RESEARCH PAPER

Gratitude and the Reduced Costs of Materialism in Adolescents

Jeffrey J. Froh · Robert A. Emmons · Noel A. Card · Giacomo Bono · Jennifer A. Wilson

Abstract Materialistic youth seem to be languishing while grateful youth seem to be flourishing. High school students ($N = 1{,}035$) completed measures of materialism, gratitude, academic functioning, envy, depression, life satisfaction, social integration, and absorption. Using structural equation modeling, we found that gratitude, controlling for materialism, uniquely predicts all outcomes considered: higher grade point average, life satisfaction, social integration, and absorption, as well as lower envy and depression. In contrast, materialism, controlling for gratitude, uniquely predicts three of the six outcomes: lower grade point average, as well as higher envy and life satisfaction. Furthermore, when examining the relative strengths of gratitude and materialism as predictors, we found that gratitude is generally a stronger predictor of these six outcomes than is materialism.

Keywords Gratitude · Materialism · Well-being · Adolescents · Self-determination theory

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1 Introduction

As children grow into adults, they internalize attitudes and values from society. Societal concerns impact the direction in which the self develops and the importance placed on various life domains. This socialization process has been well studied for numerous aspects of culture, including how children begin to think of their gender, their race, their sense of self, as well as other aspects of their identities (Kasser 2005)—including their materialistic value orientation (Kasser et al. 2004). Indeed, in addition to experiences that induce feelings of insecurity (e.g., divorce; Rindfleisch et al. 1997), exposure to materialistic social models exerts a direct influence on children acquiring and internalizing materialistic values (Kasser et al. 2004).

When materialistic values become essential to a person's value system, personal well-being decreases because it is likely that experiences supporting basic psychological needs will decrease and thus these needs will go unmet (Kasser et al. 2004; Kasser and Ryan 1993, 1996). Gratitude, however, seems to have an opposite effect on personal well-being partly because it helps people fulfill the basic psychological needs of competence, autonomy, and relatedness (Kneezel and Emmons 2006). And because materialism is a problem for youth, and concerns about rising material strivings are increasing among parents, educators, and scientists (Chaplin and John 2007), the purpose of this study was to examine the effects of materialism and gratitude on social, emotional, and academic functioning in adolescence.

1.1 Theoretical Framework

Self-determination theory (SDT; Ryan and Deci 2000) suggests people have three innate needs that drive self-motivation, personality integration, and successful self-regulation: competence, autonomy, and relatedness. Competence is a desire to affect one's environment and achieve valued outcomes within it (Deci and Ryan 2000). Autonomy is the desire to engage in self-selected behaviors that are concordant with one's strengths and personality (Deci and Ryan 2000). And relatedness is the desire to feel connected to others and have a sense of belonging (Deci and Ryan 2000).

These needs appear crucial for well-being (Ryan and Deci 2000). Valuing intrinsic aspirations (e.g., affiliation, growth, and community) is related positively with well-being and negatively with depression and anxiety; however, valuing extrinsic aspirations (e.g., wealth, fame, and image) is related negatively with well-being and positively with depression and anxiety (Kasser and Ryan 1993). People who over invest in extrinsic or materialistic goals are more likely to experience mental illness, not mental health, because the fulfillment of basic psychological needs may remain unmet (Kasser 2002). For example, needs of autonomy and competence would not be fulfilled if an individual were to buy a particular brand of apparel to impress peers, and this choice then has the effect of compromising their ability to successfully execute an important task (e.g., job, duty) or valued activity (e.g., sport, hobby). If, however, an individual buys a brand of apparel that improves their ability to engage in a task or activity and improves their execution of that task or activity, then they are likely to fulfill their needs for autonomy and competence.

Indeed, materialistic adolescents may be less likely to report being intensely absorbed or engrossed in a personally meaningful activity (Kasser 2002), unlike grateful adolescents (Froh et al. 2010). This may happen because materialistic values: (a) focus people more on the external rewards of an activity than on interest and challenge; (b) lead people to become self-conscious, thus minimizing absorption because it requires losing awareness of

oneself; and (c) encourage some behaviors (e.g., watching television) that rarely produce absorption (Kasser 2002). On the other hand, because gratitude is a positive response to receiving a benefit (Emmons 2007), it tends to promote valuing connections to people, personal growth, and social capital (i.e., intrinsic aspirations) (Bono and Froh 2009). Thus, it seems likely that gratitude and materialism drive incompatible ways of functioning.

Values theory provides additional explanation for such links between gratitude and materialism (Bilsky and Schwartz 1994). In this framework values are desirable, trans-situational goals that vary in importance and help guide people's lives. Within a dynamic structure involving distinct values, some values are incompatible with each other; actions to fulfill one may conflict with actions to pursue another. One of the major conflicts is between orientations of *self-enhancement* (pursuing success and dominance over others) versus *self-transcendence* (accepting others as equals and being concerned for their welfare) (Bilsky and Schwartz 1994). Materialism likely falls under the former (Kasser 2005; Sheldon and Kasser 1995), whereas gratitude likely falls under the latter. Specifically, gratitude is most closely related to values of *benevolence* (preserving and enhancing the welfare of close others) and *universalism* (understanding, appreciating, tolerating, and protecting the welfare of people and nature) (Bilsky and Schwartz 1994). These values are diametrically opposed to power (desiring social status and control over people and resources) and hedonism (desiring sensory pleasure for oneself), (Bilsky and Schwartz 1994), which likely are the two values most aligned with materialism. Therefore, values theory would predict a negative correlation between gratitude and materialism because they represent opposing value systems.

