 = control and 1 = gratitude) were entered as independent variables while the three subscales of materialism were entered as dependent variables. Firstly, I examined the relationship between perceived happiness and the three subscales of materialism: success, centrality, happiness. Results were inconsistent from study 1 in that there was no significant effect of perceived happiness on the success subscale of materialism ($F(1, 104) = .642$, $p = .898$), or the centrality subscale of materialism ($F(1, 104) = .889$, $p = .618$). Therefore, H3a and H3b were not supported in this study. However, in line with study 1, there were significant effects of perceived happiness on the happiness subscale of materialism ($F(1, 104) = 2.178$, $p = .003$). Therefore, H3c is supported. Next, I examined the relationship between gratitude and the three subscales of materialism. Results revealed that there was no significant effect of gratitude on the success

subscale of materialism ($F(1, 128) = .110$, $p = .759$), the centrality subscale of materialism ($F(1, 128) = .312$, $p = .533$), or the happiness subscale of materialism ($F(1, 128) = .003$, $p = .959$). Furthermore, the results yielded a non-significant interaction effect of perceived happiness and gratitude on the success ($F(1, 85) = .755$, $p = .745$), centrality ($F(1, 85) = .938$, $p = .537$), and happiness ($F(1, 85) = .935$, $p = .540$) subscales of materialism. Therefore, H6 is not supported.

Testing for Moderated Mediation (Perceived Happiness)

The next step was to determine whether perceived happiness played a role in mediating the interaction between perceived social class and gratitude on materialism. Three separate analyses were conducted using the PROCESS Model 15 provided by Hayes (2022). Perceived social class condition (0 = low and 1= high) was entered as the independent variable, perceived happiness (continuous) was entered as a mediator, gratitude (0 = control, 1 = high gratitude) was entered as the moderator, and the three subscales of materialism (continuous) were entered as the dependent variables. Although the happiness subscale of materialism was the only subscale to have a significant relationship between perceived happiness and materialism, I still ran analyses using the other two subscales for completeness. The complete results of these analyses can be found in Appendix F.

The results of this analysis indicate that perceived social class had no effect on perceived happiness ($b = -.16$, $t(128) = -1.02$, $p = .311$). Results also showed that there was no interaction between perceived happiness and gratitude on the happiness subscale of materialism ($b = .15$, $t(124) = .74$, $p = .459$). The interaction between perceived social class and gratitude was also not significant on the happiness subscale of materialism ($b = .24$, $t(126) = .60$, $p = .459$). These three results are consistent with my analyses described above. When perceived happiness, and the

perceived happiness × gratitude interaction, were both accounted for, the interaction between perceived social class and gratitude was not significant ($b = .23$, $t(124) = .64$, $p = .55$). Furthermore, there was no evidence of an indirect conditional effect of perceived social class, though perceived happiness, on the happiness subscale of materialism for the control condition (point estimate: .0914, 95% CI = -.0904 to .2729) or the high gratitude condition (point estimate: .0670, 95% CI = -.0628 to .2209). Therefore, H7 is not supported.

Discussion

Firstly, I re-visited study 1's hypotheses. H1a, H1b, and H1c were not supported indicating that there was no significant effect of perceived social class on the three subscales of materialism. This is consistent with study 1's results. H2 however differed from the results in study 1 and was not supported, indicating that there was no significant relationship between perceived social class and perceived happiness. H3a and H3b also differed from study 1 in that there was no significant relationship between perceived happiness and the success and centrality subscales of materialism. However, H3c was consistent with study 1, revealing a significant relationship between perceived happiness and the happiness subscale of materialism.

Unique to study 2, hypotheses 5, 6, and 7 were then tested. Prior to analysis, the gratitude manipulation was measured and was found to be successful, indicating that those in the high gratitude condition were more grateful than those in the control condition. H5 which looked at the interaction effect of perceived social class and gratitude on the three materialism subscales, was not supported as there was no significant effect. H6, which looked at the interaction effect of perceived happiness and gratitude on the three materialism subscales, was also not supported as there was no significant effect. Lastly, as expected considering the results of the previous

analyses, H7 was also not supported in that there was no significant mediation effect of perceived happiness.

