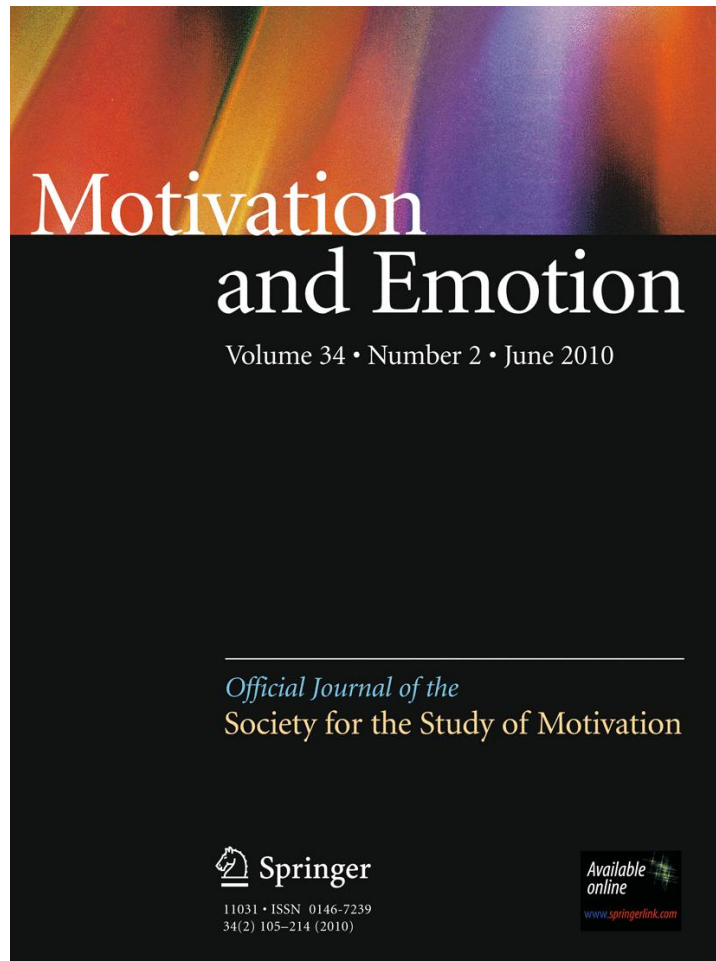


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## Being grateful is beyond good manners: Gratitude and motivation to contribute to society among early adolescents

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**Abstract** Gratitude, a positive response to receiving a benefit, may contribute more to youth than just momentary happiness. It may ignite in youth a motivation for “upstream generativity” whereby its experience contributes to a desire to give back to their neighborhood, community, and world. We tested this notion by longitudinally examining early adolescents’ gratitude and their social integration, or motivation to use their strengths to help others and feel connected to others at a macro level. Middle school students ( $N = 700$ ) completed measures of gratitude, prosocial behavior, life satisfaction, and social integration at baseline (T1), 3-months (T2), and 6-months (T3) later. Using bootstrapping to examine multiple mediators, controlling for demographics and social integration at T1, we found that gratitude at T1 predicted social integration at T3 and that prosocial behavior and life satisfaction at T2 mediated the relation. Further mediational analyses showed that gratitude and social integration serially enhanced each other. This prospective evidence aligns well with the interpretation that gratitude may help to initiate upward spirals toward greater emotional and social well-being. Implications are discussed in terms of gratitude’s role in positive youth development.

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Being thankful isn’t just saying thanks. It’s a divine feeling that isn’t hideable. When you truly are thankful you will do something in return because you owe it to the person and society.

—Gratitude essay from an 11 year-old male research participant (Froh 2007).

Being grateful may build and strengthen social bonds and friendships (Emmons and Shelton 2002; Fredrickson 2004; Komter 2004). Gratitude, “a sense of joy and thankfulness in response to receiving a gift” (Emmons 2004, p. 554), enables one to notice, understand, and capitalize off beneficial exchanges with others (McCullough et al. 2008). But when in life does such mature social understanding reliably emerge? Some suggest that as children become less egocentric and enter early adolescence, the ability to empathize strengthens (Saarni 1999). This ability may be the strongest developmental catalyst of gratitude, as it enables the social-cognitive determinants needed to appreciate and reciprocate the conditions of benefit-giving situations (McCullough et al. 2001). Specifically, because gratitude is a complex emotion and is experienced insofar as one can appraise the personal value of a benefit and the intent of and cost to a benefactor (Tesser et al. 1968; Wood et al. 2008), it may not be until early adolescence (ages 10–14) that children can reliably experience genuine gratitude and reap its psychological and relational benefits (see Bono and Froh 2009; Froh and Bono 2008, for reviews). Gratitude probably matures by age 10 (Emmons and Shelton 2002). Indeed, it is only after

children's empathy develops enough for them to comprehend others' intentions to contribute to their life satisfaction—which seems to be in place by age 10 (Park and Peterson 2006)—that they may be able to start experiencing gratitude as adults do. Thus, the current study examines the relation between gratitude and social integration and the mechanisms for such a relation in early adolescence hoping to capture an early developmental period where one can experience and benefit from genuine gratitude.

Early adolescence may constitute a key period when children can truly begin to benefit from an ability to understand and appreciate intentional acts of kindness from others and experience gratitude. It is when adolescents exhibit a readiness to establish supportive social bonds that match their intrinsic interests (Saarni 1999) and when they begin relying on these bonds more and more for understanding and describing their identity (Montemayor and Eisen 1977). It is at this time that adolescents start navigating the challenges of exploring and committing to adult social roles and developing industriousness (Marcia 1980). In short, early adolescence is when children may begin capitalizing purposefully on the positive investments and inputs of others. Gratitude can help them secure and build important resources (e.g., assistance and cooperation from others, opportunities, and knowledge) and establish supportive, fulfilling relationships early on—all benefits that are mutually reinforcing in development. Thus, gratitude may be a vital social skill for adolescents because it can broaden their horizons so that they can purposefully approach the future.