Further evidence exists for the conflict between goals driven by gratitude and goals driven by materialism. In a group of 1,854 undergraduates from 15 cultures worldwide, 11 types of goals[1] aligned consistently with two underlying orthogonal dimensions in a circumplex model: intrinsic (e.g., community, affiliation) versus extrinsic (e.g., financial success, image) (Grouzet et al. 2005). Therefore, to the extent that gratitude is an intrinsic value and is related to goals of community and affiliation (Emmons 2007), it will likely conflict with materialistic goals.

1.2 Materialism, Gratitude, and Well-Being

Materialism is a lifestyle based on accumulating and acquiring consumer goods beyond what is necessary to meet basic needs (Kasser 2002). It involves the belief that it is important to attain financial success, nice possessions, the right image, and high status (Kasser et al. 2004). Consumer researchers define materialism as the importance a person places on worldly possessions (Belk 1984) or to acquiring possessions that he considers necessary to attain goals (e.g., happiness) (Richins and Dawson 1992). Although materialism has been identified with personality traits such as envy, lack of generosity, and possessiveness (Belk 1985), it is currently identified with values and an orientation to consumption-based aims, beliefs, goals, and behaviors (Kasser et al. 2004). Indeed, materialism is now typically measured via the "values method" where participants rate a variety of different goals and values—such as those concerning spirituality, relationships, sensual pleasure, and materialism—in terms of how important each is to their lives (Kasser and Ryan 1993, 1996).

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[1] The 11 goals were: hedonism, safety, physical health, self-acceptance, affiliation, community feeling, spirituality, conformity, popularity, image, and financial success.

Negative psychological correlates of materialism exist in adulthood. Materialistic adults tend to exhibit life dissatisfaction (Richins and Dawson 1992), unhappiness (Belk 1985), low self-esteem (Kasser 2002), less concern with the welfare of others (Sheldon and Kasser 1995), less relatedness, autonomy, competence, and meaning in life (Kashdan and Breen 2007), and more depression (Kasser and Ryan 1993) and envy (Belk 1985). Beyond reporting low levels of gratitude (Kashdan and Breen 2007; McCullough et al. 2002), materialistic adults are less satisfied with their standards of living, family lives, and the amount of fun and enjoyment they experience (Richins and Dawson 1992).

Several studies document similar findings in children and adolescents. Materialistic youth tend to be less committed to school (Goldberg et al. 2003), more preoccupied with consumer behaviors (Goldberg et al. 2003) have poorer academic performance (Roberts et al. 1999), and are at greater risk for psychopathology (e.g., depression; Cohen and Cohen 1996), anxiety, and unhappiness (Kasser 2005). Further, they are not only less likely to experience family togetherness (Flouri 2004), but they are also less likely to be socially integrated, or inclined to connect to and help others in their neighborhood and community (Froh et al. 2010).

Gratitude, on the other hand, may promote healthy social development. Grateful youth report satisfaction with their friends, family, community, and school; they also report having supportive family and peer relationships, as well as helping others (Froh et al. 2009). Further, by focusing young people on ways others have benefited them, gratitude may enhance self-respect (Froh et al. 2008b). Therefore, gratitude seems crucial for healthy development because it focuses youth on how their lives are supported and sustained by others, which should bolster feelings of being valued and of security—states that are negatively related with materialism.

1.3 The Present Study

Research examining the relation between materialism and well-being in youth is scarce despite concerns about the ill effects of materialism on youth (Kasser 2002; Schor 2004). Research has yet to examine how materialism and gratitude simultaneously, and therefore uniquely, predict such broad outcomes as academic functioning (grade point average [GPA]), life satisfaction, absorption, social integration, envy, and depression. We expect that materialism will negatively predict gratitude, GPA, life satisfaction, absorption, and social integration, and positively predict depression and envy. We also expect that gratitude will positively predict GPA, life satisfaction, absorption, and social integration, and negatively predict depression and envy. Finally, we expect that the paths between gratitude and the outcomes will be stronger than the paths between materialism and the outcomes.

2 Method

2.1 Procedure

Students enrolled in curriculum that all students receive (i.e., English) were sought for participation to increase the odds of obtaining a representative sample of the school. The students were recruited by the first author, while working as a school psychologist in the same district. He contacted the principal of the school where data were collected and asked for permission to distribute parental consent forms and collect data after receiving passive parental consent and active student assent. Of the 1,090 students in the school, 50 were

absent the day of data collection, and five parents/guardians returned the consent forms requesting that their child not participate in the study. All data were collected from one school in a city in Long Island, New York during spring 2007. One week prior to data collection, the first author reviewed all measures and instructions with the vice principal who then reviewed them with the teachers. Teachers were given a script for introducing the study to students to ensure uniformity and control for potential demand characteristics. Teachers administered questionnaires in classrooms.

