Original Research

Appreciation (Including Gratitude) and Affective Well-Being: Appreciation Predicts Positive and Negative Affect Above the Big Five Personality Factors and Demographics

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Abstract

This study investigated the relation between appreciation and positive and negative affect, controlling for gender, age, ethnicity, and Big Five personality factors. Appreciation consists of several aspects, including a focus on what one has ("have" focus), awe, gratitude, and interpersonal appreciation. Undergraduates ($N = 236$) completed an online survey containing the Appreciation Scale, Positive and Negative Affect Scale (PANAS), and Big Five Inventory (BFI). The Big Five traits accounted for 38% and 43% of the variance in positive and negative affect, respectively, beyond demographics. Appreciation accounted for 9% ($p < .001$) and 4.6% ($p < .05$) of the variance in positive and negative affect, respectively, beyond demographics and the Big Five. The "have" focus aspect of appreciation, which represents noticing, focusing on, and valuing what one has, accounted for significant unique variance in both positive and negative affect. Gratitude did not. Future research is needed to determine how broadly these results generalize.

Keywords

appreciation, gratitude, well-being, positive affect, negative affect, Big Five

Introduction

Some people just seem to be happier than others. What factors are associated with their happiness? I argue that appreciation may play an important role in mental health and subjective well-being, including affective well-being. As is the case with other emotions, appreciation can be conceptualized both as an emotion and as a disposition. A person's current emotional state might be that she is feeling appreciation. Someone else might be feeling happy. These statements describe emotions felt in the current moment. Emotions are brief. But if, over time, one has a tendency to feel appreciation, feeling appreciation often and/or in many circumstances, then one has a disposition of appreciation. Research has demonstrated there are individual differences in appreciation, that is, in the tendency to feel appreciation (e.g., Adler & Fagley, 2005; Tucker, 2007). This is consistent with most people's personal observations that at one end of the continuum are people who appreciate kindnesses or opportunities, appreciate beauty wherever it is found, and value family and friends. At the other end of the continuum are those who do not appear to notice these positive aspects of their lives and take their positive circumstances or experiences for granted (Fagley, 2012, 2016). However, although there are individual differences in the tendency to feel appreciation, it is also possible to increase one's tendency to experience appreciation through particular beliefs and practices, which can be learned (Adler & Fagley, 2005).

Appreciation has been defined as "acknowledging the value and meaning of something—an event, a person, a behavior, an object—and feeling a positive emotional connection to it" (Adler & Fagley, 2005, p. 81). Elements of this definition were offered by Wood, Froh, and Geraghty (2010) to describe a "life orientation" of *gratitude*. However, Fagley (2012, 2016) has argued that the construct of *appreciation* subsumes gratitude (see also Tudge & Freitas, 2017). Appreciation has been argued to be a key factor in forging and maintaining social bonds (Adler & Fagley, 2005; Algoe,

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2012; Algoe, Gable, & Maisel, 2010; Fagley & Adler, 2012; Kubacka, Finkenauer, Rusbult, & Keijsers, 2011) and in well-being (Adler & Fagley, 2005; Fagley, 2012; Lim, 2015). In addition, it has been viewed as connected to spirituality and as an important ingredient for success in the workplace (Fagley & Adler, 2012). Although some view appreciation and gratitude as the same construct and use the terms interchangeably, others view them as distinctly different (e.g., Manela, 2016). Here, appreciation and gratitude are viewed as hierarchically nested categories, with appreciation being the higher order construct, which includes a number of aspects such as gratitude, awe, and "have" focus, just as the superordinate construct "bird" includes ducks, penguins, and cardinals (Fagley, 2012, 2016). Feeling appreciation is necessary, but not sufficient, for gratitude, just as laying eggs is necessary, but not sufficient, for an animal to be classified as a bird (Fagley, 2016; Watkins & Bell, 2017).

The construct of appreciation has been conceptualized as having eight aspects: "have" focus, awe, ritual, present moment, self/social comparison, gratitude, loss/adversity, and interpersonal appreciation (Adler, 2002; Adler & Fagley, 2005). The "have" focus aspect of appreciation involves noticing, focusing on, and valuing (appreciating) what one has. This attentional focus on "what one has" counters the tendency to take positive aspects of one's life for granted. The awe aspect is a feeling of awe or wonder in response to beauty, nature, or life itself. Research has shown awe is associated with elements of both subjective well-being and physical well-being. For example, Rudd, Vohs, and Aaker (2012) showed awe was associated with greater life satisfaction. Even more recently, Stellar et al. (2015) showed that awe was the strongest predictor of lower inflammatory cytokines, which are associated with better health outcomes. The ritual aspect refers to using personal or religious rituals, routines, or practices to remind oneself to notice and appreciate the positive aspects of one's life. The present moment aspect of appreciation consists of focusing on the positive elements of the present moment, with mindful awareness. Focusing attention on the positive in the present or imbuing neutral elements with positive meaning counters the tendency to ruminate on the negative events of the past or worry about the future in ways that rob us of the present. The self/social comparison aspect of appreciation refers to using comparison to a worse moment or circumstance in one's past to enhance appreciation of the present. Or, one may compare one's situation with that of others who are less fortunate to foster appreciation for what one has. For example, it may help one value one's basic model bicycle, if one remembers there are many without a bicycle of any kind who therefore must travel long distances on foot. The gratitude aspect of appreciation is a feeling of grateful emotion directed toward one's benefactor in response to a kindness or benefits received such as help, a gift, or an opportunity—or even attempts to provide them. Researchers have identified a number of factors that affect a recipient's gratitude to a