### Gratitude and positive youth development

Gratitude, then, may aid adolescents' development by fostering both a general sense of connectedness to others, the community and society at large as well as a motivation to use one's strengths to broadly contribute to these entities. Indeed, a sense of gratitude for being able to both participate in what the world has to offer and make a unique contribution was a very common characteristic among highly purposeful youth (Damon 2008). This purposeful state of being may help the young teen embark on the tasks of articulating, sharing, and building the self-narrative (Gergen and Gergen 1988; McAdams 2001) upon which a robust personal identity is based (Niederhoffer and Pennebaker 2002). In particular, we propose that as a moral behavior in beneficiaries, gratitude helps young adolescents achieve greater social integration (Durkheim 1951; Keyes 1998), defined as, "being passionate about helping and feeling connected to others at a macro level (e.g., neighborhood and community)" (Froh et al. 2010a, p. 6). Social integration was shown to be associated negatively with

depression, envy, delinquency, and antisocial behavior and associated positively with a higher grade point average, life satisfaction, positive affect, self-esteem, hope, and happiness (Froh et al. 2010a). Moreover, Froh et al. (2010a) obtained such associations via self, peer, and teacher report using cross-sectional and longitudinal data. Thus, a link between gratitude and social integration would help to explain why gratitude may foster both intrapsychic and interpersonal well-being and promote optimal functioning in multiple realms of life (Emmons 2007).

Gratitude is a typical emotional response when people receive a personal gift or benefit that was not earned, deserved, or expected, but instead due to the good intentions of another person (Emmons and McCullough 2003). People are grateful when they notice and appreciate the good things that happen to them and when they express thanks to those responsible (Emmons 2007). As a moral emotion, gratitude promotes beneficial exchanges and relationships between people and the welfare of society at large (Haidt 2003), a view that has long been shared by religions and cultures across the globe (Emmons and Crumpler 2000). Considered an important virtue for psychological and social well-being, gratitude furnishes people with meaningfulness and expands their sense of connection to include other people or communities, nature, God, or another spiritual force (Emmons 2007).

Though many studies using adult populations have shown that gratitude does, in fact, tune people into valuable relationships (Algoe et al. 2008), reinforce the kind behaviors of benefactors, and even spur prosocial behavior in beneficiaries (for a review, see Emmons and McCullough 2004), the origins and early benefits of gratitude remain largely uncharted. Gratitude may help youth foster prosocial relationships, self-esteem and competence, well-being, and purpose in life (Bono and Froh 2009; Froh and Bono 2008), but evidence from research using youth populations remains scant. The purpose of this study was to examine whether gratitude is longitudinally related to increases in an important indicator of adolescent social well-being, social integration, and if gratitude and social integration serially enhance each other.

### Gratitude, well-being, and thriving

Social belonging is among the most essential resources for humans' survival (Ainsworth 1989; Bowlby 1982; Buss 1990; Deci and Ryan 2000), and caring ties can buffer people from adversity and pathology as well as enhance their health and well-being throughout life (Baumeister and Leary 1995; House et al. 1988). Some even suggest "that nature has designed the human psyche for participation in cultural society" (Baumeister 2005, p. 6). That is, beyond

people simply being social animals like other species—interacting with a community so as to satisfy basic need and goals (e.g., food, protection)—humans evolved the distinct capacity to maintain, transmit, and accumulate information in a cultural context (Baumeister 2005). With gratitude being a moral emotion that promotes prosocial behavior (McCullough et al. 2001) and supports the forming and strengthening of supportive relationships between people (Algoe et al. 2008; Emmons 2007), it is possible that gratitude may aid social integration and help people contribute to the collective.

Research with adults overwhelmingly indicates that gratitude is strongly linked to healthy psychological and social functioning (McCullough et al. 2002; Watkins 2004). Compared with less grateful people, grateful people report experiencing more life satisfaction, optimism, vitality, and less depression and envy. Grateful individuals also endorse high levels of agreeableness, extraversion, openness, and low levels of neuroticism (McCullough et al. 2002). Grateful people also tend to be more prosocial. That is, they are more helpful, supportive, forgiving, and empathic toward others (McCullough et al. 2002). Feeling grateful, in fact, causes people to respond prosocially to benefactors (Bartlett and DeSteno 2006; Tsang 2006, 2007) and unrelated others (Bartlett and DeSteno 2006; Nowak and Roch 2007). Other research on adults (Overwalle et al. 1995; Watkins et al. 2003) has also shown that grateful people tend to experience greater positive emotions, such as more frequent contentment, happiness, and hope, as well as fewer negative emotions.

The regular experience of positive emotions can make people healthier and more resilient, fueling an upward spiral of optimal functioning, well-being, and development (Fredrickson 2001; Fredrickson and Joiner 2002). The broaden-and-build theory of positive emotions suggests that, unlike negative emotions which narrow our focus and restrict our behavioral range, positive emotions yield nonspecific action tendencies beyond physical action. Further, positive emotions generate broad thought-action repertoires that ultimately build enduring physical, intellectual, and social resources (Fredrickson 2001). For instance, positive emotions broaden problem-solving strategies (Fredrickson and Branigan 2005) and can undo the aftereffects of negative emotions (Fredrickson et al. 2000). Indeed, one reason resilient people bounce back from negative life events better is that they experience positive emotions regularly and use them more often in response to stressful situations (Tugade and Fredrickson 2004). Gratitude may engage this upward spiral (Fredrickson 2004). For example, after compassion, gratitude was the second most common emotion experienced after the September 11 attacks in 2001, and it appeared to be a powerful factor in helping people cope with the disaster

(Fredrickson et al. 2003). Such effects may have occurred with youth too. For example, in an archival study of newspaper accounts of things children were thankful for, themes of gratitude for basic human needs (e.g., family, friends, and teachers) were found to increase after 9/11 (Gordon et al. 2004). There is no way to tell, however, if positive emotions helped the children cope with the disaster.