2.2 Participants

Participants were 1,035 students from a public high school (mean age = 15.67 years, SD = 1.21, range = 14–19 years). Students were in grades 9 (27.8%), 10 (25.0%), 11 (25.7%), and 12 (21.5%) within an affluent district (district median household income = \$94,339; state median household income = \$43,393). Most were Caucasian (64.7%), about half were male (50.6%), and 12.5% reported receiving special education services.

2.3 Measures

2.3.1 Materialism

The Material Values Scale (MVS; Richins 2004) is a 15-item measure of materialism using a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). In adult samples, internal reliabilities have ranged from .79 to .91 (Richins 2004). The MVS evaluates three distinct aspects (each serving as an indicator in our latent variable models described below): success (e.g., "I admire people who own expensive homes, cars, and clothes."), centrality (e.g., "Buying things gives me a lot of pleasure."), and happiness (e.g., "I'd be happier if I could afford to buy more things."). An initial exploratory factor analysis indicated that these items are unidimensional, and in the current sample, the MVS total score demonstrated good internal consistency ($\alpha = .81$).

2.3.2 Gratitude

We used three scales to assess gratitude (each serving as an indicator in our latent variable models). The Gratitude Questionnaire–6 (GQ-6; McCullough et al. 2002) is a 6-item measure of gratitude using a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*) including items such as, "If I had to list everything that I felt grateful for, it would be a very long list," (We replaced "grateful" with "thankful" in the items because we have found that youth use the latter more when describing their experience as a beneficiary). The GQ-6 has a robust one-factor solution (McCullough et al. 2002) and has demonstrated good internal consistency in adult ($\alpha = .82$; McCullough et al. 2002) and early adolescent samples ($\alpha = .82$; Froh et al. 2008b). In the current sample, the GQ-6 demonstrated acceptable internal consistency ($\alpha = .76$).

The Gratitude, Resentment, and Appreciation Test (GRAT)-short form (Thomas and Watkins 2003) is a 16-item measure of gratitude using a Likert scale from 1 (*strongly disagree*) to 9 (*strongly agree*). Internal consistency is excellent in adult samples ($\alpha = .92$), as are convergent and discriminant validity (Thomas and Watkins 2003). The GRAT-short form assesses three aspects: lack of a sense of deprivation (e.g., "Life has

been good to me."), simple appreciation (e.g., "Oftentimes I have been overwhelmed at the beauty of nature."), and appreciation for others (e.g., "I couldn't have gotten where I am today without the help of many people."). In the current sample, the total GRAT score demonstrated good internal consistency ($\alpha = .82$), and alpha for the subscales ranged from acceptable to good (lack of a sense of deprivation: $\alpha = .81$; simple appreciation: $\alpha = .74$; appreciation for others: $\alpha = .73$).

The Gratitude Adjective Checklist (GAC; McCullough et al. 2002) is the sum of three adjectives (grateful, thankful, and appreciative) rated on a Likert scale from 1 (*very slightly or not at all*) to 5 (*extremely*). It has shown good internal consistency in adult ($\alpha = .87$) (McCullough et al. 2002) and adolescent samples ($\alpha = .78 - .88$) (Froh et al. 2008a). The students were asked to indicate how much they felt each emotion "in general." In the current sample, the GAC demonstrated good internal consistency ($\alpha = .86$).

Together, the GQ-6, GRAT-short form, and GAC comprised the latent variable for gratitude in our model.

2.3.3 Academic achievement

Students were asked to report their GPA. The response options were: 95 and above, 90–94.9, 85–89.9, 80–84.9, 75–79.9, 70–74.9, 65.0–69.9, and 64.9 and below. (This school district uses a 0–100 scale for GPA.)

2.3.4 Life satisfaction

The Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS; Seligson et al. 2003) is a 5-item measure using a Likert scale ranging from 1 (*terrible*) to 7 (*delighted*) that assesses satisfaction with family life, friendships, school experience, self, and living environment. Internal consistency has been acceptable with middle school students ($\alpha = .75$) and good with high school students ($\alpha = .81$). Confirmatory factor analyses support its construct validity with a total life satisfaction score accounting for 50% of the total variance (Huebner et al. 2003). Overall life satisfaction is the sum of the five items. A sample item is, "I would describe my satisfaction with my family life as _____." In the current sample, the BMSLSS demonstrated acceptable internal consistency ($\alpha = .72$), and the five items were parceled into three indicators for latent variable analysis.

2.3.5 Envy

The Dispositional Envy Scale (DES; Smith et al. 1999) is an 8-item measure of envy using a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). In college samples, internal consistency (sample 1 $\alpha = .86$, and sample 2 $\alpha = .83$) and 2-week test-retest reliability is good (.80) (Smith et al. 1999). A sample item is, "I feel envy every day." In the current sample, the DES demonstrated good internal consistency ($\alpha = .87$). We formed three parceled indicators from these eight items for our latent variable models.