benefactor, such as the benefactor's intention, the benefit's value to the recipient, cost to the benefactor, and its perceived responsiveness to the self (e.g., Algoe, Haidt, & Gable, 2008; Tesser, Gatewood, & Driver, 1968).

The loss/adversity aspect represents using experiences of loss or adversity to promote greater valuing (appreciation) of what one still has, but which previously may have been taken for granted. Janoff-Bulman and Berger (2000) observed that trauma survivors often experience increased appreciation. The traumatic event triggers a change in perspective—adoption of a new reference point—and enhanced valuing of ordinary experiences. Even a close call or an anticipated loss can foster appreciation. This may occur because it jolts people out of the view that things will always stay as they are now, causing people to realize that positive experiences, time, and life itself are limited, "scarce." Using this principle, Kurtz (2008) demonstrated that college students in their last year appreciated their last year more when they were prompted to think about the fact that their college experience was almost over. The anticipated loss increased the value placed on the remaining college experience, increasing appreciation. And finally, interpersonal appreciation is valuing and appreciating others in one's life and expressing that to them. This is not *gratitude*, as one is not *grateful to* them for a particular benefit or act of kindness, but instead one notices and values their presence in one's life, their positive qualities, and their fellowship and expresses that appreciation to them. Lambert and Fincham (2011, Study 3) showed that experimental manipulation of expressing appreciation to a friend led to significantly greater comfort in expressing relationship concerns, viewed as an important relationship maintenance behavior. This provides evidence supporting the idea that interpersonal appreciation is a key factor in building and maintaining social bonds (Adler & Fagley, 2005; Fagley & Adler, 2012).

According to the broaden-and-build theory of positive emotion (Fredrickson, 1998, 2013), experiences of positive emotion broaden awareness, build personal resources, and can begin an upward spiral leading to more positive emotion (Garland et al., 2010). Appreciation may be one avenue to this upward spiral of increasing positive affect (PA). In fact, Fredrickson (2004) noted that upward spirals triggered by gratitude (actually "have" focus appreciation) have been demonstrated empirically (i.e., Emmons & McCullough, 2003, Study 1). She argued that the effects of experiencing positive emotions compound over time, transforming individuals such that they become "more creative, knowledgeable, resilient, socially integrated, and healthy" (Fredrickson, 2004, p. 153). That is, positive emotions broaden cognition and foster creative thinking, building new personal resources and triggering an upward spiral of ever-improving functioning and emotional well-being (Fredrickson, 2004). Even the more cognitive aspects of appreciation are expected to increase PA. For example, as suggested by Fagley (2012), noticing and focusing on what one has and valuing it may

prevent or reduce hedonic adaptation, which would lead to greater PA and life satisfaction. Schneider (2001) expressed a similar view. Hedonic adaptation is the phenomenon in which people become accustomed (habituated) to their circumstances so that the delicious meal, the loving spouse, or the luxurious car no longer generates positive emotions. They are taken for granted, no longer noticed. But the process of explicitly noticing, focusing one's attention on, and valuing what one has disrupts the psychological process of taking these circumstances, people, experiences, or items for granted. They are seen afresh. One can appreciate all over again that one's car has heated seats or that the view from campus is stunning in late afternoon. Consistent with this view, the Hedonic Adaptation Prevention Model (Sheldon & Lyubomirsky, 2012) highlights appreciation as one of two key paths for avoiding hedonic adaptation.

A growing body of research has examined appreciation (in some cases just gratitude, which is viewed here as one aspect of appreciation) as a predictor of subjective well-being (e.g., Adler & Fagley, 2005; Lim, 2015). Subjective well-being has been defined as having a cognitive component consisting of one's appraisal of one's life (life satisfaction) and an affective component consisting of one's PA and negative affect (NA; Pavot & Diener, 1993). Studies in which appreciation (including gratitude) was experimentally manipulated suggest that its role may be causal in fostering well-being (e.g., Lambert, Fincham, Stillman, & Dean, 2009). Although some studies have experimentally examined what was termed gratitude, if one examines the definitions of the aspects of appreciation and compares those to the various interventions, it is often the case that they have, in fact, studied another aspect of appreciation than gratitude. For example, the "list three things" task appears to be a "have" focus intervention as it asks people to list things they *have* for which they are grateful or that they appreciate (Fagley, 2016; Fagley & Adler, 2012). This fosters noticing and valuing what one has. There is no mention of directing gratitude to someone who provided the "thing" for which one is "grateful," which is a defining attribute of gratitude (Algoe et al., 2008; Roberts, 2004). Similarly, some versions of the "gratitude letter" task are more appropriately viewed as targeting interpersonal appreciation, as they are expressions of how much one values and appreciates a person and his or her influence on one's life, rather than an expression of gratitude to that person for a particular kind act or gift.