Despite making changes to social class manipulation and using a more well-known measure of happiness, I was unable to find support for my hypotheses. However, the gratitude manipulation proved to work, and there were significant results between perceived happiness and materialism, I believe that the problem may have been the social class manipulation. Study 2 unfortunately had a lot of participants who had to be removed as a result of them responding to the perceived social class manipulation with "nonsense" therefore this could have skewed the results.

General Discussion

Summary of Results

This research aimed to primarily explore the impact of social class on materialistic values. Furthermore, it looked at the mediating effect of perceived happiness between perceived social class and materialism, and the moderating role of gratitude between perceived happiness and materialism. In study 1, hypotheses H1, H2, H3, and H4 were tested. H1a, H1b, and H1c, which looked at the relationships between perceived social class and the three subscales of materialism, success, centrality, and happiness, were not supported. H1a and H1b were not supported due to a lack of a significant relationship. Interestingly, the relationship between perceived social class and the happiness subscale of materialism was significant, showing that participants who were made to think that they were in a higher social class reported higher materialistic values and behaviours relating to happiness, compared to those who were made to think they were in a lower social class. However, H1c was rejected as the relationship was in the

opposite direction that predicted. H2 looked at the relationship between perceived social class and perceived happiness and was marginally supported in that there was a marginally significant negative relationship between perceived social class and perceived happiness. H3a, H3b, and H3c looked at the relationships between perceived happiness and the three subscales of materialism. All three hypotheses were supported as results revealed significant negative relationships between perceived happiness and the three subscales of materialism. Lastly, H4a, H4b, and H4c looked at the mediating effect of perceived happiness on the relationship between perceived social class and the three subscales of materialism. The mediation effect was no significant and therefore H4a, H4b, and H4c were not supported.

In study 2, H1, H2, and H3 were investigated and H5, H6 and H7 were tested. H1a H1b, and H1c, as in study 1, were not supported as there were no significant relationships between perceived social class and the three subscales of materialism. In study 1, H2 was supported however in study 2, there was no significant relationship between perceived social class and perceived happiness. H3a H3b, and H3c in study 1 were supported as significant relationships were found between perceived happiness and all three subscales of materialism, however in study 2, only H3c supported indication a significant relationship between perceived happiness and the happiness subscale of materialism. Being investigated for the first time in study 2 was H5, H6, and H7. H5 predicted that there would be a significant interaction effect of perceived social class and gratitude on the three materialism subscales, more specifically that those in the high gratitude condition would report lower materialism levels than those in the control condition. However, this was not the case and there was no significant effect between the variables, therefore H5 was not supported. Furthermore, H6 predicted a significant interaction effect of perceived happiness and gratitude on the three materialism subscales which also was

not supported due to the lack of a significant relationship. Lastly, H7 was also unfortunately, but not surprisingly after the previous analyses results, not supported in that there was no mediation effect of perceived happiness, or the perceived happiness x gratitude interaction, on the relationship between perceived social class and the three materialism subscales.

Although the mediation and moderation effects were not significant in both study 1 and study 2, significant relationships between the variables did arise which allows for theoretical contributions, managerial and practical implications, as well as opportunities for future research on these topics of interest.

Theoretical Contributions

This research contributes to social class, materialism, happiness, and gratitude literature in various ways. First, it addresses a gap in the literature regarding the lack of adult demographics in studies investigating the relationship between social class and materialism. Previous research on this topic (Chaplin et al., 2014; Li et al., 2018) focused primarily on children, adolescents, and students, whereas the current study used participants who were over 18 years old. Second, the current study fills a gap in the literature by proposing that perceived happiness may help us better understand how perceived social class can impact materialism. Current literature primarily looks at negative emotions such as self-esteem as the mediator between social class and materialism (Chaplin et al., 2014; Li et al., 2018; Zheng et al., 2018; Otero-López & Villardefrancos, 2013; Roberts et al., 2015), however, I instead considered a positive emotion, that is, happiness. Additionally, most studies that have looked at positive emotions in relation to social class, happiness, and gratitude, look at overarching variables such as positive affect or overall life satisfaction (Roberts et al., 2015; Hirshberg at al., 2018; Ryan &

Dziurawiec, 2001) that encompass multiple factors and emotions (both of which can include the emotion of happiness), however, in my thesis, the focus was exclusively on one emotion. Furthermore, by examining happiness, the current study also adds to the understanding of the underlying emotions that arise from living in various social classes, and how those emotions may influence materialistic values and behaviours. Lastly, my research proposed a conceptual model that integrated several variables. While previous studies have examined these variables individually, my model offers a more comprehensive understanding of how they interact to impact materialistic tendencies.