2.3.6 Depression

The Center for Epidemiologic Studies Depression Scale for Children (CES-DC; Weissman et al. 1980) is a 20-item measure of depression using a Likert scale from 1 (*not at all*) to 4 (*a lot*). Concurrent validity and test-retest reliability have been established (Faulstich et al.

1986). It has demonstrated good internal consistency ($\alpha = .88$) in a sample of 156 youth ranging in age from 8 to 17 years (Brage et al. 1993). A sample item is, "I felt down and unhappy." In the current sample, the CES-DC demonstrated good internal consistency ($\alpha = .89$), and the 20 items were parceled into three indicators for latent variable analysis.

2.3.7 Absorption and social integration

The Engaged Living in Youth Scale (ELYS; Froh et al. 2010) is a 15-item measure of positive psychological functioning using a Likert scale from 1 (*definitely not like me*) to 6 (*exactly like me*). In a sample of early and late adolescents, internal consistency was good for the absorption ($\alpha = .89$) (6 items) and social integration ($\alpha = .84$) (9 items) subscales (Froh et al. 2010). A sample item for absorption is, "While doing my hobbies (e.g., sports, reading, musical instruments, acting, etc.), I feel 'in the zone,'" and a sample item for social integration is, "I feel like a part of my community/neighborhood." In the current sample, the absorption ($\alpha = .82$) and social integration subscale ($\alpha = .83$) demonstrated good internal consistency. The 6 items from the absorption subscale and 9 items from the social integration subscale were each parceled into three indicators for latent variable analysis.

2.3.8 Socioeconomic status

The Hollingshead Four Factor Index of Social Status (Hollingshead 1975) uses a combination of education and occupation ratings to categorize individuals into five social classes, which correspond roughly with upper class (Class I), the middle classes (Classes II and III), the working class (Class IV), and the poor (Class V). An individual's occupational prestige is rated on a 10-point scale, from 0 = housewives, those on welfare, laid-off workers, and unemployed to 9 = executives, commissioned officers in the military, major government officials, and professionals. Education level is also rated on a 7-point scale, from 1 = under 7 years of schooling to 7 = completed some graduate or professional training. These two ratings are then combined as follows: ($5 \times$ [occupation]) + $3 \times$ [education]). For a family where both parents work, the same calculations would be made for each parent. Then, the total score for each parent would be added together and divided by two to create a final socioeconomic status continuous code for that family.

3 Results

3.1 Measurement Model

We first calculated descriptive statistics for the main study variables and socioeconomic status (see Table 1). We then fit a confirmatory factor analytic (CFA) model to evaluate measurement of our latent constructs. This mode fit the data well: $\chi^2_{(252)} = 1045.94$, CFI = .96, RMSEA = $.055_{(90\% \text{ confidence interval} = .051–.058)}$. This fit, and the absence of noteworthy modification indices, provides support for this measurement model. Inspection of the factor loadings indicated that all were significant and substantial, with standardized loadings ranging from .60 to .89.

The latent correlations from this CFA are shown in Table 2. From this table, we see that materialism and gratitude have a medium negative association with each other.

Table 1 Means, standard deviations, and range for the main study variables and socioeconomic status

Outcome	Mean	SD	Range
Materialism	43.08	8.25	17–75
GQ-6	33.17	5.43	7–42
GRAT-short form	101.03	17.18	46–144
GAC	11.21	2.84	3–15
GPA	6.24	1.30	1–8
Life satisfaction	27.08	4.41	13–35
Envy	17.46	6.42	8–39
Depression	36.76	10.41	20–73
Absorption	27.57	5.60	8–36
Social integration	38.56	7.78	11–54
SES	49.27	9.76	6–66

GQ-6, Gratitude Quesitonnaire-6; *GRAT-short form* Gratitude, Resentment, and Appreciation Test-short form; *GAC* Gratitude Adjective Checklist; *SES* Socioeconomic status

Table 2 Latent correlations among constructs (From CFA)

	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	−.01	.06	−.15*	.05	−.08	.06	.05	−.02	.09*	−.10*	−.03	−.09*
2. Sex (female)		−.01	.04	−.07	.19*	−.14*	.16*	.07	.19*	−.08	.22*	−.16*
3. Ethnicity (minority)			−.07	−.01	.05	.07	−.11*	−.07	.04	−.09	.14*	.02
4. SES				−.02	.02	−.08	.22*	.05	.05	−.03	−.02	.01
5. Special education					−.09	.06	−.29*	.10*	.01	.01	.01	.01
6. Gratitude						−.34*	.28*	−.35*	−.43*	.69*	.76*	.34*
7. Materialism							−.22*	.25*	.06	−.10*	−.22*	−.02
8. GPA								−.13*	−.10*	.20*	.17*	.08
9. Envy									.51*	−.44*	−.12*	−.10*
10. Depression										−.70*	−.08	−.20*
11. Life satisfaction											.35*	.27*
12. Social integration												.45*
13. Absorption												