Evidence that gratitude is related with well-being in youth has only recently started to emerge, and most of it rests on research using correlational methods administered at single points in time. For instance, among early adolescents, gratitude was found to be negatively related with physical symptoms and positively related with positive affect, perceptions of peer and familial social support, optimism, providing emotional support, and satisfaction with school, family, community, friends, and self (Froh et al. 2009b). And among late adolescents, gratitude was positively related with life satisfaction, social integration, absorption, and academic achievement and negatively related with envy, depression, and materialism (Froh et al. 2010d). Other research with adolescents indicates that strong social ties and a sense of engagement with others are significant predictors of achievement (Appleton et al. 2008; Froh et al. 2010a) and of immediate and long-term personal well-being (Froh et al. 2010a). Thus, gratitude seems related to various indicators of psychological and social functioning in youth as it is with adults.

Because gratitude acts in tandem with other positive emotions to boost well-being and success in life (Fredrickson 2004), gratitude may have benefits that are unique to adolescents. For instance, in early adolescents it is strongly linked to hope (Froh et al. 2009b). Hope triggers planning for achieving goals, and planning produces action. It also increases trust in others (Dunn and Schweitzer 2005), which should buoy youths' efforts to identify strengths and face new challenges (Marcia 1980). Moreover, because gratitude strengthens and builds relationships, it should help academically beyond its relation with self-reported GPA (Froh et al. 2010d). Adolescents with high quality friendships fare better in school (Rubin et al. 2006). So it makes sense that gratitude in youths is also related to trust and satisfaction with life in multiple domains (Froh et al. 2009b). Youths who are unsatisfied with their lives exhibit more aggression, sexual risk-taking, substance use, poor eating and physical inactivity (Huebner et al. 2006); and if they dislike school, they are more likely to lag in academic functioning, extracurricular activity, and connecting to school (Huebner and Gilman 2006). Feeling connected to school is a chief determinant of low risk behavior and academic growth (Resnick et al. 1997). Thus, gratitude may engage other social emotional skills for building character, success and well-being in human development.

The most convincing evidence that gratitude can improve youth well-being comes from three gratitude intervention studies. In one study (Froh et al. 2008), early adolescents instructed to count up to five things for which they were grateful (i.e., gratitude condition) reported more gratitude, optimism, and life satisfaction, as well as less negative affect, compared to those who counted things they found annoying (i.e., hassles condition). In another study (Froh et al. 2009a), children and adolescents low in positive affect who wrote and personally delivered a gratitude letter to a benefactor, compared to those who kept journals about daily events, reported greater gratitude and positive affect at post-treatment and greater positive affect at the 2-month follow-up. Finally, in a third study (Froh et al. 2010b), children taught how to think gratefully, compared to those in an attention-control group, reported more grateful thinking, gratitude, and happiness (per self and teacher reports) and also wrote more thank you cards to their parent teacher association. Some of these effects even held 3–5 months later. Thus, experimental evidence demonstrates that being grateful can help a young person experience long lasting boosts to their well-being.

### Life satisfaction, prosocial behavior, and motivation to contribute to society

Life satisfaction (LS) and prosocial behavior constitute two developmental mechanisms through which gratitude is presumed to obtain its salubrious effects (Froh et al. 2009b; Graham 1988; Park and Peterson 2006). LS, or the subjective appraisal of the quality of one's life (Diener et al. 1999), is a critical strength for youth. Considered an indicator of optimal functioning (Suldo and Huebner 2006), LS has been found to predict later externalizing and internalizing behaviors as well as experiences of peer victimization among adolescents (Haranin et al. 2007; Martin et al. 2008), and adolescents who have higher levels of LS are also less likely to exhibit externalizing behaviors in the aftermath of significant life stressors (Suldo and Huebner 2004). To the extent that LS is related to positive affect (Diener et al. 1999), it may not only be the result of successful outcomes in life but also the cause of them (Lyubomirsky et al. 2005); and this may be the case in multiple domains of life too. In fact, gratitude may help change a person in fundamental ways. When people are made to feel grateful they become more satisfied with life and it is gratitude's relationship with LS that accounts for a reduction in materialistic values (Lambert et al. 2009a). This suggests that gratitude helps prompt in people a "broadened" view of their lives that can even serve to alter their pursuits and goals away towards greater emotional (rather than material) gratification and well-being. Thus,

LS would seem important for adaptive development across the life span.

Prosocial behavior is also critical to human development because it affects the quality of interactions between people and among groups. It facilitates cooperation and connects individuals to resources that are crucial for humans' survival (Trivers 1971). When individuals help others they not only benefit those people but they benefit themselves too. People can experience improved physical and mental health when they help others (Schwartz and Sendor 2000) or volunteer (Omoto and Snyder 1995; Wilson and Musick 1999). In fact, providing instrumental support to others has even been linked to reduced mortality (Brown et al. 2003). Consistent findings have been obtained with adolescents as well. Altruism was found to be positively associated with health for females and with well-being for males and females (Schwartz et al. 2009). In particular, helping that is provided autonomously yields benefits for both the helper (and the recipient) because it satisfies essential psychological needs (Weinstein and Ryan 2010).

Because people feel grateful when they receive aid or gifts that they consider personally valuable or that they see as being provided intentionally by, or at some cost to, a benefactor, gratitude orients people to the things and social exchanges in their lives that sustain or enhance their welfare (McAdams 2001; McAdams and Bauer 2004). Gratitude also increases their sense of interpersonal trust and imbeddedness in caring relationships (Dunn and Schweitzer 2005). This may also elicit positive expectations about future exchanges with others. Consistent with this view that gratitude can positively shift the way individuals view themselves and others, recent evidence indicates that gratitude lends individuals a sense of coherence in life, precisely because it causes them to positively frame events and circumstances (Lambert et al. 2009b). For these reasons, then, we expect that gratitude would bring greater satisfaction with life, energize prosocial behavior, and motivate youth to contribute to the lives of others and to society in general. These predictions follow from the social evolutionary role gratitude is assumed to play in facilitating humans' cooperation with non-kin and in sustaining reciprocal altruism (McCullough et al. 2008; Nowak and Roch 2007). McCullough et al. (2008) raised the possibility that gratitude evolved to facilitate social exchange. Compelling evidence suggests that gratitude evolved to stimulate not only direct reciprocal altruism but also "upstream reciprocity" (Nowak and Roch 2007): the passing on of benefits to third parties instead of returning benefits to one's benefactors.