Implications for Business

This research yields insight for both marketers and businesses as whole. Firstly, marketers can better align their marketing strategies with their consumers. Not only can they better segment their consumers to target groups that would align more with their campaigns, but they can also alter their campaigns to better align with various target groups. For example, if their campaigns or advertisements are more positive and emit happiness, they might resonate better with those in low social classes who are typically happier. Alternatively, if their advertisements or campaigns do not currently resonate with lower social classes, then marketers could alter their approach and create advertisements that elicit more happiness.

From a high-level perspective, companies could enhance both their corporate social responsibility and their employee wellness programs by engaging in initiatives that aim to enhance happiness and well-being in the community. Not only does this improve the lives of others and could help reduce materialism levels, but it also benefits the corporations brand image. Furthermore, corporations could also be transparent and honest with their consumers on

the negative effects of overconsumption and materialism and the potential driving factors of them as a strategy to build trust with the consumer and ultimately enhance their long-term relationship. Lastly, companies could also put in place programs and policies to help reduce the waste from materialism such as bettering their return policies, a program to re-sell used items, or a program to recycle end of life cycle products.

Implications for Societal and Individual Well-Being

This study shows that there is a relationship between perceived happiness and materialism which provides very useful insight in how to enhance sustainability in regard to one's well-being and finances, and the environment. By being aware of how negative emotions can lead to materialistic values and behaviours, I can intercept these emotions and therefore reduce the effects of materialism in various ways.

Firstly, as mentioned previously, happiness, overall life satisfaction, and well-being are all negatively correlated with materialism levels. By understanding this construct, individuals can be more self-aware in their purchasing behaviour as well as re-evaluate their values surrounding material objects. By diminishing their materialistic values and behaviours, they will hopefully then lead a happier life. Furthermore, overall well-being has also been found to have a significant relationship with financial well-being while financial well-being has a negative relationship with materialism (Chatterjee, 2019). In other words, individuals who are more materialistic often spend more money on these material items which can put them in more negative financial situations, and ultimately negatively impact their general well-being as well.

Lastly, by reducing materialistic values and behaviours, consumers can contribute to environmental sustainability. Materialism has been found to be negatively associated with both

environmental attitudes and behaviours. In other words, the more materialistic someone is, the more negative attitudes and behaviours they have towards the environment (Hurst, 2013). Furthermore, it has been found that citizens of industrialized countries that enjoy high living standards have reached material individualism and are putting stress on the earth that is causing environmental damage (Salonen & Ahlberg, 2013). Materialistic attitudes elicit demand for more material products, which means more production, use, and eventual waste of these material products leading to environmental degradation. Examples of environmental degradation include the overexploitation of natural resources, deforestation, pollution, emission of greenhouse gases, harm to wildlife, and more (Tyagi et al., 2014). By reducing how much we consume, we will reduce how much is being produced, and therefore reduce the negative effects of materialism and overconsumption on the environment.

Limitations and Future Research

These studies had limitations which provides ample opportunities for future research. First, although the participants of these studies were aged 18+, mixed genders, and from various socioeconomic backgrounds, all participants were from the United States and therefore this study cannot necessarily be generalized across cultures. Future research could include participants from various countries in order to get more generalizable results.

Secondly, as mentioned previously, the happiness measure in the first study consisting of two items did not elicit an accurate depiction of one's happiness levels, and only using one of the items, although more significant, does not provide strong validity or reliability of the measure. Therefore, the measure was modified in study 2 by using a more well-known construct to measure happiness. For even more accurate results, future research could include the Oxford

Happiness Inventory, the shortened version (i.e., the one that was used in study 2), or another well-known happiness measurement.