* $p < .01$

Materialism is associated with lower GPA, higher envy, lower life satisfaction, and lower social integration and absorption (small-to-medium associations). In contrast, gratitude has medium associations with higher GPA and absorption, strong positive relations with life satisfaction and social integration, and medium associations with lower envy and depression. This table also displays associations with variables that will serve as covariates in subsequent models (constructs 1–5). Here, we see that females have higher levels of gratitude and lower levels of materialism than males, but that materialism and gratitude are unrelated to age, being an ethnic minority, SES, or receipt of special education services (Fig. 1).
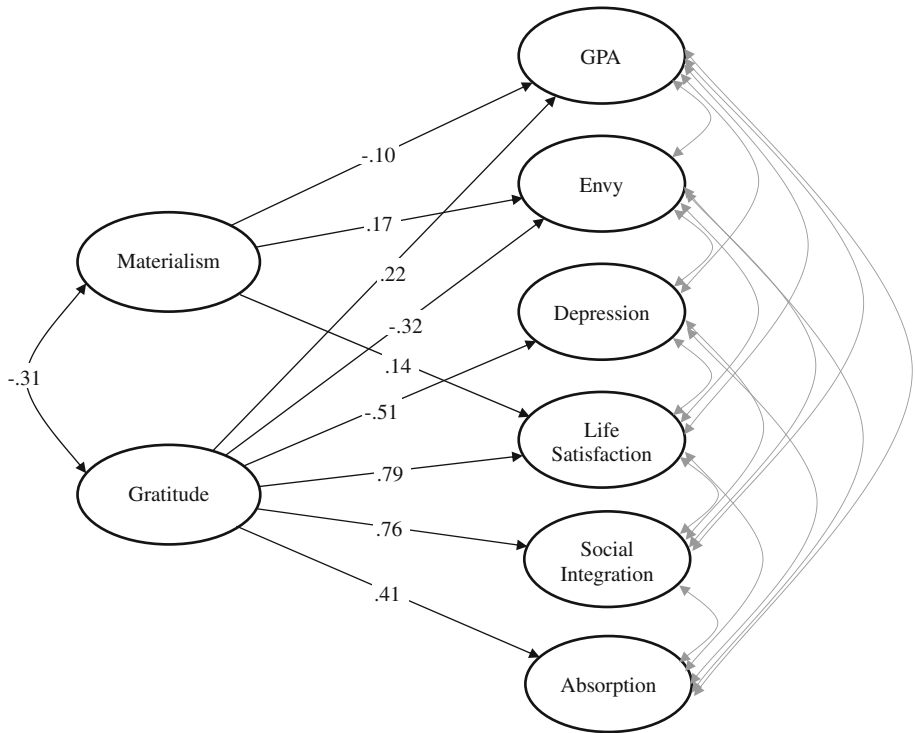
Fig. 1 Structural model of materialism and gratitude predicting adjustment. Notes. Model controls for age, sex, ethnicity, SES, and receipt of special education services. Only statistically significant ($p < .01$) predictive paths shown. Model fit: $\chi^2_{(252)} = 1045.94$, CFI = .96, RMSEA = $.055_{(.051-.058)}$

3.2 Materialism and Gratitude as Predictors of Adjustment

We next fit a structural model in which materialism and gratitude predict GPA, envy, depression, life satisfaction, social integration, and absorption, controlling for sex, age, ethnic minority status, SES, and receipt of special education services. This is a saturated structural model, which means that the fit is equal to the CFA model described above. Standardized latent regression coefficients of materialism and gratitude predicting the six aspects of adjustment are shown in Table 3, and can be interpreted as the *unique* relations (i.e., controlling for the other) of materialism and gratitude to adjustment. Inspection of these values indicates that gratitude, controlling for materialism, uniquely predicts all outcomes considered: higher GPA, life satisfaction, social integration, and absorption, as well as lower envy and depression. In contrast, materialism, after controlling for gratitude, uniquely predicts three of the six outcomes: lower GPA, as well as higher envy and life satisfaction.

3.3 Relative Strengths of Materialism and Gratitude as Predictors

To further evaluate the relative predictive powers of materialism versus gratitude, we compared the relative magnitudes of these regression paths. Specifically, for depression, life satisfaction, social integration, and absorption (i.e., those outcomes for which the two

Table 3 Unique predictions of materialism and gratitude to adjustment

	Materialism	Gratitude	Comparison[a]
GPA	−.10*	.22*	3.68, $p = .055$
Envy	.17*	−.32*	4.36, $p < .05$
Depression	−.08	−.51*	98.65, $p < .001$
Life satisfaction	.14*	.79*	184.47, $p < .001$
Social integration	.03	.76*	314.77, $p < .001$
Absorption	.09	.41*	51.21, $p < .001$

Values are standardized latent regression coefficients in which Materialism and Gratitude were treated as correlated predictors of the six outcome variables, controlling for age, sex, ethnicity, SES, and special education services

[a] Comparisons in the magnitudes of the predictive relation of materialism versus gratitude to each aspect of adjustment were evaluated using nested-model comparisons (see text for details), with values representing 1 $df \Delta\chi^2$

* $p < .01$

regression paths were in the same direction), we fit a series of nested models in which the parallel paths (e.g., materialism predicting depression and gratitude predicting depression) were constrained equally. For GPA and envy, in which the regression paths were of opposite sign, we compared the absolute magnitudes of the materialism versus regression paths by constraining one to equal the inverse of the other. We inspected the increase in model misfit ($\Delta\chi^2$) due to these constraints to evaluate whether this equality constraint was tenable; if it was not (i.e., $\Delta\chi^2$ was high relative to Δdf), then we concluded that the magnitudes of these paths were significantly different. Results of these comparisons are summarized in the rightmost column of Table 3. These findings indicate that gratitude is generally a stronger predictor of these six outcomes than is materialism (though the difference in magnitude is only marginal, $p = .055$, for GPA).

