

## 16

## Why Gratitude Enhances Well-Being: What We Know, What We Need to Know

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5 Gratitude is held in high esteem by virtually  
6 everyone, at all times, in all places. From ancient  
7 religious scriptures through modern social sci-  
8 ence research, gratitude is advanced as a desir-  
9 able human characteristic with the capacity for  
10 making life better for oneself and for others.  
11 Though gratitude is associated with pleasantness  
12 and highly desirable life outcomes, it is certainly  
13 not an easy or automatic response to life situa-  
14 tions. Resentment and entitlement often seem to  
15 come naturally. Individual personality flaws such  
16 as neuroticism or narcissism make it difficult to  
17 recognize the positive contributions of others.  
18 The very fact that gratitude is a virtue suggests  
19 that it must be deliberately cultivated. Like any  
20 virtue, it must be taught, or at least modeled, and  
21 practiced regularly, until it becomes, in an  
22 Aristotelian sense, a habit of character. A grateful  
23 person is one who is prone to react to the good-  
24 ness of others in a benevolent and receptive  
25 fashion, reciprocating kindness when opportuni-  
26 ties arise. The grateful person has been able to  
27 overcome tendencies to take things for granted,  
28 to feel entitled to the benefits they have received,  
29 and to take sole credit for all of their advantages  
30 in life. They are able to gladly recognize the

contributions that others have made to their  
well-being. Further, they are able to discern  
when it is appropriate to express gratitude and  
are not overly concerned with exacting gratitude  
from those whom *they* benefit.

What have we learned about gratitude and the  
grateful personality? First, a definition: Gratitude  
is an acknowledgment that we have received  
something of value from others. It arises from a  
posture of openness to others, where we are able  
to gladly recognize their benevolence. Societies  
through the ages have long extolled the benefits  
of gratitude, and classical writings have deemed  
it the “greatest of the virtues.” But only recently  
has psychological theory and research on grati-  
tude begun to catch up with philosophical com-  
mendations. In the first part of this chapter,  
we review research on gratitude and positive  
human functioning. First, we briefly consider the  
research on gratitude and well-being. After a  
consideration of this evidence, we explore the  
mechanisms by which gratitude enhances well-  
being. We consider several explanations and  
evaluate the empirical evidence for each. In the  
latter part of the chapter, we establish an agenda  
for the future by considering some ways in

1 which the scientific field of gratitude can be  
2 advanced.

### 3 **Gratitude and Well-Being: Taking Stock**

4 Gratitude is foundational to well-being and  
5 mental health throughout the lifespan. From  
6 childhood to old age, accumulating evidence  
7 documents the wide array of psychological,  
8 physical, and relational benefits associated with  
9 gratitude. In the past few years, there has been  
10 an accumulation of scientific evidence showing  
11 the contribution of gratitude to psychological  
12 and social well-being (Emmons & McCullough,  
13 2003; McCullough, Kilpatrick, Emmons, &  
14 Larson, 2001; Wood, Froh, & Geraghty, 2010).  
15 Gratitude has been shown to contribute to not  
16 only an increase in positive affect and other  
17 desirable life outcomes but also to a decrease in  
18 negative affect and problematic functioning as  
19 demonstrated in diverse samples such as among  
20 patients with neuromuscular disease, college  
21 students, hypertensives, and early adolescents  
22 (Emmons & McCullough, 2003; Froh, Sefick, &  
23 Emmons, 2008; Shipon, 2007).

24 Based on Rosenberg's (1998) hierarchical  
25 levels of affective experience, gratitude has been  
26 identified as a trait, emotion, and mood. The  
27 grateful disposition can be defined as a stable  
28 affective trait that would lower the threshold of  
29 experiencing gratitude. As an emotion, gratitude  
30 can be understood as an acute, intense, and rela-  
31 tively brief psychophysiological reaction to being  
32 the recipient of a benefit from an other. Lastly, as  
33 a stable mood, gratitude has also been identified  
34 to have a subtle, broad, and longer-duration  
35 impact on consciousness (McCullough, Tsang, &  
36 Emmons, 2004). Both state and dispositional  
37 gratitude have been shown to enhance overall  
38 psychological, social, and physical well-being.  
39 Gratitude promotes optimal functioning at mul-  
40 tiple levels of analysis—biological, experiential,  
41 personal, relational, familial, institutional, and  
42 even cultural (Emmons & McCullough, 2004).

43 Two main measures have been administered  
44 to assess dispositional gratitude: the six-item  
45 Gratitude Questionnaire (GQ; McCullough,  
46 Emmons, & Tsang, 2002), and the 44-item  
47 Gratitude Resentment and Appreciation Test or  
48 the GRAT (Watkins, Grimm, & Hailu, 1998).  
49 The GQ-6 measures dispositional gratitude as a  
50 generalized tendency to recognize and emotion-  
51 ally respond with thankfulness, after attributing  
52 benefits received to an external moral agent

(Emmons, McCullough, & Tsang, 2003). The 53  
44-item GRAT form measures three dimensions 54  
of gratitude: resentment, simple appreciation, 55  
and appreciation of others (Watkins et al., 56  
1998). Beyond these scales to assess gratitude, 57  
other measures include personal interviews 58  
(Liamputtong, Yimyam, Parisunyakul, Baosoung, 59  
& Sansiriphun, 2004), rating scales (Saucier & 60  
Goldberg, 1998), and other self-report measures 61  
such as free response (Sommers & Kosmitzki, 62  
1988) and personal narratives (Kashdan, Mishra, 63  
Breen, & Froh, 2009). 64

65 Dispositional gratitude has been shown to  
66 uniquely and incrementally contribute to subjec-  
67 tive well-being (McCullough et al., 2004; Watkins,  
68 Woodward, Stone, & Kolts, 2003; Wood, Joseph,  
69 & Maltby, 2008) and to benefits above and  
70 beyond general positive affect (Bartlett &  
71 DeSteno, 2006). Dispositional gratitude has also  
72 been found to be positively associated with pros-  
73 ocial traits such as empathy, forgiveness, and will-  
74 ingness to help others (McCullough et al., 2002).  
75 People who rate themselves as having a grateful  
76 disposition perceived themselves as having more  
77 prosocial characteristics, expressed by their empa-  
78 thetic behavior, and emotional support for friends  
79 within the last month. Similar associations have  
80 been found between state gratitude and social  
81 well-being (Emmons & McCullough, 2003).

