

Extroverts as Materialists: Correlating Personality Traits, Materialism, and Spending Behavior

Alexis E. Jackson and Jason Scott

The Neighborhood Academy, Pittsburgh, PA

Summary

This study investigated the correlations between personality traits and adolescent materialism. It also measured the differences between the spending habits of materialists and non-materialists. A group of 48 high-school students completed a survey made up of three different components. The first measured how participants would spend a hypothetical \$500 budget, the second measured their levels of materialism through the Youth Materialism Scale, and the final component measured their personality traits through the Big Five Inventory. A positive correlation was found between extroversion and materialism ($r = 0.35$, $p = 0.0073$), while no other traits correlated with materialism. This correlation is the opposite of other studies conducted with adults, where extroversion was negatively correlated with materialism. When comparing materialists and non-materialists, the main factor that influenced purchases was whether a person's friends or peers purchased the item. This study also found that gender does not have an effect on levels of materialism. Lastly, more materialistic youth tended to spend more money on themselves versus non-materialists when given a hypothetical windfall of \$500.

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Introduction

Adolescence is a pivotal period when individuals have the opportunity to make economic decisions that express their current developing selves. It is also an important period in a person's development when he or she experiences heightened social change and are highly receptive to perceived judgments of his or her peers (1). Adolescents, as consumers of material goods, may make decisions that reflect their personality and level of materialism. The concept of materialism is defined as a person's inclination to place a significant value on physical objects he or she acquires. Materialism is triggered by psychological and emotional needs and

aspirations. Researchers have constructed several different definitions of materialism, defining it as a set of personal traits, personal values, and even orientation to one's personal needs (2). Previous studies have linked materialism and personality traits in adults, as well as materialism and consumer behaviors. One particular subgroup of shoppers who display materialistic behavior is adolescents (3). Adolescents who are categorized as more materialistic tend to spend more money, are less generous, and less willing to share compared to their peers (3). The purpose of this study was to couple adolescents' Big Five personality traits with their materialism level. It also investigated and compared the shopping behaviors of materialistic and non-materialistic adolescents.

In order to understand the general concept of materialism, it is important to examine the array of definitions developed by previous researchers. Belk believed that an individual's materialism level is based upon certain personality traits (2, 4). According to him, materialism is a collection of three traits: envy, non-generosity, and positiveness. The Youth Materialism Scale (3), which we use in this study to measure materialism, employs all aspects of Belk's definition. Statements include: "I like to buy things my friends have," (envy), "I'd rather not share my money with others if it means I'll have less for myself," (non-generosity), and "When you grow up, the more money you have, the happier you are," (positiveness) (3).

The second definition of materialism is called the personal values of materialism, which was first developed by Richins (2). He argued that materialism is a system of personal values. Richins also used three concepts to explain the makeup of materialism: centrality, happiness, and success. Centrality is a prominent focus on physical objects in a person's life. The Youth Materialism Scale also reflects Richins's definition. Statements include: "I'd rather spend time buying things, than doing almost anything else," (centrality), "I would be happier if I had more money to buy more things for myself," (happiness) and "The only kind of job I want when I grow up is one that gets me a lot of money," (success) (3).

The last definition of materialism is socio-political materialism and postmaterialism, which were constructed by Inglehart (2). Socio-political materialism is triggered by a chronic focus on lower order needs. This fixation makes people feel comfortable and physically safe,

which is why they prefer it instead of focusing on higher order needs such as self-expression and quality of life (2, 5). The Youth Materialism scale captures this fixation with statements such as, "I have fun just thinking of all the things I own" (3). Inglehart also stated that materialists place a higher value on worldly attainment over spiritual attainment. Along with his definition, he developed a theory of postmaterialism (2). Postmaterialism is when people place a high value on higher order needs and are willing to forgo their worldly possessions (lower order needs). Related to Inglehart's definition is social milieu, which is the values obtained by the influence of peers, and formative felt affluence, which is the feeling that a person's needs are met regardless of their financial standpoint. Inglehart felt that social milieu and formative felt affluence also contributed towards his definition of materialism. A person who lacks felt formative affluence or was raised in a materialistic social milieu is likely to develop socio-political materialism (2).