Another limitation to consider that may have affected the results were the writing tasks for both the perceived social class and gratitude manipulations. Both studies received many written responses that were deemed to be "nonsense" and many participants had to be removed because of this. Future studies could either format the questions differently to avoid any misunderstanding, or another method of manipulation could be used. They could also start with a bigger sample to compensate for the fact that many participants may have to be removed.

Additionally, seeing as these studies were based on cross sectional designs, many contextual and personal factors could have altered the participants emotional or psychological state and engagement in the study. Furthermore, the manipulation tactics for social class and gratitude may not have been as functional in a short, one-time circumstance. Seeing as I was measuring trait happiness and materialism, meaning that these are established emotions and values in someone's life that have taken time to build, it is plausible that using a one-time manipulation may not alter them. Future research could employ a longitudinal design so that participants would report their happiness, gratitude, and materialism levels multiple times which would provide a more accurate and holistic representation. Additionally, conducting a longitudinal study in which participants in the high gratitude condition would practice gratitude every day may enhance the results of the manipulation and therefore have a more significant effect on materialism. However, if a cross-sectional design is used, measuring state happiness and materialism may be a better option as the one-time social class and gratitude manipulation would likely be enough to alter participants current levels of happiness and perceptions on materialism.

Furthermore, another limitation in the survey design in study 2 that could have been problematic considering I was measuring trait happiness and materialism is that there was no filler task in between the social class manipulation and the happiness measure. As mentioned, study 1 looked at state happiness whereas study 2 looked at trait materialism, in future studies the survey design could be altered accordingly. This is because with trait measurements a filler task is needed after the manipulation to defer participants thoughts before measuring what is actually being investigated whereas with state measurements, I would want to measure how they are feeling exactly after being manipulated.

The last limitation of this study is self-reporting bias. After participants completed the gratitude manipulation section of the survey, they were asked to self-code each item they listed as being negative, positive, or neutral. By having the participants do this, there may be bias and inconsistencies between ratings. However, in future studies, the researchers could code the participants listed items in order to have more consistency in how they are rated.

Generally speaking, many moderating variables that were not investigated in the study could have had implications on the results. For example, one's culture and the way their society as whole views consumptions, their other emotions or psychological well-being, their financial status, their life experiences, their exposure to advertisements, or even the amount of social media they consume, may impact materialistic tendencies. There are many avenues for future research to investigate this topic.

Conclusion

In conclusion, the findings suggest that the social class you are in can impact your happiness levels, and in turn your happiness levels can impact materialism levels. Unfortunately,

happiness could not explain this relationship between social class and materialism. Furthermore, practicing gratitude was not found to impact our materialistic values. Although both studies yielded many unsuccessful results, significant and meaningful relationships did arise from this research which will ultimately contribute to theory and business, while also offering suggestions to improve individual and societal well-being. Furthermore, the limitations of this study that likely caused the lack of significant and inconsistent results, allow for future researchers to learn from this and adapt their methods.

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Appendix A: Social Class Manipulation

Scenario 0: Low Social Class

Please take a few moments to look at the image below

Think of the ladder above as representing where people stand in the United States. Now, **please compare yourself to the people at the very top of the ladder**. These are people who are the best off—those who have the most money, most education, and the most respected jobs. In particular, we'd like you to think about how you are different from these people in terms of your own income, educational history, and job status.

Now imagine yourself interacting and getting acquainted with one of those people at the **top of the ladder** (again, these are people who have the most money, most education, and the most respected jobs). In the space provided below, please write about how your differences might impact what you would talk about and/or how you believe the interaction would likely go (point-form is acceptable).

Scenario 1: High Social Class

Please take a few moments to look at the image below

Think of the ladder above as representing where people stand in the United States. Now, **please compare yourself to the people at the very bottom of the ladder**. These are people who are the worst off—those who have the least money, lowest education, and the least respected jobs. We'd like you to think about how you are different from these people in terms of your own income, educational history, and job status.