82 While gratitude has been studied as trait, it has  
83 also been studied as a state—feeling grateful and  
84 equivalent states (appreciation, thankfulness) at  
85 the moment. State gratitude has been experi-  
86 mentally activated through the self-guided exer-  
87 cise of journaling. In the first study examining  
88 the benefits of experimentally induced grateful  
89 thoughts on psychological well-being in daily  
90 life, a gratitude induction was compared to a  
91 hassles and a neutral life events condition  
92 (Emmons & McCullough, 2003). The cultivation  
93 of grateful affect through daily and weekly jour-  
94 naling led to overall improved well-being,  
95 including fewer health complaints and a more  
96 positive outlook toward life. Participants in the  
97 gratitude condition also reported more exercise  
98 and appraised their life more positively com-  
99 pared to participants in the hassles and neutral  
100 conditions. Furthermore, in a study examining  
101 the contribution of gratitude in daily mood over  
102 21 days, gratitude was strongly associated with  
103 spiritual transcendence and other positive affec-  
104 tive traits (e.g., extraversion) (McCullough et al.,  
105 2004). In the past few years, a number of labora-  
106 tory and research-based intervention studies  
107 have also been examining the positive impact of

1 gratitude-induced activities (e.g., the gratitude  
2 visit, gratitude letter) on psychological well-  
3 being, including happiness, depression, and mate-  
4 rialism (Bono, Emmons, & McCullough, 2004;  
5 Lyubomirsky, Sheldon, & Schkade, 2005;  
6 McCullough et al., 2004; Seligman, Steen, Park,  
7 & Peterson; 2005; Watkins, 2000).

8 Given the emerging strong association  
9 between gratitude and well-being, an important  
10 step becomes exploring the reasons for this  
11 relationship. What are the mechanisms respon-  
12 sible for why gratitude promotes well-being?  
13 A number of possible explanations have been  
14 suggested; however, not all of them have been  
15 fully investigated. In the next section, we exam-  
16 ine several explanations for the relation between  
17 gratitude and well-being, some of which stem  
18 from new research from our laboratory that is  
19 relevant to these hypotheses.

#### 20 Hypothesis 1: Gratitude Facilitates 21 Coping with Stress

22 Pondering the circumstances in one's life for  
23 which one is grateful appears to be a common  
24 way of coping with both acute and chronic stress-  
25 ful life events. Our first hypothesis is that grati-  
26 tude improves well-being by providing useful  
27 coping skills for dealing with losses. These  
28 include building a supply of more positive  
29 thoughts, increasing the focus on benefits in life  
30 and on others, and reducing the maladaptive  
31 focus on losses (Fredrickson, 2004; Watkins,  
32 2000). For example, gratitude has been associated  
33 with distinct coping styles of seeking social  
34 support, positive reframing, approach-oriented  
35 problem solving, and active coping (Wood,  
36 Joseph, & Linley, 2007). The coping styles linked  
37 with gratitude might be based on the recognition  
38 of benefits, stronger social bonds, prosocial moti-  
39 vation, and the evolutionary adaptation of grati-  
40 tude as an emotion for regulating reciprocal  
41 altruism (McCullough et al., 2001; McCullough,  
42 Kimeldorf, & Cohen, 2008; Trivers, 1971). In the  
43 past few years there has been growing empirical  
44 evidence for gratitude's association with coping  
45 and post-traumatic growth (Peterson, Park, Pole,  
46 D'Andrea, & Seligman, 2008).

47 One of the first studies examining the benefits  
48 of psychological strengths on well-being in  
49 combat veterans found that, compared to veter-  
50 ans with Post-Traumatic Stress Disorder (PTSD),  
51 veterans without PTSD reported more disposi-  
52 tional gratitude on the GQ-6 (Kashdan, Uswatte,  
53 & Julian, 2006). Gratitude also emerged as one of

54 the strongest themes for quality of life (toward  
55 the donor, their families, and the renal team) in a  
56 sample of kidney transplant recipients, followed  
57 by long-lasting psychosocial effects on the recip-  
58 ients (Orr, Willis, Holmes, Britton, & Orr, 2007).  
59 In a prospective study examining college stu-  
60 dents in the aftermath of the September 11 ter-  
61 rorist attacks, gratitude emerged as one of the  
62 primary themes and contributed to resilience  
63 and post-crisis coping (Fredrickson, Tugade,  
64 Waugh, & Larkin, 2003). Lastly, a recent study  
65 including undergraduate women with trauma  
66 history showed strong associations between  
67 gratitude (measured by a four-item post-trauma  
68 gratitude scale including the items "fortunate,"  
69 "grateful," "appreciated life," and "relieved")  
70 and emotional growth ( $r = .43, p < .001$ ). Most  
71 importantly, gratitude after trauma was nega-  
72 tively associated with PTSD symptom levels  
73 ( $r = -.18, p < .05$ ) (Vernon, Dillon, & Steiner,  
74 2009). Therefore, the evidence strongly supports  
75 the supposition that gratitude promotes adaptive  
76 coping and personal growth.

#### 77 Hypothesis 2: Gratitude Reduces Toxic 78 Emotions Resulting from Self and Social 79 Comparisons

80 Another possible explanation for the relation  
81 between gratitude and well-being is that grateful  
82 individuals are less likely to engage in upward  
83 social comparisons that can result in envy or  
84 resentment, or self-comparisons with alternative  
85 outcomes in one's own life that can result in  
86 regret. Either type of these invidious compar-  
87 isons can cause people to feel that they lack some-  
88 thing important that either others have or that  
89 they desire for themselves. Envy is a negative  
90 emotional state characterized by resentment,  
91 inferiority, longing, and frustration about other  
92 people's material and non-material successes  
93 (Parrott & Smith, 1993). Considerable research  
94 has shown that envy creates unhappiness and is  
95 associated with a host of negative mental health  
96 indicators (Smith & Kim, 2007). As gratitude is a  
97 focus on the benevolence of others, it is incom-  
98 patible with envy and resentment, as the grateful  
99 person appreciates positive qualities in others  
100 and is able to feel happy over the good fortune  
101 that happens to others (Smith, Turner, Leach,  
102 Garonzik, Urch-Druskat, & Weston, 1996).  
103 Grateful people, who tend to focus on the posi-  
104 tive contributions of others to their well-being,  
105 probably devote less attention to comparing their  
106 outcomes with those of other people and thus

1 experience less envy as a result. Using Smith,  
 2 Parrott, Diener, Hoyle, & Kim's (1999) measure  
 3 of dispositional envy and the envy subscale of  
 4 Belk's materialism scale (Ger & Belk, 1996  
 5 McCullough et al., 2002) reported moderate neg-  
 6 ative correlations (ranging from  $-.34$  to  $-.40$ )  
 7 between gratitude and envy. Furthermore, the  
 8 correlations between trait gratitude and envy  
 9 remained significant after controlling for posi-  
 10 tive affect, negative affect, and agreeableness.  
 11 Grateful people do experience less frustration  
 12 and resentment over the achievements and pos-  
 13 sessions of other people, and the overlap between  
 14 gratitude and envy is not produced by their  
 15 common bond with trait affect.