All three types of materialism relate to the idea that people have a hierarchical preference for material desires over other wants and needs. At the same time, they also differ in central themes. Belk focused on how a person's traits determine materialism levels. In Richins's interpretation, his main concentration was how people have a system of personal and societal values. Inglehart's reasoning for people being materialistic is that they have a chronic psychological need to place a high value on lower order needs. While each definition of materialism is different, the concepts tend to correlate. Various studies have found that participants who display one type are likely to display others (6-8). As each form of materialism is critical in understanding the current experiment, the scale used in this study is the Youth Materialism Scale (3). It was developed to measure materialism in adolescents, and includes components of Belk's, Richins', and Inglehart's definitions.

Many researchers have argued that one's personality, as measured by the Big Five, is an antecedent of their materialism; different personality traits correlate with and predict future materialistic behavior (6, 7, 8). The Big Five is a group of five broad personality characteristics. They are extroversion, agreeableness, conscientiousness, neuroticism, and openness (9,10). An extrovert is characterized as very sociable, outgoing, talkative, adventurous, and generally enthusiastic. Agreeableness is shown through sympathy, affection, kindness, forgiveness, lack of stubbornness, and modesty. Someone who is conscientious can be categorized as being organized, reliable, aware of their surroundings, and diligent. People who are neurotic tend to be anxious, tense, hostile, self-conscious, and unhappy. Finally, individuals who display openness are typically imaginative, curious, artistic, and unorthodox.

Previous researchers have studied the correlations between personality traits and materialism. Neuroticism is positively correlated with materialism (6-8), while extroversion, openness, and agreeableness are negatively correlated (6-8). In the aforementioned studies, all participants were adults; youths were not included. This study will investigate whether adolescents have similar patterns as adults. It is unknown whether the same patterns will also occur in younger consumers. For example, non-extroverted adults tend to be materialistic, while frequently adolescent female shoppers tend to shop for social reasons, suggesting extroverted adolescents may be more materialistic, not less (11). Therefore, the first hypothesis of this study was that the Big Five personality traits will be correlated with materialism. Specifically, neuroticism and extroversion will be positively correlated with materialism, while openness, agreeableness and conscientiousness will be negatively correlated.

There are several theories as to why and how materialistic people shop. One study found that females buy items that make them happy (11). Materialists are also more inclined to seek their peers' approval; therefore their friends may have influence when it comes to them purchasing items. This behavior may be because materialists tend to be more neurotic, and neurotic people tend to be more anxious and worry about what others think. Another study stated that sales are a more crucial factor to materialists and help them determine if they are going to purchase an item or not (3). Also, materialistic adolescents are more enticed by products promoted by celebrities (3). Therefore, the second hypothesis of this study is that materialistic adolescents will be more likely to make decisions based on the following compared to non-materialistic youth: their friends' purchases, promotions, happiness derived from the act of purchasing, and celebrity endorsements.

The rate at which a person saves and spends can say a lot about them. One aspect that can be revealed is if an individual has the potential of being materialistic or not. One study asked a group of youths how they would spend \$500 (3). Those who kept the majority for themselves were found to be materialists. Youth who gave more money away were categorized as non-materialists when measured by the Youth Materialism Scale (3). Researchers also found that it was less likely for materialistic youth to have savings accounts (3). Therefore, the third hypothesis of this study states that when given a hypothetical \$500 windfall, materialistic adolescents will spend more money on themselves compared to non-materialists.

It is not clearly understood whether females are more materialistic than males. One study found that males tend to be more materialistic than females (3); another found

that females are more materialistic than males using the Richins scale (11). In a different study, researchers argue that females are a “powerful consumer dynamic” in the US economy (12). This implies that girls may be more materialistic. We predicted that each gender will have different levels of materialism, but were unsure as to the direction of the difference, due to the previous conflicting findings.

Results

Previously, there had not been any studies conducted using the Youth Materialism scale to find the relationship between personality traits and materialism. This study utilized the scale to measure how personality traits correlate with adolescent materialism levels. The participants were given three different types of surveys. The first was a set of questions that required open-ended responses to investigate the reasons people made purchases, the second was the Youth Materialism scale, and the last was the Big Five Inventory. The open-ended questions asked participants to anonymously report how they would spend a hypothetical \$500 and asked them why they made those decisions (**Appendix A**).