Now imagine yourself interacting and getting acquainted with one of those people at the **bottom of the ladder** (again, these are people who have the least money, lowest education, and the least respected jobs). In the space provided below, please write about how your differences might impact what you would talk about and/or how you believe the interaction would likely go (point-form is acceptable).

Appendix B: Materialistic Values Scale (Richins, 2004)

ITEMS IN THE MVS ARRANGED BY SUBSCALE

(R) denotes a reverse scaled item.

SUCCESS

1. I admire people who own expensive homes, cars, and clothes.

2. Some of the most important achievements in life include acquiring material possessions.

3. I don't place much emphasis on the amount of material objects people own as a sign of success. (R)

4. The things I own say a lot about how well I'm doing in life.

5. I like to own things that impress people.

6. I don't pay much attention to the material objects other people own. (R)

CENTRALITY

7. I usually buy only the things I need. (R)

8. I try to keep my life simple, as far as possessions are concerned. (R)

9. The things I own aren't all that important to me. (R)

10. I enjoy spending money on things that aren't practical.

11. Buying things gives me a lot of pleasure.

12. I like a lot of luxury in my life.

13. I put less emphasis on material things than most people I know. (R)

HAPPINESS

14. I have all the things I really need to enjoy life. (R)

15. My life would be better if I owned certain things I don't have.

16. I wouldn't be any happier if I owned nicer things. (R)

17. I'd be happier if I could afford to buy more things.

18. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.

Appendix C: The Mediating Effects of Perceived Happiness on the Perceived Social Class and Materialism (Study 1)

Perceived Social Class, Perceived Happiness, and the Success Subscale of Materialism

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

         Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : SUCCESS
    X  : Conditio
    M  : Happines

Sample
Size:  101

**************************************************************************
OUTCOME VARIABLE:
 Happines

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1728      .0299     2.3452     3.0487     1.0000    99.0000      .0839

Model
             coeff         se          t          p       LLCI       ULCI
constant    5.1400      .2166    23.7332      .0000     4.7103     5.5697
Conditio    -.5322      .3048    -1.7461      .0839    -1.1369      .0726

**************************************************************************
OUTCOME VARIABLE:
 SUCCESS

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .3698      .1367      .8901     7.7604     2.0000    98.0000      .0007

Model
             coeff         se          t          p       LLCI       ULCI
constant    3.7896      .3451    10.9817      .0000     3.1048     4.4744
Conditio    -.0049      .1906     -.0255      .9797     -.3832      .3734
Happines    -.2405      .0619    -3.8847      .0002     -.3634     -.1177

************************ TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 SUCCESS

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0616      .0038     1.0168      .3765     1.0000    99.0000      .5409