Schneider (2001) argued that appreciation promotes PA, better coping with stress, and better relationships with others. Adler and Fagley (2005) demonstrated that individual differences in the tendency to feel appreciation are related to life satisfaction, PA, and, to a lesser degree, NA. Lim (2015) reported that the "have" focus aspect of appreciation, in which people focus on what they have and value it, was a significant predictor of emotional well-being, social well-being, and psychological well-being in a sample of South Korean university students. Fagley (2012) reported that appreciation accounted for significant variance in life satisfaction, the cognitive component of subjective well-being, even when individual differences in the Big 5 personality factors of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism were controlled. The Big 5 personality factors have been shown to account for considerable variance in subjective well-being (Steel, Schmidt, & Shultz, 2008), around 20% or 30% of the variance, depending on the component of subjective well-being. Therefore, it is important to control for the Big Five personality factors when examining a variable's relation to subjective well-being. Yet neither Lim (2015) nor Adler and Fagley (2005) did so. Would the relation between appreciation and PA (reported by Adler & Fagley, 2005) persist once individual differences in the Big Five personality traits are controlled?

In this article, the relation between appreciation and PA and NA is examined more closely. This study examined two pairs of research questions. The first pair of questions examined whether appreciation would account for significant variance in PA and NA once the Big 5 personality factors and demographics were controlled. The second pair of research questions sought to identify which aspects of appreciation, if any, would account for significant, unique variance in affective well-being (PA and NA) when demographics and personality factors were controlled.

Finding out whether appreciation is related to affective well-being is important for two reasons: one practical and one theoretical. From a practical standpoint, it is important to know whether they are related once the Big Five personality factors have been controlled because that would suggest it may be worthwhile to develop interventions targeting appreciation. As it currently stands, it may be that prior studies found a significant relation between appreciation and emotional well-being because they failed to control for the Big Five personality factors. That is, the apparent relation between appreciation and emotional well-being may merely represent shared variance of appreciation with the Big Five, as the Big Five factors are also related to emotional well-being. Furthermore, if one can determine which aspects of appreciation exhibit the strongest relationships with affective well-being, then it may suggest which aspects of appreciation to target with an intervention. One could focus first on those aspects, developing interventions designed to target those particular aspects of appreciation specifically. From a theoretical perspective, the broaden-and-build theory of positive emotion asserts that experiencing positive emotion begins an upward spiral leading to increases in overall positive emotion. That is, as appreciation is a positive emotion, it should lead to greater levels of other positive emotions. Thus, appreciation should be associated with significant variance in PA. It is expected to have little relation to NA; greater levels of appreciation may tend to be associated with somewhat lower levels of NA.

Table 1. Examples of Items From Each Subscale of the Appreciation Scale.

Aspect of appreciation	No. of items in subscale	Sample item
"Have" focus	10	"I remind myself to think about the good things I have in my life."
Awe	6	"I get caught up in the wonderment of life."
Ritual	6	"I perform rituals (i.e., pray or say grace before a meal) that remind me to be appreciative."
Present moment	7	"I enjoy the little things around me like the trees, the wind, animals, sounds, light, etc."
Self/social comparison	5	"I reflect on the worst times in my life to help me realize how fortunate I am now."
Gratitude	10	"When a friend gives me a ride somewhere when he or she doesn't have to, I really appreciate it."
Loss/Adversity	8	"I use my own experiences of loss to help me pay more attention to what I have now."
Interpersonal appreciation	5	"I acknowledge to others how important they are to me."

Note. The 57-item Appreciation Scale was developed by Adler and Fagley (2005).

Method

Participants

Undergraduates at a large state university in the northeastern United States, as part of a larger study (reported in Fagley, 2012), completed an online survey constructed using Qualtrics survey software. Two hundred fifty-five individuals visited the study's informed consent page at least once; 252 chose to start the survey, and of these, 246 completed it. The six cases who did not complete the survey were deleted. Of the 246 who completed the survey, there were no missing data (as the survey required a response to continue). However, four spent less than 10 min completing the survey, and they were omitted from subsequent analyses. Ten minutes was determined to be the minimum time needed to complete the survey based on pilot testing. Responses from one 17-year-old were removed from the data set, as potential participants needed to be at least 18 to give informed consent. Three cases who had standardized residuals greater than 3 and two who constituted multivariate outliers based on their significant Mahalanobis distances were omitted from further analysis, as recommended by Meyers, Gamst, and Guarino (2013), leaving 236 (86 men and 150 women). Screening was completed prior to any analyses of the hypotheses. SPSS v24 was used for all data analysis. Of the 236 participants, 51.3% reported their ethnic background as White, 24.6% Asian, 9.7% Latino, 8.1% African American/Black, and 6.4% other. Participants' ages ranged from 18 to 24, with a mean of 18.82 ($SD = 1.13$).