16 Regret is a counterfactual emotion produced  
 17 by perceptions of what might have been. In  
 18 regret, some action, event, or state of affairs is  
 19 construed as "unfortunate" and contrasted with  
 20 some more propitious alternative that "might  
 21 have been" (Roberts, 2004). In that it is a form of  
 22 welling on the negative, regret generates related  
 23 unpleasant states of anxiety, unhappiness, and  
 24 even depression (Isenberg, 2008; Landman,  
 25 1993). There is no empirical evidence that  
 26 directly tests the hypothesized linkage between  
 27 regret and gratitude, though the opposing causal  
 28 attributions that give rise to gratitude versus  
 29 regret have been well-established (Weiner, 2007).  
 30 It is likely that the dispositionally grateful have  
 31 a firewall of protection against incapacitating  
 32 regrets because they are inclined to dwell on the  
 33 favorable, rather than the regrettable, in life  
 34 (Roberts, 2004). By appreciating the gifts of the  
 35 moment, gratitude offers freedom from past  
 36 regrets. While a promising hypothesis, more  
 37 research is needed before we can draw definitive  
 38 conclusions concerning this hypothesis.

### 39 Hypothesis 3: Gratitude Reduces 40 Materialistic Strivings

41 Gratitude and materialism represent opposing  
 42 motivational goals. Gratitude may aid well-being  
 43 by motivating people to fulfill basic needs of per-  
 44 sonal growth, relationships, and community—  
 45 motives that are incompatible with materialism  
 46 (Polak & McCullough, 2006). As a route to the  
 47 bolstering of well-being, gratitude may block  
 48 materialistic pursuits. Materialism is damaging  
 49 to subjective well-being. Materialistic adults  
 50 tend to exhibit life dissatisfaction (Richins &  
 51 Dawson, 1992); unhappiness (Belk, 1985; Kasser  
 52 & Kanner, 2004); low self-esteem (Kasser,  
 53 2003); less concern with the welfare of others

(Sheldon & Kasser, 1995); less relatedness, 54  
 autonomy, competence, and meaning in life 55  
 (Kashdan & Breen, 2007); and higher levels of 56  
 depressive symptoms (Kasser & Ryan, 1993) and 57  
 envy (Belk, 1985). Materialistic adults are less 58  
 satisfied with their standards of living, family 59  
 lives, and the amount of fun and enjoyment they 60  
 experience (Richins & Dawson, 1992). 61

62 Gratitude is most closely related to the values  
 63 of *benevolence*, an orientation characterized by  
 64 "the preservation and enhancement of the wel-  
 65 fare of people with whom one is in frequent per-  
 66 sonal contact" (Bilsky & Schwartz, 1994, p. 167)  
 67 and *universalism*, defined as "understanding,  
 68 appreciation, tolerance, and protection for the  
 69 welfare of all people and for nature" (Bilsky &  
 70 Schwartz, 1994, p. 167). Furthermore, in the  
 71 Values-in-Action taxonomy of human strengths  
 72 (Peterson & Seligman, 2004), gratitude is one of  
 73 the five strengths that falls under the broader  
 74 virtue of *transcendence*. These value orientations  
 75 are diametrically opposed to *power* ("social status  
 76 and prestige, control or dominance over people and  
 77 resources") (p. 167) and *hedonism* (pleasure and  
 78 sensuous gratification for oneself") (p. 167),  
 79 which likely are the two values in this theory  
 80 most aligned with materialism. Values theory  
 81 would therefore predict a negative correlation  
 82 between gratitude and materialism on the grounds  
 83 that they represent opposing value systems.

84 Evidence suggests that gratitude can reduce  
 85 the pernicious effects of materialism on well-  
 86 being. Grateful people report themselves as being  
 87 less materialistic and are less likely to define per-  
 88 sonal success in terms of material accomplish-  
 89 ments and possessions (McCullough et al., 2002).  
 90 In particular, grateful people report being more  
 91 willing to part with their possessions, more gen-  
 92 erous with them, less envious of the material  
 93 wealth of others, less committed to the idea that  
 94 material wealth is linked with success in life, and  
 95 less convinced of the idea that material wealth  
 96 brings happiness. Using structural equation  
 97 modeling, Froh, Emmons, Card, Bono, & Wilson  
 98 (in press) found that gratitude mediates the rela-  
 99 tion between materialism and well-being.  
 100 Apparently, material success is not a very impor-  
 101 tant factor in the happiness of highly grateful  
 102 people, so this hypothesis has received consider-  
 103 able support.

### 104 Hypothesis 4: Gratitude Improves Self-Esteem

105 Self-esteem has emerged as a powerful correlate  
 106 of happiness (e.g., Denny & Steiner, 2009);

## 252 PART V. PERSONALITY PERSPECTIVES

1 Lyubomirsky, Tkach, & DiMatteo, 2006; Walker  
 2 & Schimmack, 2008). Gratitude might be impor-  
 3 tant because focusing on receiving benefits  
 4 from benefactors might enhance self-esteem and  
 5 self-respect. This hypothesis has not been exten-  
 6 sively tested, but the data that do exist are  
 7 supportive. For example, grateful youth report  
 8 high levels of self-esteem (Froh, Wajsblat, &  
 9 Ubertini, 2008). They also report high levels of  
 10 self-satisfaction concurrently (Froh et al., 2008,  
 11 2008; Froh, Yurkewicz, & Kashdan (2009) and  
 12 three and six months later (Froh et al., 2008).  
 13 Grateful people, in focusing on how their lives  
 14 are supported and sustained by others, might  
 15 feel more secure and are therefore less likely  
 16 to seek material goods to strengthen their self-  
 17 image. Grateful people may also have more  
 18 stable self-esteem that is less contingent upon  
 19 transient success and failure experiences, con-  
 20 tributing to their ability to cope with stress,  
 21 as discussed in Hypothesis 1. We do not yet  
 22 know, however, the direction of the relation. It  
 23 may be that high self-esteem leads to more feel-  
 24 ings of gratitude because it makes it more likely  
 25 that the person will respond positively to the  
 26 benevolence of others. Conversely, it may be that  
 27 feelings of gratitude produce more positive self-  
 28 construals. Future research will have to decide  
 29 this sequence.