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.5533      .1426    17.9054      .0000     2.2704     2.8363
Conditio     .1231      .2007      .6136      .5409     -.2751      .5213
```

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .1231      .2007      .6136      .5409     -.2751      .5213

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
     -.0049      .1906     -.0255      .9797     -.3832      .3734

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Happines      .1280      .0842     -.0127      .3140

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

Perceived Social Class, Perceived Happiness, and the Centrality Subscale of Materialism

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : CENTRALI
    X  : Conditio
    M  : Happines

Sample
Size:  101

**************************************************************************
OUTCOME VARIABLE:
 Happines

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1728      .0299     2.3452     3.0487     1.0000    99.0000      .0839

Model
             coeff         se          t          p       LLCI       ULCI
constant    5.1400      .2166    23.7332      .0000    4.7103    5.5697
Conditio    -.5322      .3048    -1.7461      .0839   -1.1369     .0726

**************************************************************************
OUTCOME VARIABLE:
 CENTRALI

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2803      .0786      .5396     4.1796     2.0000    98.0000      .0181

Model
             coeff         se          t          p       LLCI       ULCI
constant    3.3165      .2687    12.3436      .0000    2.7833    3.8497
Conditio     .0268      .1484      .1809      .8568    -.2677     .3214
Happines    -.1355      .0482    -2.8109      .0060    -.2312    -.0398

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 CENTRALI

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0656      .0043      .5772      .4283     1.0000    99.0000      .5143

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.6200      .1074    24.3855      .0000    2.4068    2.8332
Conditio     .0990      .1512      .6545      .5143    -.2011     .3990

************* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .0990      .1512      .6545      .5143    -.2011     .3990

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .0268      .1484      .1809      .8568    -.2677     .3214

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Happines     .0721      .0488    -.0098      .1771

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

Perceived Social Class, Perceived Happiness, and the Happiness Subscale of Materialism

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

         Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : HAPPINES
    X  : Conditio
    M  : Happines

Sample
Size:  101

**************************************************************************
OUTCOME VARIABLE:
 Happines

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1728      .0299     2.3452     3.0487     1.0000    99.0000      .0839

Model
             coeff         se          t          p       LLCI       ULCI
constant    5.1400      .2166    23.7332      .0000    4.7103    5.5697
Conditio    -.5322      .3048    -1.7461      .0839   -1.1369     .0726

**************************************************************************
OUTCOME VARIABLE:
 HAPPINES

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .5056      .2557      .8686    16.8303     2.0000    98.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    4.4879      .3409    13.1652      .0000    3.8114    5.1644
Conditio     .2331      .1883     1.2378      .2188    -.1406     .6068
Happines    -.3284      .0612    -5.3689      .0000    -.4498    -.2070

************************ TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 HAPPINES

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1916      .0367     1.1127     3.7742     1.0000    99.0000      .0549

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.8000      .1492    18.7696      .0000    2.5040    3.0960
Conditio     .4078      .2099     1.9427      .0549    -.0087     .8244
```

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .4078      .2099     1.9427      .0549    -.0087     .8244

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
      .2331      .1883     1.2378      .2188    -.1406     .6068

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Happines     .1748      .1056     -.0188     .3969

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

Appendix D: The Oxford Happiness Questionnaire (Hills & Argyle, 2002)

Items marked (-) should be scored in reverse.

1. I don't feel particularly pleased with the way I am (-)
2. I feel that life is very rewarding
3. I am well satisfied about everything in my life
4. I don't think I look attractive (-)
5. I find beauty in some things
6. I can fit in everything I want to
7. I feel fully mentally alert
8. I do not have particularly happy memories of the past (-)

Appendix E : Gratitude Manipulation

Scenario 0 : Control

There are many truths in our lives that that we might be knowledgeable about. In the space below, please list 5 objective facts that you know to be true. Point form is encouraged.

Scenario 1: High Gratitude

There are many things in our lives that we might be grateful about. In the space below, please write 5 things in your life that you are grateful or thankful for. Point form is encouraged.

Appendix F: Moderated Mediation Analysis (Study 2)

Perceived Social Class, Perceived Happiness, Gratitude, and the Success Subscale of Materialism

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 15
    Y  : SUCCESS
    X  : SCcondit
    M  : PERCEIVE
    W  : GratCond

Sample
Size:  130

**************************************************************************
OUTCOME VARIABLE:
 PERCEIVE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0896      .0080      .7887     1.0361     1.0000   128.0000      .3107

Model
             coeff         se          t          p       LLCI       ULCI
constant    4.4974      .1209    37.2127      .0000     4.2582     4.7365
SCcondit    -.1609      .1581    -1.0179      .3107     -.4736      .1519

**************************************************************************
OUTCOME VARIABLE:
 SUCCESS

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1122      .0126     1.1892      .3163     5.0000   124.0000      .9024

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.7821      .6533     4.2584      .0000     1.4890     4.0752
SCcondit    -.1072      .2589     -.4140      .6796     -.6195      .4052
PERCEIVE    -.0481      .1389     -.3462      .7298     -.3229      .2268
GratCond   -1.1037     1.0463    -1.0549      .2935    -3.1746      .9671
Int_1        .2101      .3936      .5338      .5944     -.5689      .9890
Int_2        .2361      .2227     1.0603      .2911     -.2046      .6768

Product terms key:
 Int_1    :        SCcondit x        GratCond
 Int_2    :        PERCEIVE x        GratCond

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      .0023      .2849     1.0000   124.0000      .5944
M*W      .0090     1.1243     1.0000   124.0000      .2911