Therefore, gratitude's association with increases in social connectedness may foster a broader motivation to connect with others in meaningful ways. Such an interpretation would be consistent with the contrary finding that

social exclusion can be harmful (Stillman et al. 2009). Stillman et al. (2009) found that when people's belongingness needs are threatened by experiences of social rejection or ongoing loneliness they perceive less meaning in their lives, compared to when their belongingness needs are met. Thus, feeling embedded in a caring social network and world may help foster a sense of meaningfulness and purpose. Purpose "is a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self" (Damon et al. 2003, p. 121). By accomplishing something that is of consequence to the world beyond the self, a person transcends one's own limited interests in pursuing a lasting, useful contribution to society. It therefore cannot occur in isolation from others.

Contribution to society represents the ultimate manifestation of positive youth development (Lerner 2004). When youth have a moral, civic, and spiritual commitment to contributing to others and institutions beyond themselves in time and place they are more likely to be advancing their own positive development as well as the health of their social world (Lerner et al. 2003). It is such "mutually beneficial and sustaining exchanges between individuals and contexts" that enable youth to thrive developmentally and that help society thrive civically (Lerner et al. 2003, p. 174). Scholars have long suspected that gratitude engenders generativity (i.e., contributing to society by nurturing younger generations) later in life (McCullough et al. 2001; Emmons 2007). The only evidence to support this notion so far, though, did not involve a direct investigation of whether actual experiences of gratitude predicted later generativity (Peterson and Stewart 1996). Evidence that gratitude predicts an internalized motivation to make a contribution to one's neighborhood, community, and world would provide an important step toward more directly examining the tenability of this notion.

### The current investigation

The aim of this study was to investigate whether gratitude is longitudinally associated with an important indicator of psychological and social well-being, social integration, and to examine if gratitude and social integration serially enhance each other. Social integration encompasses a prosocial and purposeful orientation of wanting to make a unique contribution to one's community and world. Beyond the assessment of static states of well-being (i.e., that depend on a momentary sense of the quality of one's life) such a construct represents a vital marker of thriving because it reflects an orientation that unifies individuals' ultimate concerns (Emmons 1999) with their desire to help

others, their community, and world—thus providing them with a certain level of coherence in their psychological and social functioning (Froh et al. 2010a). The socially integrated adolescent can be said to be thriving because he has an internalized motivation to be engaged in "healthy, positive relations with his or her community" and be moving toward "making culturally valued contributions to self, others, and institutions" (Lerner et al. 2003, p. 173). As a construct, then, social integration is important to measure in children and adolescents because it maximizes their chances of finding a purpose and, in turn, attaining a social network that supports such efforts (Damon 2008).

This study represents the first longitudinal investigation of gratitude among early adolescents and a vital marker of their thriving—social integration, or their motivation to contribute to a unifying purpose in their life and to people and society. In particular, we examined if participants who are more grateful were also more socially integrated than their less grateful counterparts 6 months later, after controlling for demographics and baseline social integration levels. We also examined if overall life satisfaction and prosocial behavior at 3 months mediated any association we found between gratitude and later social integration. In other words, we tested whether gratitude as a trait was related prospectively to individuals' social integration and whether life satisfaction and prosocial behavior both served as mediators in gratitude's longitudinal association with social integration. Further, because it is possible that a more socially integrated person may be more grateful later on, we also tested an alternate model whereby we examined the association between social integration and gratitude 6 months later (after controlling for demographics and baseline gratitude levels) and whether life satisfaction and prosocial orientation served as mediators in this longitudinal relationship. Finally, building off of the broaden-and-build theory of positive emotions, we examined if gratitude and social integration serially influence each other.

### Method

#### Participants

Participants were 700 middle school students (mean age = 11.74 years, SD = .89, range = 10–14 years) from one public school in a city in Long Island, New York. Students were in grades 6 (40.4%), 7 (31.5%), and 8 (28.1%) within an affluent district (district median household income = \$94,339; state median household income = \$43,393). Most were Caucasian (70.8%), about half were female (51.7%), and 14.4% reported receiving special education services.

## Measures

### *Gratitude adjective checklist (GAC; McCullough et al. 2002)*

The GAC is the sum of three adjectives: grateful, thankful, and appreciative. A Likert scale from 1 (very slightly or not at all) to 5 (extremely) followed each item. It has demonstrated good internal consistency in adult samples ( $\alpha = .87$ ; McCullough et al. 2002), and convergent and discriminant validity has been established in adolescent samples (Froh et al. 2007, 2008). Students were asked to rate the amount they experienced each feeling “during the past few weeks.” In the current sample, the GAC demonstrated good internal consistency ( $\alpha = .83$ ). Although other dispositional measures of gratitude exist (e.g., the Gratitude Questionnaire-6; McCullough et al. 2002), we chose the GAC for this study because when the data for the current study were collected it was the only validated gratitude scale for adolescents (see Froh et al. 2007 for a review). To allay concerns about construct validity, it should be noted that the GAC and GQ-6 are correlated at .58 for 10–11 year olds and .45 for 12–13 year olds,  $p$ 's < .001 (Froh et al. 2010c).

### *Child social behaviour questionnaire (CSBQ; Warden et al. 2003)*

The CSBQ yields scores using 12 behavioral dimensions for four factors: two antisocial factors, a prosocial factor, and a victim factor. (We used the prosocial factor, which has eight items.) After reading the sentence stem, “How often have you...” participants respond to questions such as, “Helped another child in your class with their work?” using the response options, “Never,” “Sometimes,” or “Often.” It has demonstrated acceptable internal consistency in youth samples ( $\alpha = .68$  for the prosocial measure). In the current sample, the prosocial factor demonstrated good internal consistency ( $\alpha = .80$ ).