The first hypothesis for this study was that neuroticism and extroversion would have a positive correlation with materialism, while the other traits would have negative correlations. To test this hypothesis, a Pearson correlation was used to measure the relationship between all Big Five traits and materialism. The test results found that extroversion was the only trait with statistical significance ($r = 0.35, p = 0.0073$). The other four traits did not display a significant difference. This means that more extroverted individuals are likely to also be more materialistic. This positive correlation is illustrated in **Figure 1**, while the other correlations are listed in **Table 1**.

The second hypothesis stated that materialistic people would be more subject to making decisions related to spending based on friends’ purchases, promotions, happiness, and celebrity promotions as opposed to non-

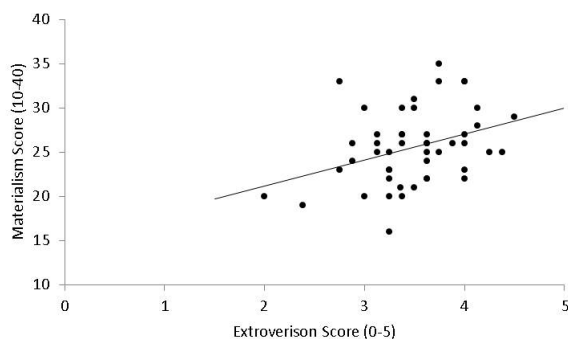


Figure 1: Positive correlation between extroversion and materialism. The correlation is statistically significant ($r = 0.35, p = 0.0073$).

	Materialism
Extroversion	$r = 0.35$ $p = 0.0073$
Agreeableness	$r = 0.004$ $p = 0.49$
Conscientiousness	$r = -0.047$ $p = 0.38$
Neuroticism	$r = -0.001$ $p = 0.50$
Openness	$r = -0.005$ $p = 0.50$

Table 1: Correlations between personality traits and materialism, as measured by the Youth Materialism Scale and the Big Five personality traits.

materialists. To test this hypothesis, the median of the scores for materialism was found, and that number was used as a demarcation between materialists and non-materialists: anyone who received a number above the median ($Mdn = 25$) was considered a materialist, and anyone who was at or below the median was labeled as non-materialist. This method for creating groups is consistent with another study on materialism (3). The hypothesis was investigated by using the Fisher’s exact test for independent proportions. Participants were asked to select the reason(s) they might purchase an item from a provided list (**Appendix A**), and the frequency of each reason was tallied for both materialists and non-materialists. Surprisingly, the only category with a significant difference was the “Friends” category (people chose to make purchases based on purchases made by friends and peers). Materialists were much more likely

Reasons for Purchasing Item	Materialists ($n = 30$)	Non Materialists ($n = 18$)	p -value
High Quality	57%	44%	> 0.05
Friends/Peers	27%	0%	< 0.0001
Sale	67%	56%	> 0.05
Unique	50%	77%	> 0.05
Trending	50%	28%	> 0.05
Content	27%	6%	> 0.05
Celebrity	13%	20%	> 0.05

Table 2: Differences in reasons for purchasing an item between materialists and non-materialists. The only category with a significant difference was the “Friends/Peers” category (people chose to make purchases based on those made by friends and peers). The p -values were calculated using Fisher’s exact test.

to purchase an item because their friends had bought it (**Table 2**).

For the third hypothesis of this study, it was predicted that materialistic people would spend more of the \$500

windfall on themselves. Three people spent the money on themselves for unselfish reasons, like helping parents with expenses. For example, one student intended to use the money to pay for a school uniform, so their parents could save their own money. Two of the participants were materialists whose scores were 31 and 33 on the survey and one was a non-materialist who scored a 16. These people were excluded from this part of the study to avoid potential biases regarding spending money on oneself for non-materialistic reasons. An independent t-test was run to compare the two groups, and we found them to be significantly different ($t = 1.81, p = 0.039$). Based on these results, the hypothesis that materialists spend more money on themselves as opposed to the non-materialists was supported. Materialists on average spent \$261.32 ($SD = \105.8) and non-materialists spent