***************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effects of X on Y
   GratCond     Effect         se          t          p       LLCI       ULCI
     .0000     -.1072      .2589     -.4140      .6796     -.6195      .4052
    1.0000      .1029      .2964      .3471      .7291     -.4838      .6897

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 SCcondit    ->    PERCEIVE    ->    SUCCESS

   GratCond     Effect     BootSE   BootLLCI   BootULCI
     .0000      .0077      .0381     -.0723      .0966
    1.0000     -.0302      .0474     -.1493      .0426

Index of moderated mediation (difference between conditional indirect effects):
             Index     BootSE   BootLLCI   BootULCI
GratCond     -.0380      .0640     -.1993      .0679

********************* ANALYSIS NOTES AND ERRORS *************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : SUCCESS
    X  : SCcondit
    W  : GratCond

Sample
Size:  130

**************************************************************************
OUTCOME VARIABLE:
 SUCCESS

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0485      .0023     1.1824      .0989     3.0000   126.0000      .9605

Model
             coeff         se          t          p       LLCI       ULCI
constant    2.5667      .1985    12.9283      .0000     2.1738     2.9596
SCcondit    -.1008      .2575     -.3913      .6962     -.6103      .4088
GratCond    -.0389      .2978     -.1306      .8963     -.6282      .5504
Int_1        .1667      .3905      .4269      .6702     -.6061      .9396

Product terms key:
 Int_1    :        SCcondit x        GratCond

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      .0014      .1823     1.0000   126.0000      .6702

********************* ANALYSIS NOTES AND ERRORS *************************

Level of confidence for all confidence intervals in output:
  95.0000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

Perceived Social Class, Perceived Happiness, Gratitude, and the Centrality Subscale of Materialism

```
Model  : 15
    Y  : CENTRALI
    X  : SCcondit
    M  : PERCEIVE
    W  : GratCond

Sample
Size:  130

**************************************************************************
OUTCOME VARIABLE:
 PERCEIVE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0896      .0080      .7887     1.0361     1.0000   128.0000      .3107

Model
              coeff         se          t          p       LLCI       ULCI
constant     4.4974      .1209    37.2127      .0000     4.2582     4.7365
SCcondit     -.1609      .1581    -1.0179      .3107     -.4736      .1519

**************************************************************************
OUTCOME VARIABLE:
 CENTRALI

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2305      .0531      .7837     1.3917     5.0000   124.0000      .2319

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.7780      .5304     7.1233      .0000     2.7282     4.8277
SCcondit     -.2935      .2101    -1.3969      .1649     -.7095      .1224
PERCEIVE     -.1981      .1127    -1.7569      .0814     -.4212      .0251
GratCond    -1.9269      .8494    -2.2687      .0250    -3.6080     -.2458
Int_1         .2390      .3195     .7481      .4558     -.3934      .8714
Int_2         .3825      .1808    2.1164      .0363      .0248      .7403

Product terms key:
 Int_1    :        SCcondit x        GratCond
 Int_2    :        PERCEIVE x        GratCond

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0043      .5597     1.0000   124.0000      .4558
M*W      .0342     4.4791     1.0000   124.0000      .0363
----------
    Focal predict: PERCEIVE (M)
          Mod var: GratCond (W)

Conditional effects of the focal predictor at values of the moderator(s):

    GratCond     Effect         se          t          p       LLCI       ULCI
      .0000     -.1981      .1127    -1.7569      .0814     -.4212      .0251
    1.0000      .1845      .1413     1.3057      .1941     -.0952      .4641
```

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : CENTRALI
    X  : SCcondit
    W  : GratCond

Sample
Size:  130

**************************************************************************
OUTCOME VARIABLE:
 CENTRALI

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .1286      .0165      .8011      .7066     3.0000   126.0000      .5498

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.8905      .1634    17.6888      .0000     2.5671     3.2139
SCcondit     -.2671      .2119    -1.2604      .2098     -.6865      .1523
GratCond     -.2060      .2451     -.8402      .4024     -.6910      .2791
Int_1         .1763      .3214      .5486      .5843     -.4598      .8124