### *Multidimensional students' satisfaction with life scale (MSSLS; Huebner 1994)*

The MSSLS is a 40-item measure using a Likert scale from 1 (strongly disagree) to 6 (strongly agree) that assesses life satisfaction in five domains: family, school, self, living environment, and friends. Across several studies (Green-spoon and Saklofske 1997; Huebner 1994; Huebner et al. 1998), internal consistency for the MSSLS ranges between the .70s to low .90s. Test–retest coefficients for 2- and 4-week time periods fall mostly between .70 and .90 (Huebner et al. 1998). A sample item for the family factor is, “I like spending time with my parents;” a sample item

for the school factor is, “I look forward to going to school;” a sample item for the self factor is, “I like myself;” a sample item for the living environment factor is, “I like my neighborhood;” and a sample item for the friends factor is, “My friends will help me if I need it.” In the current sample, the MSSLS demonstrated good internal consistency ( $\alpha = .89$ ).

### *The engaged living in youth scale (ELYS; Froh et al. 2010a)*

The ELYS is a 15-item measure of social integration and absorption using a Likert scale from 1 (definitely not like me) to 6 (exactly like me). We used the social integration factor, which has nine items. In a sample of early and late adolescents, internal consistency for the social integration factor ranged from .73 to .89 and test–retest reliability was the following: 2-weeks,  $r = .84$ , 3-months,  $r = .72$ , and 6-months,  $r = .70$ , ( $p$ 's < .001). Furthermore, adolescents high in social integration reported elevated levels of hope, meaning, self-esteem, happiness, and positive affect and reduced levels of depression, negative affect, antisocial behavior, envy, and materialism (Froh et al. 2010a). A sample item is, “I love helping people.” In the current sample, the social integration factor demonstrated good internal consistency ( $\alpha = .89$ ).

## Procedure

Students enrolled in mandatory curriculum were sought for participation to increase the odds of obtaining a representative sample of the school. The first author 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. 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. Students completed the GAC and social integration subscale at T1, the prosocial behavior and life satisfaction scales at T2 (3-months later), and the GAC and social integration subscale at T3 (6-months later).

## Results

### Correlations

We initially conducted zero-order correlations (see Table 1). The demographic variables were dummy coded

**Table 1** Zero-order correlations, means, and standard deviations among demographic variables, T1 social integration, T1 gratitude, T2 prosocial behavior, T2 life satisfaction, and T3 social integration

Variable	1	2	3	4	5	6	7	8	9
1. Gender	–	.03	–.05	–.10*	.26**	.19**	.18**	.17**	.22**
2. Age		–	–.04	.05	–.10*	–.06	.05	–.00	–.07
3. Ethnicity			–	–.00	–.03	–.05	.10*	–.07	–.05
4. SPED Services				–	.01	–.05	.04	–.08	–.00
5. T1 Social integration					–	.49**	.40**	.40**	.70**
6. T1 Gratitude						–	.30**	.30**	.41**
7. T2 Prosocial behavior							–	.28**	.41**
8. T2 Life satisfaction								–	.45**
9. T3 Social integration									–
<i>M</i>	–	11.74	–	–	41.34	12.77	13.93	191.98	41.02
<i>SD</i>	–	.89	–	–	7.09	1.96	2.81	21.27	7.67

SPED = Special education. T1 = baseline. T2 = 3-months. T3 = 6-months

\*  $p < .05$ , \*\*  $p < .001$

(gender: 0 = male, 1 = female; ethnicity: 0 = white, 1 = non-white; services: 0 = not receiving special education services, 1 = receiving special education services). From this table, we see that gratitude at T1 has medium associations with prosocial behavior and life satisfaction at T2. Furthermore, like prosocial behavior and life satisfaction at T2, gratitude at T1 also has a medium to strong association with social integration at T3.

#### Multiple-mediator model

Following recent recommendations about the interpretation of indirect effects (e.g., MacKinnon et al. 2002; MacKinnon et al. 2004; Preacher and Hayes 2004, 2008), we used a sampling with replacement, bias-corrected and accelerated, bootstrapping procedure (5,000 samples of  $N = 700$ ) for examining the statistical significance of all indirect (mediated) paths. See Preacher and Hayes (2004, 2008) for more information about the advantages of bootstrapping and also comparison with the Baron and Kenny (1986) causal steps approach.) Using longitudinal data to examine mediation is preferred over cross-sectional data because temporal order is accounted for (i.e., causal priority can be established; Preacher and Hayes 2004; e.g., Conger et al. 1990). Therefore, controlling for gender, age, ethnicity, special education services, and social integration at T1, we then tested a model where gratitude at T1 predicts prosocial behavior and life satisfaction at T2, which in turn predicts social integration at T3. Following the recommendation of Preacher and Hayes (2008), we tested a model with multiple mediators because the effect of an independent variable on an outcome is likely transmitted by several means. Furthermore, “when multiple mediators are entertained, it

is often more convenient, precise, and parsimonious to include them in the same model” (p. 887).

As noted earlier, bootstrapped estimates were used to examine the indirect effects of gratitude at T1 on social integration at T3 via prosocial behavior and life satisfaction at T2 controlling for demographic variables and social integration at T1. The interpretation of our findings is that, taken together, prosocial behavior and life satisfaction mediate the effect of gratitude on social integration. The total effect of gratitude on social integration is .33,  $p < .05$ , and the direct effect of gratitude on social integration is .19,  $p = .14$ . The difference between the total and direct effects is the total indirect effect through the two mediators with a point estimate of .14 and a 95% BCa (bias corrected and accelerated) bootstrap CI of .06–.24. Because zero does not fall into this interval, we can therefore claim that the difference between the total and direct effects of gratitude on social integration is different from zero. Thus, the total indirect effect of the two mediators is significant. The directions of the paths from gratitude to the mediators and the mediators to social integration are consistent with the interpretation that greater gratitude at T1 is related with greater prosocial behavior and life satisfaction at T2, which in turn is related with greater social integration at T3. An examination of the specific indirect effects indicates that prosocial behavior (95% BCa CI = .02–.13) and life satisfaction (95% BCa CI = .02–.15) are mediators because their 95% CIs do not contain zero. This indicates that zero is not likely a potential value for the indirect effect  $ab$ , which is  $a$  (the path between the predictor and mediator) multiplied by  $b$  (the path between the mediator and criterion), the necessary requirement for mediation to exist (Preacher and Hayes 2004, 2008).