Procedure

After study approval by the University's institutional review board (IRB), the survey containing the measures of appreciation, Big 5 personality traits, and PA and NA was listed on the Psychology Department's subject pool website. Students could click the link to the informed consent page which described the study. Those who agreed to participate could then begin the survey, and if they completed it, they obtained 1 research participation credit (of the 5 needed for their course requirement). The Sona System software used on the subject pool website allowed students to participate anonymously and yet obtain participation credit.

Measures

Appreciation. The Appreciation Scale (Adler & Fagley, 2005) was used to measure appreciation. It is composed of eight subscales assessing the eight aspects of appreciation described earlier: "have" focus, awe, ritual, present moment, self/social comparison, gratitude, loss/adversity, and interpersonal appreciation (see Table 1). Previous research by Wood, Maltby, Stewart, and Joseph (2008) and Adler and Fagley (2005) reported reliabilities ranging from .95 for gratitude to .62 for self/social comparison. Adler and Fagley (2005) also reported evidence of validity including correlations with variables in the nomological net and comparing known groups. Each of the 57 items is rated on a 1 (*strongly disagree/never*) to 7 (*strongly agree/more than once a day*) scale. Responses to items comprising each subscale were summed and divided by the number of items in the subscale to yield the subscale score. Thus, subscale scores represent the average rating given to items in that subscale and therefore can range from 1 to 7. Table 1 includes a typical item from each scale.

PA and NA. The Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) was used to measure the affective components of well-being, as it is the scale most often used for this purpose and exhibits good reliability. The scale is composed of two 10-item subscales. For those unfamiliar with the PANAS, it is important to note that none of its items assess any of the aspects of appreciation. Items are single words such as "inspired" (in the PA subscale) or "afraid" (in the NA subscale), which are rated on a 1 (*very slightly or not at all*) to 5 (*extremely*) scale. Consequently,

Table 2. Descriptive Statistics (*N* = 236).

Variable	*M*	*SD*	Theoretical range	Observed range	Coefficient alpha
Positive affect	35.92	5.86	10-50	17-50	.82
Negative affect	22.59	7.60	10-50	10-43	.88
BFI Openness	3.56	0.52	1-5	2.40-4.90	.76
BFI Conscientiousness	3.46	0.59	1-5	1.56-4.89	.80
BFI Extraversion	3.36	0.74	1-5	1.38-5.00	.86
BFI Agreeableness	3.75	0.58	1-5	2.00-5.00	.77
BFI Neuroticism	2.91	0.69	1-5	1.25-4.75	.82
AS_"Have" Focus	5.46	0.83	1-7	2.80-7.00	.86
AS_Awe	4.85	0.98	1-7	1.33-7.00	.75
AS_Ritual	4.60	1.26	1-7	1.33-7.00	.83
AS_Present Moment	5.23	0.89	1-7	1.86-6.86	.79
AS_Self/Social comparison	5.03	0.99	1-7	1.60-7.00	.72
AS_Gratitude	6.15	0.62	1-7	4.00-7.00	.76
AS_Loss/Adversity	5.26	0.93	1-7	1.75-7.00	.80
AS_Interpersonal	5.15	0.99	1-7	2.20-7.00	.82
Age	18.82	1.13		18-24	

Note. BFI = Big Five Inventory; AS = Appreciation Scale.

scores on each subscale can range from 10 to 50, with higher scores indicating stronger affect. Watson et al. (1988) reported coefficient alpha reliabilities of .88 and .87 for the PA and NA scales, respectively.

The Big Five personality traits. The Big 5 Inventory (BFI; John, Donahue, & Kentle, 1991) was used to measure the Big Five personality traits of Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. The BFI consists of 44 brief items rated on a 1 (*disagree strongly*) to 5 (*agree strongly*) scale. Responses to items comprising each subscale were summed and divided by the number of items in the subscale to yield the subscale score. A typical item is "I am someone who can be moody." John, Naumann, and Soto (2008) reviewed research on the Big Five Inventory and reported coefficient alpha values from .87 to.79 and discussed considerable evidence of validity.

Results

Preliminary Analyses

Descriptive statistics and reliabilities are reported in Table 2. All scale reliabilities were above .72. These values were similar to those reported in previous research (e.g., Adler & Fagley, 2005; Wood et al., 2008).

Correlations of appreciation subscales with PA and NA. As shown in Table 3, Pearson correlations between the appreciation scales and PA ranged from .55 (for "have" focus) to.22 (for gratitude). All were significant at the alpha .001 level. However, one was less than .3, three were between .31 and .4, three were between .41 and .5, and only one was greater than .5. Only two aspects

of appreciation were significantly (negatively) correlated with NA: "have" focus, with a correlation of –.21, *p* = .001, and gratitude, with a correlation of –.16, *p* = .011. The other six correlations were less than an absolute value of.10.