30 **Hypothesis 5: Gratitude Enhances**  
 31 **Accessibility to Positive Memories**

32 Gratitude has also been shown to contribute to  
 33 well-being by boosting the retrieval of positive  
 34 autobiographical memories. Grateful people are  
 35 characterized by a positive memory bias  
 36 (Watkins, Grimm, & Kolts, 2004). This positivity  
 37 bias extends to both intentional and intrusive  
 38 positive memories. These findings were reliably  
 39 replicated in a subsequent study by the authors  
 40 after controlling for depression. In a more recent  
 41 study by Watkins, Cruz, Holben, & Kolts (2008),  
 42 the reappraising benefit of gratitude on memory  
 43 was shown to promote successful closure of  
 44 unpleasant open memories, ultimately contrib-  
 45 uting to happiness. Therefore, gratitude enhances  
 46 the retrievability of positive experiences by  
 47 increasing elaboration of positive information.  
 48 The positive impact of gratitude on memory was  
 49 further confirmed in a study by Watkins et al.  
 50 (2008). The grateful reappraisal of upsetting  
 51 memories was shown to promote better emo-  
 52 tional processing and closure of the upsetting  
 53 open memories.

Future research could examine the influence of 54  
 gratitude on the construction of self-construals. 55  
 These construals might subsequently impact 56  
 appraisals of autobiographical memories. Accord- 57  
 ing to Ross (1989), implicit theories of personal 58  
 attributes can influence the retrieval of self- 59  
 construal and facilitate biased recall. Furthermore, 60  
 the perception of self can change (or remain rela- 61  
 tively stable) over time (Ross, 1989). The role of 62  
 gratitude in influencing construal of life histo- 63  
 ries might be tested both for state and trait grati- 64  
 tude. People high on trait gratitude may be 65  
 better able to retrieve more positive personal life 66  
 experiences compared to less grateful individu- 67  
 als. The effect of experimentally induced grati- 68  
 tude on the quality of autobiographical memories 69  
 (e.g., positive-negative valence of the memories, 70  
 perception of negative life events) could also be 71  
 investigated. 72

**Hypothesis 6: Gratitude Builds**  
**Social Resources**

73  
 74  
 75 Gratitude may contribute to overall well-being  
 76 by enhancing social relationships. Gratitude has  
 77 been linked in a variety of ways to positive inter-  
 78 personal functioning. Gratitude facilitates the  
 79 building of social resources by broadening the  
 80 thought action repertoire (i.e., via initiation of  
 81 friendships or consideration of a wide range of  
 82 strategies by the beneficiary as a form of repay-  
 83 ment) (Fredrickson, 2004, pp. 150). Moreover,  
 84 besides building new bonds, gratitude also helps  
 85 strengthen and maintain existing relationships  
 86 (Algoe, Haidt, & Gable, 2008) and fosters trust  
 87 (Gino & Schweitzer, 2008). Grateful people pos-  
 88 sess a number of resources that make them  
 89 desirable friends and romantic partners. They  
 90 are extraverted, agreeable, empathic, emotion-  
 91 ally stable, forgiving, trusting, and generous  
 92 (McCullough et al., 2002; Wood et al., 2008).  
 93 Further, gratitude is a strength of character that  
 94 is highly desired in romantic partners (Steen,  
 95 Kachorek, & Peterson, 2003).

96 From an attachment perspective, gratitude has  
 97 been shown to promote social bonds since it is  
 98 closely associated with attachment security. In a  
 99 sample of Israeli undergraduates, attachment  
 100 security uniquely contributed to the grateful  
 101 disposition over and beyond the association of  
 102 attachment security with self-esteem or trust  
 103 (Mikulincer, Shaver, & Slav, 2006). In a subse-  
 104 quent study the link between trait gratitude and  
 105 attachment security was examined in context of  
 106 new marital relationships. For both husband and

1 wife, the perceived positive behavior of the part-  
2 ner was strongly associated with greater grati-  
3 tude toward the partner on a particular day  
4 (Mikulincer et al., 2006, pp. 203). The link is not  
5 limited to newlyweds. In a sample of older adults,  
6 greater social support from adult children was  
7 found to be related with a higher sense of grati-  
8 tude (Dahua, Yan, & Liqing, 2004).

9 The social benefits of gratitude can also be  
10 construed in terms of the affect theory of social  
11 exchange proposed by Lawler (2001). This theory  
12 proposes that positive emotions generated by  
13 social exchange partners lead to social cohesion  
14 and strengthening of social networks. Therefore,  
15 by promoting prosocial behavior, building social  
16 resources, fostering trust, attachment security,  
17 and social exchange, gratitude is a vital interper-  
18 sonal emotion, the absence of which undermines  
19 social harmony.

#### 20 Hypothesis 7: Gratitude Motivates 21 Moral Behavior

22 Gratitude is an essential part of creating and  
23 sustaining positive social relations. One way  
24 that gratitude sustains personal relationships is  
25 that it motivates moral behavior—action that  
26 is undertaken in order to benefit another.  
27 McCullough et al. (2001) proposed that gratitude  
28 possesses three psychological features that are  
29 relevant to processing and responding to prosocial  
30 behavior: It is a benefit detector as well as  
31 both a reinforcer and motivator of prosocial  
32 behavior. In this functional account, gratitude is  
33 more than a pleasant feeling. Gratitude is also  
34 motivating and energizing. It is a positive state  
35 of mind that gives rise to the “passing on of the  
36 gift” through positive action. As such, gratitude  
37 serves as a key link in the dynamic between  
38 receiving and giving. While a response to kind-  
39 nesses received, gratitude drives future benevo-  
40 lent actions on the part of the recipient. In the  
41 language of evolutionary dynamics, gratitude  
42 leads to “upstream reciprocity” (Nowak & Roch,  
43 2007), the passing on of a benefit to a person  
44 uninvolved in the initial exchange. Part of grati-  
45 tude’s magnetic appeal lies in its power to evoke  
46 a focus by the recipient on the benevolence of  
47 others, thereby ensuring a perception that kind-  
48 ness has been offered, and its beneficial conse-  
49 quences that frequently are the motive to  
50 respond favorably toward another. The idea that  
51 the capacity to receive and be grateful fosters the  
52 desire to return goodness is theoretically com-  
53 pelling and empirically viable.