**Table 2** SE and *t*-values for gratitude at T1 predicting social integration at T3 (6-months) through prosocial behavior and life satisfaction at T2 (3-months) controlling for demographic variables and social integration at T1

Paths	SE	<i>t</i>
Gender → social integration T3	.47	.57
Age → social integration T3	.25	−.52
Ethnicity → social integration T3	.50	−.14
SPED services → social integration T3	.65	.32
Social integration T1 → social integration T3	.04	14.72***
Gratitude → social integration <i>c</i>	.13	2.45*
Gratitude → social integration <i>c'</i>	.13	1.46
Gratitude → prosocial behavior	.06	3.00**
Gratitude → life satisfaction	.47	2.33*
Prosocial behavior → social integration	.09	3.85***
Life satisfaction → social integration	.01	6.01***

SPED = Special education. The model summary for predicting social integration is,  $R^2 .54, F(8, 553) = 80.79, p < .001$

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

In sum, controlling for demographic variables and social integration at T1, greater gratitude at T1 is related with greater social integration at T3 both directly and indirectly via greater prosocial behavior and life satisfaction at T2. These relationships are summarized in Table 2 and Fig. 1.

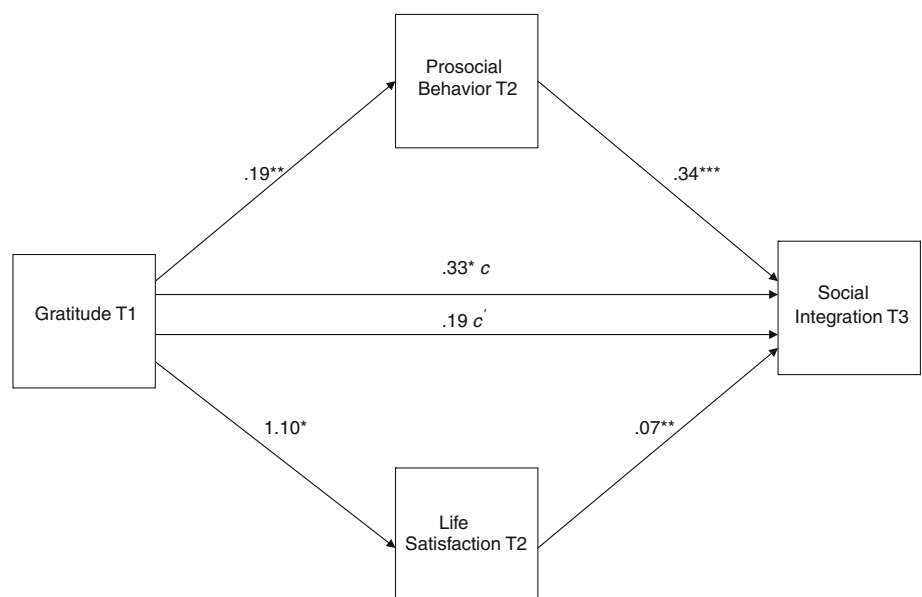
Alternative model

To help clarify temporal order, controlling for gender, age, ethnicity, special education services, and gratitude at T1, we then tested an alternative model where social

integration at T1 predicts prosocial behavior and life satisfaction at T2, which in turn predicts gratitude at T3. The interpretation of our findings is that, taken together, prosocial behavior and life satisfaction mediate the effect of social integration on gratitude. The total effect of social integration on gratitude is .08,  $p < .001$ , and the direct effect of social integration on gratitude is .06,  $p < .001$ . The difference between the total and direct effects is the total indirect effect through the two mediators with a point estimate of .02 and a 95% BCa bootstrap CI of .01–.04. Because zero does not fall into this interval, we can therefore claim that the difference between the total and direct effects of social integration on gratitude is different from zero. Thus, the total indirect effect of the two mediators is significant. The directions of the paths from social integration to the mediators and the mediators to gratitude are consistent with the interpretation that greater social integration at T1 is related with greater prosocial behavior and life satisfaction at T2, which in turn is related with greater gratitude at T3. But the direct effect of prosocial behavior at T2 on gratitude at T3 is not statistically significant,  $p = .31$ . An examination of the specific indirect effects indicates that, for the reasons noted above, prosocial behavior (95% BCa CI = −.00–.01) is not a mediator because its 95% CI contains zero, whereas life satisfaction (95% BCa CI = .01–.03) is a mediator because its 95% CI does not contain zero.

In sum, controlling for demographic variables and gratitude at T1, greater social integration at T1 is related with greater gratitude at T3 both directly and indirectly via greater life satisfaction at T2, but not indirectly via greater prosocial behavior at T2.

**Fig. 1** Unstandardized coefficients for gratitude at T1 predicting prosocial behavior and life satisfaction at T2 (3-months) in turn predicting social integration at T3 (6-months) controlling for demographic variables and social integration at T1. Note: The following are the unstandardized coefficients for the demographic variables and social integration at T1 predicting social integration at T3: gender, .27; age, −.13; ethnicity, −.07; special education services, .20; social integration at T1, .58\*\*. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

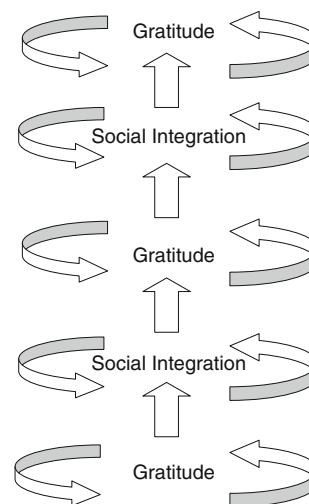


Do gratitude and social integration serially influence each other?