Correlations of the Big 5 factors with appreciation subscales. As shown in Table 3, correlations ranged from .44 (between present moment and openness to experience) to.04 (between self/social comparison and neuroticism). However, 33 of the 40 correlations were below .3, six were between .3 and .4, and one was greater than .4. Significant correlations between the Big 5 personality factors and the aspects of appreciation and PA and NA suggest that personality should be controlled when examining the relations between appreciation and PA and NA. Otherwise, correlations between appreciation and PA or NA could be due to variance appreciation shares with the Big 5 personality factors.

Correlations with the demographic variables. It should be noted that there are statistically significant gender differences in appreciation. These correlations between gender and appreciation subscale scores ranged from .147 to .272, corresponding to 2.2% to 7.4% of the variance. This argues for controlling gender in analyses of appreciation. There were also significant differences in PA for two of the dichotomies representing ethnic groups: African American/Black and Asian. This suggests it may be important to control for ethnicity. Age was not significantly correlated with any of the appreciation scales, PA or NA, or the Big Five traits. However, Wood et al. (2008, Study 1) found that age was significantly correlated with two aspects of appreciation measured via the Appreciation Scale, as well as two subscales of the GRAT. In addition, a study by Callan, Kim, and Matthews

Table 3. Pearson Correlations (N = 236).

Variable	Affect		Appreciation								Big Five traits				
	PA	NA	H	A	R	P	S	G	L	I	O	C	E	A	N
PA	—														
NA	−.187**	—													
AS_H	.552***	−.210***	—												
AS_A	.388***	−.015	.679***	—											
AS_R	.361***	−.061	.671***	.569***	—										
AS_P	.434***	−.066	.720***	.726***	.510***	—									
AS_S	.347***	.079	.619***	.503***	.476***	.548***	—								
AS_G	.220***	−.164*	.474***	.318***	.296***	.403***	.298***	—							
AS_L	.402***	−.007	.632***	.560***	.514***	.576***	.707***	.435***	—						
AS_I	.413***	−.040	.634***	.498***	.411***	.594***	.432***	.291***	.451***	—					
O	.316***	−.059	.250***	.280***	.097	.437***	.190**	.275***	.155*	.222***	—				
C	.418***	−.312***	.395***	.132*	.244***	.254***	.227***	.260***	.253***	.226***	.031	—			
E	.504***	−.202**	.331***	.214**	.195**	.286***	.139*	.184**	.254***	.369***	.299***	.235***	—		
A	.213***	−.399***	.314***	.203**	.187**	.321***	.167*	.393***	.261***	.269***	.194**	.381***	.158*	—	
N	−.240***	.628***	−.221***	−.083	−.058	−.141*	.038	−.056	−.078	−.115	−.090	−.214***	−.253***	−.339***	—
Gender	.009	.114	.177**	.165*	.147*	.270***	.200**	.272***	.214***	.165*	.100	.134*	.113	.176**	.255***

Note. Gender was coded: 1 = male; 2 = female. PA = positive affect; NA = negative affect; AS_H = "Have" Focus subscale of Appreciation Scale; AS_A = Awe subscale of Appreciation Scale; AS_R = Ritual subscale of Appreciation Scale; AS_P = Present Moment subscale of Appreciation Scale; AS_S = Self/Social Comparison subscale of Appreciation Scale; AS_G = Gratitude subscale of Appreciation Scale; AS_L = Loss/Adversity subscale of Appreciation Scale; AS_I = Interpersonal Appreciation subscale of Appreciation Scale; O = Openness to Experience; C = Conscientiousness; E = Extraversion; A = Agreeableness; N = Neuroticism.
*$p \le .05$. **$p \le .01$. ***$p \le .001$.

(2015) found that age was significantly related to the tendency to engage in social comparison and to the feeling of resentment "originating from the belief that one is deprived of desired and deserved outcomes compared to others" (p. 196). These variables are similar to the self/social comparison aspect of appreciation. Thus, although the variability/range of ages in this sample was small, which should reduce the size of observed correlations, these considerations suggested it would be prudent to control for age.

Hierarchical Multiple Regression Analyses

Two hierarchical regression analyses were computed, one for PA and one for NA. All tolerance values exceeded .10 (and variance inflation factors [VIFs] <10), indicating no problems with multicollinearity (Meyers et al., 2013). In each analysis, demographic variables were entered together, as a set, in Block 1, then the Big 5 personality factors were entered as a set in Block 2, and, finally, the appreciation scales were entered together in Block 3. This allowed the total variance accounted for by each set of variables to be quantified and tested for significance, controlling for all previously entered variables. In addition, the *unique* variance accounted for by each aspect of appreciation could be assessed with all other variables controlled.

PA. As shown in Table 4, in Block 1, PA was regressed on age, gender, and ethnicity (represented as four dichotomies).