Recent experimental evidence indicates that 54  
gratitude is a unique facilitator of reciprocity 55  
(Bartlett & DeSteno, 2006; Watkins, Schneer, 56  
Ovnicek & Kolts, 2006). After appraising the evi- 57  
dence that gratitude fosters moral behavior, 58  
McCullough, Kimeldorf, and Cohen (2008) pro- 59  
pose that gratitude evolved to facilitate social 60  
exchange. Compelling evidence suggests that 61  
gratitude evolved to stimulate not only direct 62  
reciprocal altruism but also upstream reciprocity 63  
(Nowak & Roch, 2007). 64

#### Hypothesis 8: Grateful People Are Spiritually Minded 65

66  
67 Several studies have found a relationship  
68 between religion, spirituality, and gratitude  
69 (Adler & Fagley, 2005; Emmons & Kneezel, 2005;  
70 McCullough et al., 2002; Watkins et al., 2003).  
71 People with stronger dispositions toward grati-  
72 tude tend to be more spiritually and religiously  
73 minded. Not only do they score higher on mea-  
74 sures of traditional religiousness, but they also  
75 scored higher on non-sectarian measures of spir-  
76 ituality that assess spiritual experiences (e.g.,  
77 sense of contact with a divine power) and senti-  
78 ments (e.g., beliefs that all living things are  
79 interconnected) independent of specific theologi-  
80 cal orientation. All measures of public and pri-  
81 vate religiousness in the Emmons and Kneezel  
82 (2005) study were significantly associated with  
83 both dispositional gratitude and grateful feelings  
84 assessed on a daily basis. Although these correla-  
85 tions were not large (ranging from  $r = .28$  to  
86  $r = .52$ ), they suggest that spiritually or reli-  
87 giously inclined people have a stronger disposi-  
88 tion to experience gratitude than do their less  
89 spiritual/religious counterparts. Research is also  
90 beginning to examine gratitude toward God.  
91 Krause (2006) found that gratitude felt toward  
92 God reduced the effect of stress on health in late-  
93 life adults and deteriorated neighborhood. The  
94 stress-buffering effect of theocentric gratitude  
95 was more pronounced among the women com-  
96 pared to the men in Krause’s (2006) study.

97 Many world religions commend gratitude as a  
98 desirable human trait (see Carman & Streng,  
99 1989; Emmons & Crumpler, 2000), which may  
100 cause spiritual or religious people to adopt a  
101 grateful outlook. Religion also provides texts,  
102 teachings, and traditions that encourage grati-  
103 tude. When contemplating a positive circum-  
104 stance that cannot be attributed to intentional  
105 human effort, such as a miraculous healing or  
106 the gift of life itself, spiritually inclined people

1 may attribute these positive outcomes to a non-  
 2 human agent (viz., God or a higher power) and  
 3 thus experience more gratitude. Third, spiritu-  
 4 ally inclined people also tend to attribute posi-  
 5 tive outcomes to God's intervention, but not  
 6 negative ones (Lupfer, De Paola, Brock, &  
 7 Clement, 1994; Lupfer, Tolliver, & Jackson, 1996).  
 8 As a result, many positive life events that are not  
 9 due to the actions of another person (e.g., pleas-  
 10 ant weather, avoiding an automobile accident)  
 11 may be perceived as occasions for gratitude to  
 12 God, although negative events (e.g., a long  
 13 winter, an automobile accident) would likely *not*  
 14 be attributed to God. This attributional style,  
 15 then, is likely to magnify the positive emotional  
 16 effects of pleasant life events.

#### 17 Hypothesis 9: Gratitude Facilitates 18 Goal Attainment

19 The possession of and progression toward impor-  
 20 tant life goals are essential for long-term well-  
 21 being (Emmons, 1999). Goal attainment is a  
 22 major benchmark for the experience of well-  
 23 being. Quality of life therapy (Frisch, 2006)  
 24 advocates the importance of revising goals, stan-  
 25 dards, and priorities as a strategy for boosting  
 26 life happiness and satisfaction. Yet goal striving  
 27 and gratitude or the grateful disposition have not  
 28 been explicitly linked. In one experimental study  
 29 on gratitude and well-being, we asked partici-  
 30 pants at the beginning of the gratitude journal-  
 31 ing study to provide a short list of goals they  
 32 wished to accomplish over the next two months.  
 33 As these were students, most goals fell into the  
 34 interpersonal or academic domains. Participants  
 35 in the gratitude condition, relative to the control  
 36 and hassles conditions, reported making more  
 37 progress toward their goals over the 10-week  
 38 period. The results of this study stand in strong  
 39 opposition to an empirically undocumented  
 40 but widely held assumption that gratitude pro-  
 41 motes passivity and complacency. On the con-  
 42 trary, gratitude enhances effortful goal striving.  
 43 Much more future research could examine the  
 44 goal correlates of gratitude, as well as grateful  
 45 affect as an emotional regulator of goal-directed  
 46 action.

#### 47 Hypothesis 10: Gratitude Promotes 48 Physical Health

49 Gratitude is a mindful awareness of the benefits in  
 50 one's life. Dwelling on goodness may promote  
 51 more efficient physical functioning, through either

inhibiting unhealthy attitudes and emotions or 52  
 facilitating more health-promoting inner states. 53  
 A small number of studies have reported physi- 54  
 cal health benefits of gratitude, and these rela- 55  
 tions have been largely independent of trait 56  
 negative affect (Wood, Joseph, Lloyd, & Atkins, 57  
 2008). Gratitude interventions have been shown 58  
 to reduce the bodily complaints, increase sleep 59  
 duration and efficiency, and promote exercise 60  
 (Emmons & McCullough, 2003; Wood et al., 61  
 2008). Experimental research suggests that dis- 62  
 crete experiences of gratitude and appreciation 63  
 may cause increases in parasympathetic myocar- 64  
 dial control (McCraty & Childre, 2004), lower 65  
 systolic blood pressure (Shipon, 2007), as well as 66  
 improvements in more molar aspects of physical 67  
 health such as everyday symptoms and physi- 68  
 cian visits (Emmons & McCullough, 2003). 69  
 McCraty and colleagues found that appreciation 70  
 increased parasympathetic activity, a change 71  
 thought to be beneficial in controlling stress and 72  
 hypertension, as well as "coherence" or entrain- 73  
 ment across various autonomic response chan- 74  
 nels. Therefore, there might be some direct 75  
 physiological benefits to frequently experiencing 76  
 grateful emotions. This line of research con- 77  
 ducted by McCraty demonstrates a link between 78  
 positive emotions and increased physiological 79  
 efficiency, which may partly explain the growing 80  
 number of correlations documented between 81  
 positive emotions, improved health, and increased 82  
 longevity. 83

#### 84 Moving Forward: Future Directions

85 As the evidence we reviewed earlier in the chap- 86  
 ter indicates, gratitude interventions in adults 87  
 consistently produce positive benefits, many of 88  
 which appear to endure over reasonably lengthy 89  
 periods of time. Gratitude interventions lead to 90  
 greater gratitude, life satisfaction, optimism, 91  
 prosocial behavior (Emmons & McCullough, 92  
 2003), positive affect (Emmons & McCullough, 93  
 2003; Watkins et al., 2003, Study 4), and well- 94  
 being (Lyubomirsky et al., 2005; Seligman et al., 95  
 2005), as well as decreased negative affect 96  
 (Emmons & McCullough, 2003; Seligman et al., 97  
 2005; Watkins et al., 2003, Study 3) compared 98  
 with controls for up to six months. Similar 99  
 findings, over shorter follow-up periods, have 100  
 been documented in youth (Froh et al., 2008). 101  
 Despite these encouraging results, much remains 102  
 unknown. We have several suggestions for future 103  
 research involving gratitude interventions.