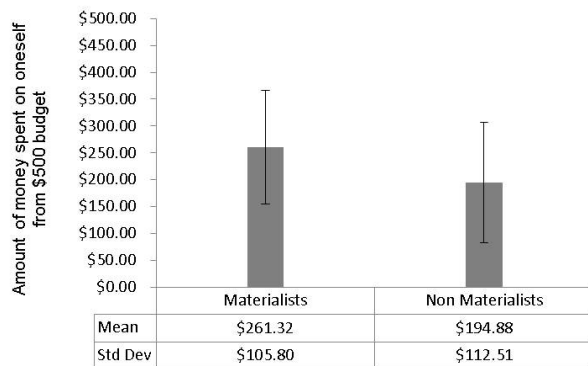


Figure 2: The difference in mean amount of money materialists and non-materialist spend on themselves out of a \$500 budget. Overall, the materialists spent more money on themselves than the non-materialists ($t = 1.81, p = 0.039$). Error bars represent standard deviations.

\$194.88 ($SD = \112.51). The differences in spending habits are illustrated in **Figure 2**.

The last hypothesis was that there would be a difference in the levels of materialism between genders. To test this hypothesis, an independent t-test was conducted. The results found that there was no significant difference ($t = 1.10, p = 0.28$) in materialism in males ($Mean = 24.86, SD = 3.79$) and females ($Mean = 26.20, SD = 4.54$).

Discussion

Our study had four major findings. First, that the only personality trait correlated with materialism was extroversion. Second, the only significant difference between materialists and non-materialists regarding why they purchased an item was the influence of their peers. Third, materialists spent more money on themselves compared to non-materialists. Finally, there was no significant difference between levels of materialism in males and females.

The first hypothesis predicted that the two traits

neuroticism and extroversion would be positively correlated with materialism, while the remaining traits would be negatively correlated. After completing the experiment, it was found that this hypothesis was only partially supported. This differed from previous studies. The only trait that was positively correlated with materialism within this study was extroversion. Relationships between the other five traits were not supported in this study, but they have been reported in other studies. The difference in results may be due to the younger age of the participants. Adolescents seek the approval of their peers; being an adolescent is a crucial time for people because this is a point where they start to try and identify themselves. Adolescents may let others influence the way they act or feel about themselves (13). Since extroverts tend to be more sociable, it is possible that they buy items seeking the approval of others and even flaunt what they have. However, this study did not include a sample of adults for direct comparison, so attributing differences in results to the age of the participants should be done with caution.

The second hypothesis stated that materialistic adolescents would be more likely to make purchases based off of promotions, their happiness, and celebrity endorsements. This hypothesis was not supported. The “Friendship/Peers” category for shopping was the only option that had an effect on how materialists shop. The results concerning the influence of friends are plausible because the test group for this study was made up of adolescents, who are more eager to seek their peers’ approval. It is unclear as to why no other factor impacted the way they shopped. A possible cause may be the small sample size of the non-materialists group ($n = 18$). With a larger sample, some of the existing differences in proportions may have been significant, as the minimum difference in the proportions would be smaller the larger the sample size.

The third hypothesis for this study was that materialistic people would spend more money on themselves when given a hypothetical windfall of \$500. This hypothesis was supported. It also agrees with another study that asked the same question (3). Materialism is all about the attainment of objects, so having more items should make materialists happier. One surprising note was that two materialistic youths were excluded from this analysis due to their intention to spend money on themselves for non-materialistic reasons. This suggests factors like one’s social milieu or felt formative affluence may play a role in moderating how materialistic people behave. An example of this would be if an extrovert were brought up in a non-materialistic household, but had materialistic tendencies. Since he or she was taught to not place value on the attainment of objects, he or she might spend money on necessities to compensate for his or

her materialistic tendencies.

The fourth hypothesis stated there would be a difference in levels of materialism in males and females. However, it was found that gender did not affect materialism. These results more than likely occurred due to their similar extroversion levels. Females had an average of a 3.61 extroversion score ($SD = 3.15$), and males had an average of 3.35 ($SD = 2.71$). Both scores are close in range, and extroversion is correlated with materialism in this study, so the lack of evidence for differences in gender is not surprising. Other studies that tested this hypothesis found conflicting results (3, 11, 12). This study suggests gender is less significant than personality in regards to identifying a materialist.

Throughout the process of executing this study, there were a few limitations. During the data collection process, some participants filled out their surveys incorrectly for the section of spending their hypothetical \$500. Some participants added money as if they had a total amount of \$1500 and divided it by the three categories. However, the survey asked how they would spend \$500, distributing the money in the three categories of spending on themselves, spending on family and friends, and saving. These participants were asked to reconsider their answers and complete the survey correctly. The second limitation was the size of the test group. The total amount of participants in the study was 48, which is large enough to run statistical tests, yet not large enough to match the power of nationwide studies with thousands of participants.