The R^2 of .049 was not significant, $F(6, 229) = 2.18$, $p = .070$). In Block 2, the Big 5 personality factors were added to the analysis. The change in R^2 of .384 was significant, $F(5, 224) = 30.34$, $p < .001$. In Block 3, the eight appreciation subscales were entered into the analysis. The change in R^2 of .090 was significant, $F(8, 216) = 5.10$, $p < .001$. Appreciation accounts for significant variance in PA, even when age, ethnicity, gender, and the Big 5 personality factors are controlled. As a whole, the set of appreciation subscales accounted for 9% of the variance in PA, over-and-above age, gender, ethnicity, and the Big 5 personality factors. Of the appreciation subscales, only "have" focus accounted for significant unique variance in PA, 1.5% of the variance as indicated by the semipartial r^2 ($t = 2.64$, $p = .009$).

NA. In Block 1, NA was regressed on age, gender, and ethnicity (represented as four dichotomies). As shown in Table 4, the R^2 of .026 was not significant, $F(6, 229) = 1.01$, $p = .42$). In Block 2, the Big 5 personality factors were added to the analysis. The change in R^2 of .431 was significant, $F(5, 224) = 35.51$, $p < .001$. In Block 3, the eight appreciation subscales were entered into the analysis. The change in R^2 of .046 was significant, $F(8, 216) = 2.48$, $p = .014$. Appreciation accounts for significant variance in NA, even when age, ethnicity, gender, and the Big 5 personality factors are controlled. As a whole, appreciation accounted for 4.6% of the variance in NA, over-and-above age, ethnicity, gender, and the Big 5 personality factors. As was the case with PA, the only appreciation

Table 4. Hierarchical Multiple Regression Analyses Predicting Positive Affect and Negative Affect From Demographic Variables, Big 5 Personality Factors, and Appreciation Subscales ($N = 236$).

Variables added at each step/block	Positive affect			Negative affect		
	ΔR^2	β	sr^2	ΔR^2	β	sr^2
Block 1	.049			.026		
Gender		−.028	.001		.121	.014
Age		−.017	<.001		−.067	.004
African American/Black		.042	.001		.035	.001
Asian		−.274	.020*		.124	.004
Latino		−.054	.001		.094	.004
White		−.169	.006		.166	.006
Block 2	.384***			.431***		
BFI Openness		.206	.036***		.041	.001
BFI Conscientiousness		.333	.080***		−.135	.013*
BFI Extraversion		.392	.120***		−.030	.001
BFI Agreeableness		−.001	<.001		−.179	.022**
BFI Neuroticism		−.011	<.001		.523	.194***
Block 3	.090***			.046*		
AS_"Have" Focus		.266	.015**		−.271	.016**
AS_Awe		.042	.001		.058	.001
AS_Ritual		−.051	.001		.039	.001
AS_Present Moment		.027	<.001		.080	.002
AS_Self/Social Comparison		.015	<.001		.081	.003
AS_Gratitude		−.070	.003		−.080	.004
AS_Loss/Adversity		.080	.002		.114	.005
AS_Interpersonal		.040	.001		.115	.007
Total R^2	.523***			.502***		

Note. Variables added in a prior block remain in the model through subsequent blocks/steps. ΔR^2 = the change in R^2; sr^2 = semipartial r^2, which indicates the proportion of variance; β = the standardized regression coefficient, the beta weight. Gender was coded: 1 = male; 2 = female. Each ethnicity category was coded 1 if a member of the category, or 0 if not. For example, Asian was coded 1 if the participant was Asian and 0 if not Asian. BFI = Big Five Inventory; AS = Appreciation Scale.
*$p < .05$. **$p < .01$. ***$p < .001$.

subscale accounting for significant unique variance (i.e., not including variance accounted for by two or more subscales) was the "Have" Focus scale, which accounted for 1.6% of the variance in NA ($t = -2.64, p = .009$), as indicated by semipartial r^2.

Discussion

Results clearly highlight the importance of the Big 5 personality traits for affective well-being. As a group, the Big Five personality factors accounted for 38.4% and 43.1% of the variance in PA and NA, respectively, over-and-above age, gender, and ethnicity, thus demonstrating the importance of controlling for personality when assessing the variance accounted for by appreciation (or any other dispositional or behavioral variable). Overall, appreciation accounted for an additional 9% and 4.6% of the variance in PA and NA, respectively, over-and-above the Big 5 and the demographic variables. This is remarkable given the large amount of variance in PA and NA already accounted for by demographic variables and personality factors. This indicates that the previously reported relationship between

appreciation subscales and affective well-being (i.e., Adler & Fagley, 2005) was not due to individual differences in personality, as measured by the Big 5 factors. That is, results are important because they demonstrate that the relationships are not merely the result of shared variance that appreciation and affective well-being share with the Big Five personality traits. Appreciation accounts for significant variance in PA and NA, beyond personality and demographics.

A greater tendency to feel appreciation is associated with higher levels of PA, as indicated by the significant positive correlations between aspects of appreciation and PA. That is, results are consistent with Fredrickson's (1998, 2004, 2013) broaden-and-build theory of positive emotion and the view that a greater tendency to feel appreciation leads to increases in other positive emotions, as well as appreciation. This is the "upward spiral" phenomenon described by Fredrickson and colleagues (e.g., Fredrickson, 2013; Garland et al., 2010). Although results are consistent with this theory, the cross-sectional data cannot rule out alternatives. Longitudinal data will be needed to provide more clarity about the actual process of change over time.