1 *Mechanisms.* What are the active ingredients  
 2 in gratitude interventions? It is not known  
 3 whether the effects of these activities are rela-  
 4 tively specific (e.g., increases in happiness alone)  
 5 or are more general (e.g., increases in perceived  
 6 physical health and decreases in negative mood).  
 7 In addition, no research has attempted to exam-  
 8 ine the effects of these activities in the context of  
 9 participants' levels of dispositional gratitude, an  
 10 established individual difference that may mod-  
 11 ulate the positive effects of activities aimed at  
 12 increasing gratitude in one's life (McCullough  
 13 et al., 2002). The active ingredients may relate to  
 14 processes of reflecting on things for which one is  
 15 grateful, or recording these in some way, or  
 16 expressing them. Until it is known which of  
 17 these is essential, we cannot state why these  
 18 exercises work and it is difficult to make informed  
 19 recommendations about how they might be  
 20 used. Future research must employ increasingly  
 21 sophisticated designs using statistical tests of  
 22 mediating and moderating effects.

23 *Comparison groups.* What is the most appro-  
 24 priate condition to contrast with gratitude?  
 25 Nearly one-half of the studies that have been  
 26 published to date found support for gratitude  
 27 interventions when making contrasts with tech-  
 28 niques that induce negative affect (e.g., record  
 29 your daily hassles). Gratitude interventions have  
 30 shown limited benefits, if any, over control con-  
 31 ditions. Thus, there is a need to better understand  
 32 whether gratitude interventions are beyond a  
 33 control condition and if there exists a subset of  
 34 people who benefit. Perhaps gratitude interven-  
 35 tions are differentially effective for groups of  
 36 people with varying backgrounds. Sample char-  
 37 acteristics themselves might show differences.  
 38 People who are actively seeking positive psy-  
 39 chology interventions may have greater expecta-  
 40 tions for their efficacy compared to college  
 41 students participating for extra credit or to fulfill  
 42 a course requirement.

43 *Trait moderators.* A moderating effect might  
 44 be found if pre-existing trait characteristics of  
 45 people affect their ability to profit from gratitude  
 46 interventions. Several dispositional factors may  
 47 moderate the effectiveness of gratitude interven-  
 48 tions. Of these, trait affect and dispositional grati-  
 49 tude are obvious candidates for consideration. It  
 50 seems a reasonable prediction that persons high  
 51 in positive affect (PA) may have reached an  
 52 "emotional ceiling" and thus are less susceptible  
 53 to experiencing gains in well-being. People lower  
 54 in PA, however, may need more positive events—  
 55 like expressing gratitude to a benefactor—to

56 "catch up" to the positive experiences of their  
 57 peers. Froh, Kashdan, Ozimkowski, and Miller  
 58 (2009) examined whether individuals differences  
 59 in positive affective style moderated the effects of  
 60 a gratitude intervention where youth were  
 61 instructed to write a letter to someone to whom  
 62 they were grateful and deliver it to them in person.  
 63 Eighty-nine children and adolescents were ran-  
 64 domly assigned to the gratitude intervention or a  
 65 control condition. Findings indicated that youth  
 66 low in PA in the gratitude condition, compared  
 67 with youth writing about daily events, reported  
 68 greater gratitude and PA at post-treatment and  
 69 greater PA at the two-month follow-up. Children  
 70 and adolescents low in PA in the gratitude condi-  
 71 tion, compared with the control group, reported  
 72 more gratitude and PA at two later time points,  
 73 at three-week and two-month follow-ups. This is  
 74 an important study because it is the first known  
 75 randomized controlled trial of a gratitude inter-  
 76 vention study in children and adolescents and  
 77 the first paper to reinterpret the gratitude inter-  
 78 vention literature arguing to carefully consider  
 79 controls groups when concluding the efficacy of  
 80 gratitude interventions. Furthermore, when con-  
 81 sidering both youth and adult populations, it is  
 82 also the first known attempt at investigating  
 83 positive affect as a moderator.

84 Then there is dispositional gratitude. Can we  
 85 expect gratitude inductions to be more effective  
 86 in increasing the well-being of grateful individu-  
 87 als or less grateful persons? Grateful individuals  
 88 would be more susceptible to recognizing when  
 89 others are being kind to them, and more open to  
 90 perceiving benefits more generally. One could  
 91 even postulate a gratitude schema (Wood et. al,  
 92 2008) as an interpretive bias on the part of dispo-  
 93 sitionally grateful individuals prone to making  
 94 benevolent appraisals. Alternatively, gratitude  
 95 interventions might also be more efficacious for  
 96 individuals low on trait gratitude since they may  
 97 have more room for improvement on the grati-  
 98 tude dimension. No published studies have  
 99 examined dispositional gratitude as a moderator  
 100 of state gratitude interventions.

101 Trait gratitude might also interact with trait  
 102 affect. Froh et al. (2009) found that, compared to  
 103 the control group, individuals in the gratitude  
 104 group who were low on positive affect benefited  
 105 the most from the gratitude intervention. Given  
 106 the recent evidence on the contribution of posi-  
 107 tive affect as a moderator, it might also be rea-  
 108 sonable to examine the possibility of a curvilinear  
 109 relationship between trait gratitude and well-  
 110 being. For example, individuals at the extreme



1 ends of the gratitude distribution might extract  
2 the least benefits from gratitude interventions.