Product terms key:
 Int_1    :        SCcondit x        GratCond

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0023      .3009     1.0000   126.0000      .5843

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

```
****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effects of X on Y
   GratCond     Effect         se          t          p       LLCI       ULCI
     .0000     -.2935      .2101    -1.3969      .1649     -.7095      .1224
    1.0000     -.0545      .2407     -.2266      .8211     -.5309      .4218

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 SCcondit    ->    PERCEIVE    ->    CENTRALI

   GratCond     Effect     BootSE   BootLLCI   BootULCI
     .0000      .0319      .0423     -.0413      .1288
    1.0000     -.0297      .0427     -.1354      .0314

Index of moderated mediation (difference between conditional indirect effects):
             Index     BootSE   BootLLCI   BootULCI
GratCond     -.0615      .0734     -.2270      .0612

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

Perceived Social Class, Perceived Happiness, Gratitude, and the Happiness Subscale of Materialism

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

         Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 15
    Y  : HAPPINES
    X  : SCcondit
    M  : PERCEIVE
    W  : GratCond

Sample
Size:  130

**************************************************************************
OUTCOME VARIABLE:
 PERCEIVE

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .0896      .0080      .7887     1.0361     1.0000   128.0000      .3107

Model
             coeff         se          t          p       LLCI       ULCI
constant    4.4974      .1209    37.2127      .0000    4.2582    4.7365
SCcondit    -.1609      .1581    -1.0179      .3107    -.4736     .1519

**************************************************************************
OUTCOME VARIABLE:
 HAPPINES

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .4255      .1811      .9969     5.4828     5.0000   124.0000      .0001

Model
             coeff         se          t          p       LLCI       ULCI
constant    5.5449      .5982     9.2696      .0000    4.3609    6.7289
SCcondit    -.0986      .2370     -.4159      .6782    -.5677     .3705
PERCEIVE    -.5679      .1271    -4.4669      .0000    -.8196    -.3163
GratCond    -.7887      .9580     -.8233      .4119   -2.6848    1.1074
Int_1        .2293      .3603      .6363      .5258    -.4839     .9425
Int_2        .1516      .2039      .7434      .4587    -.2520     .5551

Product terms key:
 Int_1    :        SCcondit x        GratCond
 Int_2    :        PERCEIVE x        GratCond

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      .0027      .4049     1.0000   124.0000      .5258
M*W      .0036      .5526     1.0000   124.0000      .4587


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ******************

Conditional direct effects of X on Y
   GratCond     Effect         se          t          p       LLCI       ULCI
     .0000     -.0986      .2370     -.4159      .6782    -.5677      .3705
    1.0000      .1307      .2714      .4816      .6310    -.4065      .6679

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 SCcondit    ->    PERCEIVE    ->    HAPPINES

   GratCond     Effect     BootSE   BootLLCI   BootULCI
     .0000      .0914      .0910     -.0904      .2729
    1.0000      .0670      .0712     -.0628      .2209

Index of moderated mediation (difference between conditional indirect effects):
              Index     BootSE   BootLLCI   BootULCI
GratCond     -.0244      .0468     -.1312      .0575

********************* ANALYSIS NOTES AND ERRORS *************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

         Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : HAPPINES
    X  : SCcondit
    W  : GratCond

Sample
Size:  130

**************************************************************************
OUTCOME VARIABLE:
 HAPPINES

Model Summary
         R       R-sq        MSE          F        df1        df2          p
      .0647      .0042     1.1930      .1765     3.0000   126.0000      .9122

Model
             coeff         se          t          p       LLCI       ULCI
constant    3.0000      .1994    15.0440      .0000    2.6054    3.3946
SCcondit    -.0227      .2586     -.0879      .9301    -.5345     .4891
GratCond    -.1250      .2991     -.4179      .6767    -.7170     .4670
Int_1        .2352      .3923      .5997      .5498    -.5410    1.0115

Product terms key:
 Int_1    :        SCcondit x        GratCond

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W      .0028      .3596     1.0000   126.0000      .5498

********************* ANALYSIS NOTES AND ERRORS *************************

Level of confidence for all confidence intervals in output:
  95.0000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
```