Greater appreciation is also associated with lower NA, as indicated by the significant negative bivariate correlations between aspects of appreciation and NA. Consistent with the findings of Adler and Fagley (2005), appreciation is more strongly related to PA than to NA. This is logical, as appreciation is a positive emotion, and people who have a greater tendency to feel appreciation would also be expected to have a greater tendency to feel other positive emotions and greater PA. In contrast, one's tendency to feel appreciation is less predictive of one's tendency to feel NA. The bivariate correlations between aspects of appreciation and NA were generally smaller than the correlations with PA, and fewer were significant. In terms of the multiple regression analyses, appreciation accounted for about twice as much variance in PA than NA. Initially, one might expect that greater PA would necessarily mean less NA. But the Pearson correlation between PA and NA was only $-.187$ ($p = .004$), so although there is a negative correlation between PA and NA, the relationship is far from perfect. Consequently, when another characteristic such as appreciation is positively correlated with PA, it says little about the degree of correlation expected with NA. This is consistent with prior research showing there is little relation between trait PA and NA (see Watson, 2002, for a brief review or Adler & Fagley, 2005, for a discussion).

The current findings are also important because they show that aspects of appreciation, other than gratitude, may be important in affective well-being. The significant variance in both PA and NA accounted for uniquely by the "have" focus aspect of appreciation extends the findings reported by Adler and Fagley (2005) for U.S. college students and Lim (2015) for South Korean college students by showing that this relation is significant even when one controls for the Big 5 personality factors and demographics, which neither prior study did. This provides stronger evidence of the relation between the "have" focus aspect of appreciation and affective well-being.

The largest correlation with PA reported in Table 3, including those with the Big 5, was with the "have" focus aspect of appreciation. This is particularly surprising because "have" focus is a more cognitively focused aspect of appreciation. Yet it is more strongly correlated with PA than the emotion-focused aspects of awe and gratitude. In fact, the Pearson correlation between "have" focus and PA was significantly greater than the correlation between gratitude and PA (.552 vs. .220; $Z = 5.66$, $p < .01$; Lee & Preacher, 2013). This is true for the correlation with awe as well (.552 vs. .388; $Z = 3.666$, $p < .01$). What might explain this? Noticing, focusing on, and valuing what one has represent an orientation to notice and find value and positive meaning in one's circumstances, opportunities, and possessions. One may speculate that this would greatly increase one's opportunities to experience PA. For example, one can only feel awe if one *notices* the sky at sunset. One can only feel gratitude if one *notices* that others have intentionally provided assistance.

Thus, noticing is a prerequisite for a number of other positive emotions, including those representing other aspects of appreciation. In this way, "have" focus may be foundational for other aspects of appreciation and for other positive emotions.

Finally, the current results are important because they demonstrate the value of a more differentiated view of the concepts of gratitude and appreciation. Although gratitude is only one of a number of aspects of appreciation, prior research has focused almost exclusively on gratitude. But over the past decade, there has been a growing "concept creep" in the definition of gratitude. This is a *horizontal* concept creep, in that more phenomena are being referred to as gratitude. Rather than joining in this tendency to label various related concepts as gratitude, I am making a plea to retain the conceptual clarity provided by the classic definition of gratitude (see also Fagley, 2016). Gratitude is a positive, emotional response directed to a benefactor by the recipient of a benefit or kind act (Algoe et al., 2008). Tesser et al. (1968) implicitly adopted this view and found that gratitude is determined, in part, by perceptions of the benefactor's intention, cost to the benefactor, and value of the benefit to the beneficiary. Philosophers have called this view of gratitude a "three-term construal," as it has a benefactor, a benefit, and a beneficiary (e.g., Roberts, 2004). One might refer to this as classic gratitude. But sometimes scholars have included cases that lack a benefactor, such as when someone is "grateful" for having a place to live or appreciates the warmth of the sun on a cold day. Unless the person is explicitly directing gratitude to God, being grateful for having a place to live or appreciating the warmth of the sun does not, in these cases, represent *gratitude* because the person is not directing their positive emotional response to a responsible agent whose intentional action caused him or her to "receive" the benefit. But they represent something that is related, conceptually, to gratitude, as both include valuing, "appreciating" something, a requisite ingredient for gratitude. But instead of gratitude, I would argue the instances represent another aspect of appreciation such as "have" focus for the former and awe or present moment for the latter. Gratitude is *interpersonal* (Algoe et al., 2008; Fagley, 2016); it requires a responsible agent (benefactor) whose intentional action/agency provided the benefit to a recipient (beneficiary). "Have" focus, awe, and present moment are not interpersonal; no "other" is involved. However, Bryant and Veroff (2007) argued that the experience of awe can be augmented by being socially shared.