Another factor that may have affected this study was the language used in the Big Five Inventory. Some words, such as “ingenuous” or “assertive,” were unfamiliar to the participants; this was mostly a limitation regarding the younger participants. Many students asked for clarification, but it is possible that they may have simply answered with a neutral response (3 in a 1–5 scale) to avoid asking again. These questions should be rephrased in the future. Another concern is that the Big Five Inventory contained statements that may have been worded negatively. It is possible that the participants may have tried to portray themselves as less negative because they are familiar with the people who conducted the experiment. If the survey was conducted in a group of students who did not know the investigators, the participants might have been less concerned about portraying themselves in a particular way.

The lack of access to family income information within the study group was also a limitation in the study. It is possible that different levels of income may affect someone’s willingness to spend money on themselves or their level of materialism. Due to privacy concerns, students were not asked about their family’s income levels. However, this may not have affected the results

because, although their true income levels may be different, each student was given the same hypothetical income of \$500 in the survey he or she took for the study. In addition, the three students who reported spending money on themselves for unselfish reasons were excluded from certain analyses.

Another possible limitation in this study was the use of multiple statistical tests. As the number of tests performed increases, the likelihood of a false positive result also increases. Given the large number of tests performed, the possibility that some of the significant results are actually not significant should not be discounted.

This study can be helpful to researchers and businesses seeking to capitalize on differences between adolescents and adults. Having this understanding may help businesses utilize the right techniques to appeal to their targeted group of consumers. This study suggests that businesses that seek adolescent materialistic customers should attempt to target extroverts and make their advertisements connect with the idea of friendship. Two successful examples of this are Coca-Cola and McDonald’s commercials, which mostly focus their advertisements around family and friends.

Future researchers should consider using online data collection. This would ensure participants do not submit incomplete or faulty surveys. Creating or using an online survey that will check to see if each category adds up to the correct dollar amount would be very useful. Another recommendation would be to work with groups that are more diverse in ethnic backgrounds and social class; this study was limited to a specific group of African American adolescents attending a private college-preparatory high school. It would be interesting to investigate if the differing correlation in extroversion and materialism is also true for other samples. Finding a way to measure felt formative affluence and social milieu would be an intriguing add-on to the experiment to see if these concepts have an effect on adolescent materialism.

Methods

Fifty students from grades 8–11 from a private urban college preparatory school were randomly selected to participate in the study. Out of a total of 50 students invited to participate, two were unable to participate due their schedule constraints. These students ranged from ages 13–18, with a mean of 15.6 years, and 25 of the participants were male and 23 were female; all self-identified as Black. The survey contained three parts: the Big Five Inventory (9), the Youth Materialism Scale (3) and a series of questions to measure how materialistic youth shop (**Appendix A**). The Youth Materialism Scale asked students to agree or disagree with provided statements, with a scale from 1 (strongly disagree) to 4

(strongly agree). The surveys were distributed in classes randomly selected from the school schedule and then were completed by the students in a small group setting.

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Appendix A

Spending Behavior Questionnaire

This survey was designed to observe how and why people shop. There are three parts that must be completed. Please keep in mind that all answers will remain anonymous throughout this process. Thank you for participating.

1. You received money for your birthday and you want to go to the mall to buy new clothes. Which of the following would motivate you to choose one brand or item over another on your trip? Check all that apply.

- Because of its high quality
- Your peers/friends have it
- There's a sale going on
- You think it's unique (Nobody has it)
- The item is currently trending
- Buying clothes makes you content
- The clothing was indorsed by a famous person or has a celebrity's name or picture of them on

2. At every Summer Session, students at our school have the opportunity to earn \$500 at the end of the program. Assume that you have earned all \$500. What would you do with your money?

3. What motivated you to make your decision in question #2? Please be specific.

4. For the following, give your answers in dollar amounts:

- a. How much of the \$500 would you spend on yourself (items desired)? _____
- b. How much of the \$500 would you spend on others (friends/family)? _____
- c. How much of the \$500 would you save for future wants? _____