4 Discussion

Gratitude is an underexplored topic in youth (see Bono and Froh 2009 and Froh and Bono 2008, for reviews) with only two published studies demonstrating that gratitude interventions tend to boost gratitude and well-being in youth (Froh et al. 2008a, 2009a). In the current study we found that grateful adolescents attained a higher GPA, were more socially integrated, were higher in absorption and life satisfaction, and were less envious and depressed than their less grateful counterparts. Furthermore, the relation between gratitude and five of these six outcomes was stronger than that of materialism with these outcomes. When combined with previous research, a clearer picture is beginning to emerge about the benefits of gratitude in adolescents, and thus an important gap in the literature on gratitude and well-being is beginning to be filled.

Part of the reason why people who pursue intrinsic goals report greater well-being than those who pursue extrinsic or materialistic goals (Kasser and Ryan 1996) is because materialism erodes friendships (Kasser 2002). But gratitude may safeguard against this erosion as it is related to perceived quality of relationships through both self-report (e.g., Wood et al. 2008) and peer-report (Algoe et al. 2008; Emmons and McCullough 2003). Gratitude seems to influence intrinsic goal pursuit, other-oriented motivations, and the

fulfillment of higher-order needs (e.g., self-expression and purpose), whereas materialism seems to fuel extrinsic goal pursuit, individualistic motivations, and the fulfillment of lower-order needs (e.g., possessions of comfort and safety) (Kasser 2002; Polak and McCullough 2006).

For example, in a daily diary study examining undergraduate students' gratitude and materialism over a 2-week period, researchers found that on days when people were less materialistic than usual, they also tended to be more grateful on that same day. This link held after controlling for trait materialism, implying that gratitude is related to less materialistic strivings, no matter how generally materialistic the person. Further, materialism was related to increased social loneliness and conflicted exchanges, but gratitude was related to even stronger decreases in these outcomes (Bono and Polak 2007). Helping to explain the above patterns, others (Kashdan and Breen 2007) found that materialism was negatively related with well-being by way of increased experiential avoidance (i.e., unwillingness to face negatively evaluated thoughts, feelings and sensations, as well as the circumstances begetting such experiences). Together, these findings illustrate ways gratitude and materialism pull people toward different ways of being in the world—gratitude promotes valuing connections to people, mindful growth, and social capital, whereas materialism promotes valuing possessions, instant comfort, and social status.

Until the current study, however, it was unknown whether and how these effects occur in youth. With gratitude and materialism having divergent associations with well-being among adolescents, gratitude may prove useful for advancing many of the social development goals increasingly addressed by schools. For example, there is evidence that strong extrinsic values are linked to increased health risk behavior (in terms of tobacco, alcohol, and marijuana use, as well as sexual activity) (Williams et al. 2000). Thus, gratitude may aid flourishing in youth because it motivates them to fulfill basic needs of personal growth, relationships, and community—all of which reduce vulnerability to the main health risks they face.

Materialism and life satisfaction were negatively correlated when examining the bivariate relation between these variables, but they were positively correlated in the structural model. Thus, it is possible that materialistic youth report higher levels of life satisfaction because their material goods bring them happiness. The correlation between materialism and life satisfaction may also hinge on the meaning and significance of materialism for particular individuals. To the extent that social interactions involve objects and activities that seem materialistic on the surface (e.g., the latest digital gizmos), such acquisitions may provide greater social inclusion. Furthermore, if gratitude is a stand-in for "intrinsic values" it suggests that the relation between materialism and life satisfaction is mostly due to the problem of conflict between materialism and such values.

Some might argue that the relation between materialism and the main study variables is due to the high socioeconomic status of our sample. In other words, is materialism related with ill-being only for adolescents who presumably want for nothing and are concerned with image (e.g., attending an Ivy League school after graduation)? In order to test this possibility, we first statistically controlled for socioeconomic status when conducting our analyses, removing its effects on the outcomes. Second, youth from higher socioeconomic backgrounds actually tend to be lower in materialism compared to youth from lower socioeconomic backgrounds. Indeed, youth who live in areas of economic deprivation tend to score particularly high on materialism (Nairn et al. 2007). Thus, it is unlikely that materialism's relationship with ill-being in our study was due to the high proportion of "rich" kids in our sample.