We hypothesized that gratitude and social integration would serially influence each other. Therefore, controlling for gender, age, ethnicity, special education services, and social integration at T1, we tested a model where gratitude at T1 predicts social integration at T3, which in turn predicts gratitude at T3.<sup>1</sup> The interpretation of our findings is that social integration mediates the effect of gratitude at T1 on gratitude at T3. The total effect of gratitude at T1 on gratitude at T3 is .32,  $p < .001$ , and the direct effect of gratitude at T1 on gratitude at T3 is .29,  $p < .001$ . The difference between the total and direct effects is the total indirect effect through the mediator with a point estimate of .03 and a 95% BCa bootstrap CI of .01–.06. Because zero does not fall into this interval, we can therefore claim that the difference between the total and direct effects of gratitude at T1 on gratitude at T3 is different from zero. Thus, the total indirect effect of the mediator is significant. The directions of the paths from gratitude to social integration and social integration to gratitude are consistent with the interpretation that greater gratitude at T1 is related with greater social integration at T3, which in turn is related with greater gratitude at T3. An examination of the specific indirect effects indicates that social integration (95% BCa CI = .01–.06) is a mediator because its 95% CI does not contain zero.

Next we tested another model where, controlling for gender, age, ethnicity, special education services, and gratitude at T1, social integration at T1 predicts gratitude at T3, which in turn predicts social integration at T3. The interpretation of our findings is that gratitude mediates the effect of social integration at T1 on social integration at T3. The total effect of social integration at T1 on social integration at T3 is .69,  $p < .001$ , and the direct effect of social integration at T1 on social integration at T3 is .60,  $p < .001$ . The difference between the total and direct effects is the total indirect effect through the mediator with a point estimate of .09 and a 95% BCa bootstrap CI of .06–.13. Because zero does not fall into this interval, we can therefore claim that the difference between the total and direct effects of social integration at T1 on social integration at T3 is different from zero. Thus, the total indirect effect of the mediator is significant. The directions of the paths from social integration to gratitude and gratitude to social integration are consistent with the interpretation that greater social integration at T1 is related with greater

<sup>1</sup> Unfortunately, we were unable to test gratitude and social integration as mediators at T2 because these data were not collected in the second wave of data collection. Therefore, we modeled our analyses after Fredrickson and Joiner (2002) and tested models where the mediators and outcome are at the same time point, in this case T3.



**Fig. 2** Gratitude and social integration in an upward spiral

gratitude at T3, which in turn is related with greater social integration at T3. An examination of the specific indirect effects indicates that gratitude (95% BCa CI = .06–.13) is a mediator because its 95% CI does not contain zero.

Together, these findings suggest that gratitude predicts itself partly via social integration, and that social integration predicts itself partly via gratitude. Gratitude and social integration, then, mutually build on one another (see Fig. 2).

## Discussion

Gratitude is more than a feeling (McAdams and Bauer 2004) as it drives people to return the benefit we have received (Simmel 1950). Gratitude has a clearly specified action tendency connected to it, as stipulated by social psychologists (Lazarus and Lazarus 1994; Schwartz 1967). Inherent in gratitude is its power to evoke a focus by the recipient on the benevolence of others, thereby ensuring a perception that kindness has been offered; and its beneficial consequences frequently are the motive to respond favorably toward another. There is an energizing and motivating quality to gratitude. It is a positive state of mind that gives rise to the “passing on of the gift” through positive action. As such, gratitude serves as a key link in the dynamic between receiving and giving. It is not only a response to kindnesses received, but it is also a motivator of future benevolent actions on the part of the recipient. In the language of evolutionary dynamics, gratitude leads to “upstream reciprocity” (Nowak and Roch 2007) or the passing on of benefits to third parties instead of returning benefits to one’s benefactors. As much of human life is about giving, receiving, and repaying, gratitude is a pivotal concept for human social interactions.

Our purpose in this study was to examine, in early adolescents, gratitude's contribution to a motivation to pass on gifts, social integration. We did find support for this hypothesis in our study. Gratitude at one point in time predicted social integration 6 months later. As longitudinal investigations go, this was a relatively short period of time. Yet because this is the first known study that has linked grateful affect with social well-being over time, the study makes an important and novel contribution. Youth who are socially integrated want to use their unique strengths to give back to others and make the world better. Gratitude leads to more immediate and longer-term well-being in adolescents because it predicts social integration. Gratitude thus promotes both intrapersonal and interpersonal well-being. Competent functioning in these two domains is considered a marker of successful development and preparation for the demands of adulthood (Barber 2005). Within a broader context, gratitude is a vital resource for positive youth development. For example, consider the 5 C's of thriving (Lerner 2004). A case could be made that gratitude either contributes to, or is strengthened by, competence, confidence, connection, character, and caring/compassion. Incorporating current perspectives of thriving may help account for some of the mechanisms by which gratitude impacts positive youth development.

If gratitude ignites a passion for helping others and contributing to society, then it makes sense to create empirically supported interventions and programs for increasing gratitude in youth. While progress has been made in the applied research of gratitude in youth (Froh et al. 2008, 2009a, 2010b) larger and more systematic efforts are needed because beyond being good for oneself, the current study suggests that being grateful is good for others. Thus, future researchers should continue developing and testing new methods for making youth more grateful.