Scientific study of a phenomenon requires clear definitions (Fagley, 2016; Roberts, 2004). In fact, Fagley (2016) argued, ". . . science advances, in part, because precise definitions of phenomena are developed that allow research to progress" (p. 76). They may differ from definitions used by laypeople. For example, as noted by Fagley (2016), laypeople often say they are "jealous" of someone's good fortune. However, an affective scientist would say it represents envy, not jealousy. Lambert, Graham, and Fincham (2009) found that laypeople tend to recognize two kinds of gratitude:

benefit-triggered (which is the view of gratitude used here) and "generalized" gratitude, which represents some of the other aspects of appreciation that do not have an explicit benefactor. Thus, even laypeople make distinctions, although not as fine-grained as those made here. Using the conceptual model of appreciation and differentiating among the various aspects of appreciation should foster better scientific understanding of these phenomena, as different aspects may be differentially related to key outcomes of interest (as observed here and elsewhere), and it should facilitate developing interventions that target particular aspects (Fagley, 2016). Recognizing, for example, that "have" focus is a distinct construct from gratitude (and having a separate measure of it) is necessary for identifying which outcomes are driven by "have" focus, by gratitude, or by some combination. Knowing which aspect drives the outcome can then facilitate formulating/crafting an intervention targeting that aspect of appreciation. This research provides an important first step down that path.

Limitations and Directions for Future Research

One limitation is the university student sample. Although the sample was diverse in terms of ethnicity (48.7% non-White), the participants were all students attending a university in the United States who were 18 to 24 years old. Older adults, people with less education, or people from other cultures may show different patterns of relations among the variables. However, even if no evidence of different correlations is obtained for samples from different cultures (e.g., American vs. Japanese samples; Robustelli & Whisman, 2018), it may still be the case that an intervention targeting one of the variables has different effects in the different cultures. For example, research has shown that the effects of some positive psychology interventions differ depending on the nationality or culture of the participants (e.g., Layous, Lee, Choi, & Lyubomirsky, 2013). Layous et al. (2013) found that the effects of a "gratitude" intervention differed depending on whether conducted with a U.S. or a South Korean sample. Thus, future research would benefit from examining older adults and/or people of different nationalities or cultures to see whether the relations observed here replicate with other groups.

Another limitation is that the multiple regression analysis does not take into account the differing reliabilities of the variables (subscales). Reliability constrains observed correlations. Thus, when reliabilities differ, it is preferable to use an analysis procedure (e.g., structural equation modeling [SEM]) that takes reliability into account (Westfall & Yarkoni, 2016). Unfortunately, although the current sample was large enough for multiple regression analysis (which uses the subscale scores), it was not large enough to conduct SEM using the item responses. Consequently, future research should obtain a larger sample so that SEM, which takes into account scale reliability, can be conducted. The current analysis using multiple regression, however, does have the advantage of being easily compared with other published work in this area, which has often used multiple regression (e.g., Wood, Joseph, & Maltby, 2008).

Another important limitation of the current study is that the data were cross-sectional, involving naturally occurring levels of appreciation and affective well-being measured at one point in time. Appreciation was not experimentally manipulated, so causality could not be demonstrated. Future research could experimentally examine appreciation, intervening to increase levels of appreciation and demonstrate that increasing appreciation leads to increases in affective well-being. Having a differentiated view of the aspects of appreciation should be useful in developing interventions targeting specific aspects. It may also promote understanding why some interventions work and others fail (e.g., they may target another aspect of appreciation that is not related to the measured outcome). Still another limitation of the study is its reliance on self-report measures, which raises the concern that people's responses were influenced by social desirability. However, the differences in the relationships observed for the different aspects of appreciation provide some evidence suggesting people did not just respond based on social desirability, as all the aspects would be viewed as desirable yet showed different relationships. Finally, future research on appreciation could broaden the scope of outcomes examined. Some scholars have argued that the PANAS measures higher arousal affect (e.g., Miao, Koo, & Oishi, 2013). Future research should examine lower arousal examples of PA and NA to see whether the relations observed here replicate. One might expect appreciation to be more strongly related to lower arousal PA, as aspects of appreciation such as awe or present moment appear related to other low arousal affect such as serenity. In addition, future studies could usefully examine other components or definitions of well-being, such as the six domains of psychological well-being described by Ryff (1989).

In sum, this study has demonstrated that the previously reported relation between appreciation and PA and NA was not simply due to their shared variance with the Big Five personality traits. Appreciation accounted for 9% and 4.6% of the variance in PA and NA, respectively, after controlling for demographics and the Big Five factors. In addition, the "have" focus aspect of appreciation accounted for significant unique variance in both PA and NA, beyond demographics and the Big Five. This suggests that the more differentiated view represented by the model of appreciation may be useful and that research could profitably expand beyond gratitude to examine other aspects of appreciation. Future research will need to verify these findings using SEM, with a broader range of age and with international samples. In addition, longitudinal research could examine whether the process

unfolds as indicated by the broaden-and-build theory of positive emotion.

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