One noteworthy limitation is our exclusive reliance on self-report data, which may have artificially inflated our findings due to shared-reporter variance. Future research on gratitude in youth could benefit from using multiple methods, including behavioral, physiological, and informant (peer/parent/teacher) data to decrease the shared method variance. For example, during a classroom break giving students the option to either socialize or help their teacher could behaviorally measure gratitude's function as a moral motive (i.e., igniting prosocial behavior; McCullough et al. 2001). A second limitation is that the present study was cross-sectional, which limits our ability to make causal inferences. Future researchers should employ longitudinal methods to draw conclusions of temporal primacy among these constructs (e.g., Froh et al. 2009b). Furthermore, experimental interventions focused on gratitude might also provide clarity of causal relations (e.g., Froh et al. 2009a). Specifically, future researchers interested in studying gratitude interventions in youth might want to consider materialism as an outcome. This would add to the literature because the two published studies examining gratitude interventions in youth (Froh et al. 2008a, 2009a) focused exclusively on well-being as the outcome. As mentioned above, researchers interested in such work should go beyond self-report and include behavioral measures of materialism to increase the scientific rigor of the experiment. For example, parents/guardians could submit their purchase receipts acquired over the past week (or some other time frame) and indicate the purchases made at their child's request. Compelling data would indicate a significant decrease in money spent on child purchase requests after the intervention. Finally, our data are from students from one school in an affluent school district. Thus, our findings must be interpreted with caution due to the poor generalizability, and future researchers are encouraged to use more diverse samples to determine the extent of replication.

As gratitude involves wanting what one has rather than having what one wants, instilling a sense of gratitude may help people appreciate the gifts of the moment and experience freedom from past regrets and future anxieties. With gratitude comes the realization that happiness is not contingent upon materialistic happenings in one's life, but rather from being embedded in caring networks of giving and receiving. And because materialism causes the denigration of relationships—partly by fostering the view that people are objects, things to be used for one's benefit (Kasser 2002)—methods and messages encouraging non-materialistic values must become a priority if we want youth to be flourishing. If a growing interest in material things in youth continues to show links to poorer school performance, negative attitudes about school, and unhappiness, then it will undoubtedly elevate public concern (Goldberg et al. 2003). In the meanwhile, our data suggest that encouraging gratitude may help counter this trend.

References

Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: Gratitude and relationships in everyday life. *Emotion, 8,* 425–429.

Belk, R. W. (1984). Three scales to measure constructs related to materialism: Reliability, validity, and relationships to measures of happiness. In T. Kinnear (Ed.), *Advances in consumer research* (11th ed., pp. 291–297). Provo, UT: Association for Consumer Research.

Belk, R. W. (1985). Materialism: Trait aspects of living in the material world. *Journal of Consumer Research, 12,* 265–280.

Bilsky, W., & Schwartz, S. H. (1994). Values and personality. *European Journal of Personality, 8,* 163–181.

Bono, G., & Froh, J. J. (2009). Gratitude in school: Benefits to students and schools. In R. Gilman, E. S. Huebner, & M. Furlong (Eds.), *Handbook of positive psychology in schools* (pp. 77–88). New York: Routledge.

Bono, G., & Polak, E. L. (2007). *Gratitude and materialism: Divergent links to relational well-being.* Manuscript in preparation.

Brage, D., Meredith, W., & Woodward, J. (1993). Correlates of loneliness among Midwestern adolescents. *Adolescence, 28*, 685–693.

Chaplin, L. N., & John, D. R. (2007). Growing up in a material world: Age differences in materialism in children and adolescents. *Journal of Consumer Research, 34*, 480–493.

Cohen, P., & Cohen, J. (1996). *Life values and adolescent mental health.* Mahwah, NJ: Erlbaum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.

Emmons, R. A. (2007). *Thanks! How the new science of gratitude can make you happier.* New York: Houghton Mifflin Company.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*, 377–389.

Faulstich, M., Carey, M., Ruggiero, L., Enyart, P., & Gresham, F. (1986). Assessment of depression in childhood and adolescence: An evaluation of the Center for Epidemiological Studies Depression Scale for Children (CES-DC). *American Journal of Psychiatry, 143*, 1024–1027.

Flouri, E. (2004). Exploring the relationship between mothers' and fathers' parenting practices and children's materialist values. *Journal of Economic Psychology, 25*, 743–752.

Froh, J. J., & Bono, G. (2008). The gratitude of youth. In S. J. Lopez (Ed.), *Positive psychology: Exploring the best in people* (Vol. 2, pp. 55–78). Westport, CT: Greenwood Publishing Company.

Froh, J. J., Bono, G., & Emmons, R. A. (2009b). *Saying "thank you" is beyond manners: Gratitude and motivation to contribute to society among early adolescents.* Manuscript submitted for publication.

Froh, J. J., Kashdan, T. B., Ozimkowski, K. M., & Miller, N. (2009a). Who benefits the most from a gratitude intervention in children and adolescents? Examining positive affect as a moderator. *The Journal of Positive Psychology, 4*, 408–422.

Froh, J. J., Kashdan, T. B., Yurkewicz, C., Fan, J., Allen, J., & Glowacki, J. (2010). *The benefits of passion and absorption in activities: Engaged living in adolescents and its role in psychological well-being.* Manuscript submitted for publication.

Froh, J. J., Sefick, W. J., & Emmons, R. A. (2008a). Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being. *Journal of School Psychology, 46*, 213–233.