Others have found that happiness does not just feel good, but it is also good for social, emotional, psychological, and physical functioning. Indeed, happiness precedes numerous positive outcomes such as getting and staying married, higher salaries, positive work evaluations, stronger immune systems, and even longevity (Lyubomirsky et al. 2005). Similarly, gratitude may go beyond being a positive emotion that yields intrapsychic gains and may actually be the impetus for good things to happen to others. Indeed, although other research with early adolescents suggests that gratitude is beyond feeling good because it is related with prosocial behavior (Froh et al. 2009b), this is the first known study showing that gratitude predicts helping behavior at both the micro and macro level. Therefore, schools and other youth-related organizations (e.g., Boy and Girl Scouts, youth ministry, after-school programs) interested in using social-emotional learning

(SEL) programs to foster and nurture the development of other-centeredness and altruism in youth might want to adopt a gratitude curriculum (e.g., Froh et al. 2010b). If the goal is to help shape children and adolescents into contributing members of society who care about the welfare of others and feel connected to their community, our data suggest that teaching children how to be grateful might be a good initial step.

We also found that individual level prosocial behavior predicts macro level prosocial behavior (i.e., social integration) but not the reverse and that this “upstream generativity” is ignited by gratitude. Generativity is the concern for and commitment to promoting the well-being of the next generation through parenting, teaching, mentoring, leadership, and other activities and involvements in which adults seek to leave a positive legacy for the future (McAdams 2001). Generativity is typically thought of as a concern that is activated later in life and is not developmentally normative in young adolescents. But even our 10–14 year-olds showed a desire to contribute to the well-being of society, questioning the assumption that generativity is relevant only in mid-life and beyond. Youth who perceive the investments that others make in them at an early age feel valued and trusted, which leads to more life satisfaction and prosocial behavior later; we contend that this in turn makes them feel more socially integrated. This pattern is reminiscent of McAdams and Bauer's (2004) finding that the most generative adults recall times in their childhood where they received in their lives an advantage, blessing, or lucky break from the hand of others and now have decided “to give something back,” to nurture and take care of the world, for others have been good enough to do that for them.

Building from the broaden-and-build theory of positive emotions (Fredrickson 2001), we found that gratitude triggers upward spirals of social well-being. This is similar to the “cycle of virtue” whereby gratitude and happiness have a reciprocal relationship (Watkins 2004) and the “upward spirals” whereby positive affect and broad-minded coping reciprocally and prospectively lead to one another (Fredrickson and Joiner 2002). Our analyses supported the upward spiral prediction: gratitude—through its effects on social integration—predicts future increases in gratitude. Early adolescents who achieve this upward spiral not only experience gains in emotional well-being (i.e., more gratitude), but they also experience gains in social well-being (i.e., social integration). This dynamic process will likely build enduring social resources that can be used in times of adversity (Fredrickson et al. 2003; Tugade and Fredrickson 2004). Thus, the reciprocal and prospective relationship between gratitude and social integration suggests an upward spiral, in which gratitude and social integration serially enhance each other (see Fig. 2).

As with any study, there are some limitations in this research. First, we relied solely on self-report measures. This 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.

Second, we assessed gratitude through a single measure, the Gratitude Adjectives Checklist. The GAC asks respondents to rate the frequency with which they have felt the grateful, thankful, and appreciative over varying periods of time. The GAC has good psychometric properties, and its validity has been documented in both adult and adolescent samples (Froh et al. 2008; McCullough et al. 2002). By altering the time frame for which participants rate the frequency of these affective states in their lives, the measure can be used to tap trait levels of the grateful disposition, shorter-term affect, or some intermediate level. A priority for future research examining gratitude in children should be on the development and validation of age-appropriate measures. We do not know if the current pattern would have held had we employed dispositional measures of gratitude, in addition to the GAC. Progress in understanding youth gratitude will depend upon the development and validation of measures that sensitively assess and monitor individual differences in gratitude in children and adolescents. Trait-like measures can be augmented with more context-specific ones that take into account, say, grateful experiences and expressions with parents and siblings.

Third, one could argue that the observed results are primarily due to positive affectivity or low neuroticism, not gratitude per se. We did not collect data on positive affectivity or neuroticism at T1 so we are unable to control for their effects and make the case for the specificity of gratitude. But other research with early adolescents points to gratitude's unique prediction of positive outcomes. For example, one study found that, controlling for positive affect, gratitude was related with more family satisfaction, school satisfaction, overall life satisfaction, optimism, gratitude in response to aid, and friend support (Froh et al. 2009b). And additional analyses done with the data from Froh et al. (2009b) indicate that, controlling for negative affect, gratitude is related with more family satisfaction, friend satisfaction, school satisfaction, residency satisfaction, overall life satisfaction, positive affect, optimism, gratitude in response to aide, and friend support. Thus, although data for the current study do not allow us to formally test gratitude's unique contribution to predicting social integration beyond positive affectivity and low neuroticism, some research supports the idea that there is something unique about gratitude when predicting positive outcomes.

Fourth, there are some shortcomings with our developmental research because the data are correlational. Specifically, we wonder how much of the effect we found is due to gratitude and how much is simply driven by maturation. That is, maybe adolescents who are more socially and emotionally mature are more satisfied and socially engaged. Gratitude could therefore only be a byproduct of maturity. Experimental evidence would be helpful in determining causality. Alternatively, a comparison of youth a few years younger or older might shed light on the developmental aspects of this research.

Finally, although we use the term *longitudinal* in this report, we recognize that our follow-up (6 months) was relatively short in duration. To be sure, we are not the first to refer to a ½ year follow-up as longitudinal. To convincingly demonstrate that gratitude leads to long-term prosocial behavior, however, longer periods of time will need to be examined. We need to track these youth over time. We have reason to believe that the effects of gratitude on social integration are not short-lived, and certainly our findings are suggestive of a more sustained influence of gratitude on social responsibility. But a more definitive conclusion awaits future research efforts.

At a more practical level, our results lead us to conclude that parents, teachers, and other socializing agents should regularly encourage elementary-school children to make public and regular expressions of gratitude, especially in response to overtures and help provided by adults. Just as gratitude is more than saying thanks and having good manners, the effects of gratitude extend far beyond happiness and personal well-being. The examination of gratitude in youth, and the factors that promote as well as inhibit its internalization and expression, is a worthy goal whose attainment will enhance young persons' prospects for flourishing and possibly, as our findings imply, help enhance the very institutions and communities they inhabit.

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