3 *The effect of instructional set.* The instruc-  
4 tions that participants in the gratitude condition  
5 are given appear to be essential. The counting  
6 blessings gratitude intervention guides partici-  
7 pants to reflect on and record benefits in their  
8 lives. Participants generally focus on the pres-  
9 ence of good things in their lives that they cur-  
10 rently enjoy. Yet a recent study found that  
11 people's affective states improve more after  
12 mentally subtracting positive events from their  
13 lives than after thinking about the presence of  
14 those events (Koo, Algoe, Wilson & Gilbert,  
15 2008). People wrote about why a positive event  
16 might never have happened and why it was sur-  
17 prising or why it was certain to be part of their  
18 lives and was not at all surprising. The results  
19 showed that the way in which people think about  
20 positive life events is critical, namely whether  
21 they think about the presence of the events (e.g.,  
22 "I'm grateful that I was in Professor Wiseman's  
23 class") or the absence of the events (e.g., "imag-  
24 ine I had never met Professor Wiseman!"). The  
25 latter impacted positive affect more than did the  
26 former. Inasmuch as most previous studies  
27 adopted the former approach, asking participants  
28 to think about the presence of positive events,  
29 the effects of gratitude on well-being may well  
30 have been underestimated. Koo et. al adduce that  
31 thinking about how events might have not hap-  
32 pened triggers surprise, and it is surprise that  
33 amplifies the event's positivity. Along these lines,  
34 another recent study (Bar-Anan, Wilson, &  
35 Gilbert, 2009) found that the uncertainty of an  
36 event intensifies felt reaction, such that outcomes  
37 that are uncertain produce greater emotional  
38 reactions. Another recent study found that focus-  
39 ing on an experience's ending could enhance  
40 one's present evaluation of it (Kurtz, 2008).  
41 Future gratitude interventions could capitalize  
42 on these three studies by giving participants  
43 explicit instructions to include in their journals  
44 events or circumstances that might not have  
45 happened, have turned out otherwise, where the  
46 initial outcome may have been uncertain, or  
47 increasing an awareness that the experience is  
48 soon ending.

49 *Dose-Effect Relationship.* More than two  
50 decades ago, an influential psychotherapy review  
51 article reported that by eight sessions of psycho-  
52 therapy, approximately one-half of patients  
53 show a measureable outcome improvement, and  
54 that by 26 sessions, this number increases to  
55 75% (Howard, Kopta, Krause, & Orlinsky, 1986).

56 Is there an equivalent dose-response relationship  
57 for gratitude interventions? Interventions have  
58 asked people to keep gratitude journals every  
59 day to a few times a week to once a week for  
60 10 weeks. While some differences have been  
61 reported across these studies, an insufficient  
62 number of trials have yet to be conducted such  
63 that recommendations could be made with confi-  
64 dence. The definition of a dose itself is up for  
65 debate. Should a dose be considered a single  
66 session of writing in a gratitude journal? Should  
67 a minimum time be set for participants to write  
68 in their journals each session? We would expect  
69 that the greater the degree of elaboration over  
70 a simple listing or counting of blessings, the  
71 greater would be the potential payoff. But a  
72 systematic comparison of the relevant variables  
73 that "gratitude dosages" vary on has yet to be  
74 conducted.

75 *Gender.* Gender may be another critical indi-  
76 vidual factor affecting the outcomes of interven-  
77 tion studies. Given the interpersonal correlates  
78 and interdependent nature of gratitude, women  
79 might have an edge over men in extracting ben-  
80 efits from gratitude interventions. In fact, recent  
81 studies have demonstrated significant gender  
82 differences in gratitude (Kashdan et al., 2009;  
83 Watkins et al., 2003). However, in another recent  
84 study by Froh et al. (2009), the usual trend of  
85 gender differences couldn't be captured in an  
86 adolescent sample. Even though adolescent girls  
87 reported more gratitude, adolescent boys appeared  
88 to derive more social benefits from gratitude for  
89 whom a stronger relationship between gratitude  
90 and family support was found.

91 As an extension of possible gender differences  
92 in gratitude, it would be compelling to examine the  
93 contribution of gratitude in romantic relation-  
94 ships. Dyadic interventions involving grateful  
95 activities might foster higher-quality relation-  
96 ships. For example, a recent study examined the  
97 influence of attachment orientations on grati-  
98 tude in new marital relationships over a period  
99 of 21 days (Mikulincer et al., 2006). Daily feel-  
100 ings of gratitude for the partner were related to  
101 appraisals of partner's behavior (i.e., the higher  
102 the level of partner's perceived positive behavior,  
103 the greater the gratitude). For both partners, per-  
104 ceived positive behavior by the partner toward  
105 the self on one day was significantly associated  
106 with greater gratitude toward the partner on that  
107 same day. Moreover, in the same study, attach-  
108 ment avoidance was found to be associated with  
109 lower feelings of gratitude for the partner across  
110 the 21 days. However, most interestingly, only

1 the husband's avoidance orientation moderated  
 2 the relationship between the perceived partner's  
 3 behavior and feelings of gratitude (i.e., avoidant  
 4 husbands reported lower gratitude even on days  
 5 when they appraised their wife's behaviors to be  
 6 highly positive). As an extension of these find-  
 7 ings, future studies can examine if and why grati-  
 8 tude has the potential of contributing more to  
 9 the relationship quality for women, compared to  
 10 men. Given the interdependent and interper-  
 11 sonal nature of gratitude, women might be more  
 12 susceptible toward perceiving a partner's positive  
 13 behaviors as gifts and extract more benefits from  
 14 gratitude in their romantic relationships. Women  
 15 are expected to expand their caretaking and rela-  
 16 tional roles, whereas men are expected to focus  
 17 their emotional expression on the expansion and  
 18 pursuit of power and status (Brody, 1997, 1999;  
 19 Stoppard & Gruchy, 1993). Therefore, seeking  
 20 more of a "provider's" role in marital relation-  
 21 ships, gratitude may trigger feelings of vulnera-  
 22 bility and weakness for men, which they may  
 23 perceive to be harmful to their masculinity and  
 24 social standing (Levant & Kopecky, 1995). As a  
 25 result, men might extract fewer benefits from  
 26 gratitude to enhance their relationship quality.

27 *Enhancing retention in self-guided programs.*  
 28 Gratitude interventions may increase compli-  
 29 ance with and the possible success of self-guided  
 30 therapies in the realms of health management.  
 31 Given that grateful people tend to take better  
 32 care of their health, would an intervention to  
 33 increase gratitude lead a person to stick with  
 34 their commitments say to reduce weight, eat  
 35 more nutritionally, exercise, or reduce smoking?  
 36 Attrition is a major problem, especially in  
 37 Internet interventions (Christensen, Griffiths,  
 38 Mackinnon, & Brittcliffe, 2006). A recent study  
 39 found that retention in a two-week intervention  
 40 for depressed persons was significantly higher  
 41 for those who completed gratitude journals com-  
 42 pared to recording automatic thoughts (Geraghty,  
 43 Wood, & Hyland, 2010).