Froh, J. J., Wajsblat, L., & Ubertini, M. (2008b). *Gratitude's role in promoting flourishing and inhibiting languishing: Using positive psychology to complement clinical practice.* Poster session presented at the Association for Behavioral and Cognitive Therapies Annual Convention, Orlando, FL.

Froh, J. J., Yurkewicz, C., & Kashdan, T. B. (2009b). Gratitude and subjective well-being in early adolescence: Examining gender differences. *Journal of Adolescence, 32*, 633–650.

Goldberg, M. E., Gorn, G. J., Peracchio, L. A., & Bamossy, G. (2003). Understanding materialism among youth. *Journal of Consumer Psychology, 13*, 278–288.

Grouzet, F. M. E., Kasser, T., Ahuvia, A., Dols, J. M. F., Kim, Y., Lau, S., et al. (2005). The structure of goal contents across 15 cultures. *Journal of Personality and Social Psychology, 89*, 800–816.

Hollingshead, A. B. (1975). *Four factor index of social status.* Unpublished manuscript. New Haven, Connecticut: Yale University.

Huebner, E. S., Suldo, S. M., & Valois, R. F. (2003). *Psychometric properties of two brief measures of children's life satisfaction: The Students' Life Satisfaction Scale and the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS).* Retrieved December 26, 2005, http://www.childtrends.org/files/huebnersuldovaloispaper.pdf.

Kashdan, T. B., & Breen, W. E. (2007). Materialism and diminished well-being: Experiential avoidance as a mediating mechanism. *Journal of Social and Clinical Psychology, 26*, 521–539.

Kasser, T. (2002). *The high price of materialism.* Cambridge, MA: MIT Press.

Kasser, T. (2005). Frugality, generosity, and materialism in children and adolescents. In K. A. Moore & L. H. Lippman (Eds.), *What do children need to flourish: Conceptualizing and measuring indicators of positive development* (pp. 357–373). New York: Kluwer/Plenum.

Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology, 65*, 410–422.

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22*, 280–287.

Kasser, T., Ryan, R. M., Couchman, C. E., & Sheldon, K. M. (2004). Materialistic values: Their causes and consequences. In T. Kasser & A. D. Kanner (Eds.), *Psychology and consumer culture: The struggle for a good life in a materialistic world* (pp. 11–28). Washington, DC: American Psychological Association.

Kneezel, T., & Emmons, R. A. (2006). Personality and spiritual development. In P. L. Benson, E. C. Roehlkepartain, P. E. King, & L. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 266–278). Thousand Oaks, CA: Sage Publications.

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual empirical topography. *Journal of Personality and Social Psychology, 82*, 112–127.

McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin, 127*, 249–266.

Nairn, A., Ormond, J., & Bottomley, P. (2007). *Watching, wanting, and well-being: Exploring the links*. National Consumer Council.

Polak, E. L., & McCullough, M. E. (2006). Is gratitude an alternative to materialism? *Journal of Happiness Studies, 7*, 343–360.

Richins, M. (2004). The Material Values Scale: Measurement properties and development of a short form. *Journal of Consumer Research, 31*, 209–219.

Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research, 19*, 303–316.

Rindfleisch, A., Burroughs, J. E., & Denton, F. (1997). Family structure, materialism, and compulsive consumption. *Journal of Consumer Research, 23*, 312–325.

Roberts, D. F., Foehr, U. G., Rideout, V. J., & Brodie, M. A. (1999). *Kids and media at the new millennium*. Menlo Park, CA: Kaiser Family Foundation.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68–78.

Schor, J. B. (2004). *Born to buy: The commercialized child and the new consumer culture*. New York: Scribner.

Seligson, J. L., Huebner, E. S., & Valois, R. F. (2003). Preliminary validation of the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS). *Social Indicators Research, 61*, 121–145.

Sheldon, K. M., & Kasser, T. (1995). Coherence and congruence: Two aspects of personality integration. *Journal of Personality and Social Psychology, 68*, 531–543.

Smith, R. H., Parrott, W. G., Diener, E. F., Hoyle, R. H., & Kim, S. H. (1999). Dispositional envy. *Personality and Social Psychology Bulletin, 25*, 1007–1020.

Thomas, M., & Watkins, P. (2003). *Measuring the grateful trait: Development of the revised GRAT*. Poster session presented at the Annual Convention of the Western Psychological Association, Vancouver, BC.

Weissman, M. M., Orvaschel, H., & Padian, N. (1980). Children's symptoms and social functioning self-report scales: Comparison of mothers' and children's reports. *Journal of Nervous and Mental Disease, 168*, 736–740.

Williams, G. C., Cox, E. M., Hedberg, V. A., & Deci, E. L. (2000). Extrinsic life goals and health-risk behaviors in adolescents. *Journal of Applied Social Psychology, 30*, 1756–1771.

Wood, A. M., Maltby, J., Gillett, R., Linley, P. A., & Joseph, S. (2008). The role of gratitude in the development of social support, stress, and depression: Two longitudinal studies. *Journal of Research in Personality, 42*, 854–871.