44 Gratitude was effective in both reducing drop-  
 45 out and lowering depression scores, and increased  
 46 retention by 12% over those recording daily  
 47 thoughts.

#### 48 **The Uniqueness of Gratitude Interventions**

49 An important issue to be addressed in future  
 50 research concerns the unique contributions that  
 51 gratitude interventions make to well-being out-  
 52 comes that distinguish them, say from related

53 positive psychology interventions. The unique- 53  
 54 ness of these interventions could be compared 54  
 55 with other positive psychological constructs such 55  
 56 as forgiveness and hope, both of which have been 56  
 57 shown to contribute to well-being (Bono, 57  
 58 McCullough, & Root, 2008; Snyder, Rand, & 58  
 59 Sigmon, 2002). What is different about grati- 59  
 60 tude? First, the underlying prosocial and rela- 60  
 61 tional nature of gratitude, subsequently leading 61  
 62 to strengthened social bonds, might facilitate 62  
 63 unique pathways to well-being. Second, grati- 63  
 64 tude has a fulfillment aspect to it, unlike hope, 64  
 65 that might facilitate extraction of benefits via 65  
 66 mindful appreciation of both present and past 66  
 67 received benefits. For example, given that hope is 67  
 68 a positive motivational state driven by goal-di- 68  
 69 rected energy and planning toward reaching 69  
 70 future goal(s) (Snyder, 2000), it probably reaches 70  
 71 its fruition only in a prospective fashion in the 71  
 72 *absence* of a desired goal—a goal that may or 72  
 73 may not be attained. Gratitude has also been 73  
 74 shown to be activated strongly by first focusing 74  
 75 on absence of benefits (Koo et al., 2008). However, 75  
 76 unlike hope, gratitude is almost always felt in 76  
 77 retrospection, thereby facilitating a positive cog- 77  
 78 nitive framework toward an already present 78  
 79 benefit. Furthermore, gratitude may be extracted 79  
 80 from immediate or present life circumstances 80  
 81 (e.g., "I am grateful for all the benefits that 81  
 82 I received today"), and also from the past (e.g., 82  
 83 "I am grateful for the love and support that I 83  
 84 received when I was sick two years back"), pro- 84  
 85 moting more expanded positive emotional expe- 85  
 86 rience. Besides the retrospective recognition of 86  
 87 benefits, gratitude also drives future prosocial 87  
 88 motivations (e.g., "I want to return benefits to 88  
 89 others who have helped me"). 89

90 Forgiveness is a motivational and emotional 90  
 91 transformation whereby a person relinquishes 91  
 92 feelings of past hurts and engages in construc- 92  
 93 tive thoughts and possibly conciliatory actions 93  
 94 toward the person who has hurt him or her 94  
 95 (McCullough, Worthington, & Rachal, 1997). 95  
 96 Given the psychological hurdles preceding for- 96  
 97 giveness, such as overcoming past hurts, psycho- 97  
 98 logical well-being via forgiveness might be 98  
 99 attained more gradually compared to gratitude. 99

100 In our laboratory, we recently compared grati- 100  
 101 tude with these two other positive psychological 101  
 102 interventions and a control condition. Online 102  
 103 interventions for gratitude, forgiveness, and hope 103  
 104 were developed and implemented daily over a 104  
 105 two-week period. Participants were randomly 105  
 106 assigned to one of four conditions—the grati- 106  
 107 tude, forgiveness, hope, or control conditions. 107

1 In the gratitude condition, participants were  
 2 asked to focus and engage grateful thoughts and  
 3 feelings toward multiple gifts received each day.  
 4 In the forgiveness condition the participants  
 5 were asked to engage in benefit finding and for-  
 6 giving thoughts toward an offender each day. In  
 7 the hope condition, participants were asked each  
 8 day to write about a goal that they hope to pursue  
 9 in the future. The control group was asked to list  
 10 activities attended each day over the two weeks.  
 11 The four groups also reported their daily emo-  
 12 tions and a daily checklist of spiritual, material-  
 13 istic, prosocial, and grateful activities.

14 Compared to men, women in all three inter-  
 15 vention conditions reported greater levels of  
 16 both trait and state gratitude. More specifically,  
 17 for the gratitude composite variable (i.e., appreci-  
 18 ative, thankful, grateful) across the 14 days,  
 19 gender differences were observed most strongly  
 20 in the gratitude intervention condition. Women  
 21 had higher levels of grateful emotions in the  
 22 gratitude condition, indicating that women were  
 23 more sensitive to the gratitude intervention.  
 24 Women also reported higher levels of positive  
 25 affect in the gratitude condition, compared to  
 26 men (Mishra & Emmons, 2009). These findings  
 27 resonate well with the gender differences find-  
 28 ings revealed in recent studies (see Kashdan et al  
 29 2009; Watkins et al., 2003). As discussed earlier,  
 30 the gender differences in gratitude may be  
 31 explained by the greater susceptibility of women  
 32 to extract benefits from gratitude because of its  
 33 utility as an interpersonal emotion. Examining  
 34 gender differences in gratitude may also lead to  
 35 further insight into the possibility of gender-  
 36 specific gratitude interventions that may applied  
 37 in future studies.

### 38 Conclusion

39 The science of gratitude is young. Even so, con-  
 40 siderable progress has already been made in  
 41 understanding how both state and trait gratitude  
 42 are conducive to well-being. Of the 10 hypothe-  
 43 ses advanced in this chapter, considerable empiri-  
 44 cal support was found for the majority of them.  
 45 Some of these have been the object of more  
 46 research than others, so it may be premature  
 47 to suggest that a comprehensive evaluation of  
 48 each has been accomplished. One conclusion that  
 49 we can draw with confidence is that relation  
 50 between gratitude and well-being is multiply  
 51 determined. In particular, we found considerable  
 52 evidence that gratitude builds social resources by

strengthening relationships and promoting 53  
 prosocial actions. It is also likely that these 10 54  
 hypotheses do not exhaust the possible ways 55  
 in which gratitude impacts well-being, and 56  
 future research will undoubtedly uncover addi- 57  
 tional mechanisms. Toward that end, we offered 58  
 some suggestions for the design of future studies 59  
 that will hopefully continue to illuminate the 60  
 richness and complexity of this social emotion 61  
 and optimize the practice of gratitude for pro- 62  
 moting harmonious intrapsychic and interper- 63  
 sonal functioning. 64

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