
Attachment, caregiving, and volunteering: Placing volunteerism in an attachment-theoretical framework

OMRI GILLATH,^a PHILLIP R. SHAVER,^a MARIO MIKULINCER,^b RACHEL E. NITZBERG,^a AYELET EREZ,^c AND MARINUS H. VAN IJZENDOORN^c

^a*University of California, Davis;* ^b*Bar-Ilan University, Israel;* ^c*Leiden University, The Netherlands*

Abstract

Recent studies based on attachment theory demonstrate that dispositional and experimentally manipulated attachment security facilitate cognitive openness and empathy, strengthen self-transcendent values, and foster tolerance of out-group members, suggesting an effect of one behavioral system, attachment, on another, caregiving. Here we report 2 studies conducted in 3 different countries (Israel, the Netherlands, and the United States) to determine whether the 2 dimensions of attachment insecurity—*anxiety and avoidance*—are related to real-world altruistic volunteering. In both studies and across the 3 locations, avoidant attachment was related to volunteering less and having less altruistic and exploration-oriented motives for volunteering. Anxious attachment was related to self-enhancing motives for volunteering. Additional results suggested that volunteering ameliorates the interpersonal problems of individuals high in anxiety and that volunteering has more beneficial effects if it is done for altruistic reasons. Future directions for experimental research on this topic are outlined.

Social scientists have expended a great deal of time, energy, and brainpower documenting human beings' proclivities for selfishness, prejudice, aggression, and violence. Along the way, as a countertheme, some (e.g., Batson, 1991; De Waal, 1996; Schroeder, Penner, Dovidio, & Piliavin, 1995) have focused on virtues such as empathy, compassion, altruism, and other forms of prosocial emotion and behavior. In recent years, investigators (e.g., Clary et al., 1998; see Penner, 2002, for a

review) have begun to study the predispositions, motives, and benefits involved in helping others and have looked beyond single altruistic acts (such as helping in an emergency) to sustained prosocial activities. Among these sustained prosocial involvements are altruistic volunteer activities such as teaching, reading to poor children, running errands for homebound elderly people, and regularly donating blood.

Volunteerism has been defined as long-term, planned prosocial behavior, especially behavior intended to benefit strangers (Penner, 2002). Scores of studies have dealt with volunteerism (e.g., Choi, 2003; Snyder & Clary, 2004), but to date, there have been relatively few theoretical analyses linking volunteerism to broad psychological theories (see Penner; Snyder, Clary, & Stukas, 2000, for preliminary efforts). The purpose of the present article is to conceptualize altruism, including its manifestations in volunteerism, in terms of Bowlby and

Omri Gillath and Phillip R. Shaver, Department of Psychology, University of California, Davis; Mario Mikulincer, Department of Psychology, Bar-Ilan University, Ramat Gan, Israel; Rachel E. Nitzberg, Department of Psychology, University of California, Davis; Ayelet Erez and Marinus H. van IJzendoorn, Center for Child and Family Studies, Leiden University, Leiden, the Netherlands.

Preparation of this article was facilitated by a grant from the Fetzer Institute.

Correspondence should be addressed to Omri Gillath, University of California, Davis, Department of Psychology, Davis, CA 95616-8686, e-mail: ogillath@ucdavis.edu.

Ainsworth's attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969/1982), and in so doing to uncover some of the psychological mechanisms underlying helping behavior and other forms of prosocial and virtuous behavior (McCullough & Snyder, 2000).

Attachment theory and research

According to attachment theory (e.g., Bowlby, 1969/1982), human beings are innately equipped with attachment and caregiving behavioral systems, among other important behavioral systems (e.g., exploration, sexual mating) because, during evolution, becoming emotionally attached to caregivers (e.g., parents) and providing care for dependent or injured individuals (e.g., infants, injured family members) enhanced inclusive fitness. As Bowlby used the term, a *behavioral system* is a species-universal, innate neural program that organizes an individual's behavior in ways that serve an important survival or reproductive function (Belsky, 1999). Each behavioral system governs the choice, activation, and termination of particular kinds of behavioral sequences. According to Bowlby, the function of the attachment behavioral system is to protect a person from danger by assuring that he or she maintains proximity to caring and supportive others (*attachment figures*). The function of the caregiving system is to respond to requests for help and provide protection, support, and relief in times of adversity. Its operation is most evident in the emotional and behavioral reactions of parents to their young offspring's signals of need or distress, but it is also considered to be the locus and foundation of empathy and compassion in all situations where one person reacts to another person's pain, need, or distress.

The attachment system is especially apparent during the first years of life, but it continues to be important across the life span. Its parameters are gradually shaped and altered by social experiences with attachment figures, resulting eventually in fairly stable individual differences in mental representations of past attachment experiences and in a concomitant *attachment style*—a systematic pattern of relational expectations, emotions, and behaviors

that results from a particular attachment history (Fraley & Shaver, 2000). Research, beginning with Ainsworth et al. (1978) and continuing through recent studies by social and personality psychologists (reviewed by Mikulincer & Shaver, 2003), indicates that individual differences in attachment style can be measured along two orthogonal dimensions, attachment-related *anxiety* and *avoidance* (Brennan, Clark, & Shaver, 1998). A person's position on the anxiety (or anxious attachment) dimension indicates the degree to which he or she worries that a partner will not be available and responsive in times of need. A person's position on the avoidance dimension indicates the extent to which he or she distrusts relationship partners' goodwill and strives to maintain behavioral independence and emotional distance from partners. People who score low on these two dimensions are said to be secure or to have a secure attachment style.

Attachment and caregiving

Since the mid-1980s, scores of studies have shown that a person's attachment style, assessed with fairly simple, two-dimensional self-report measures, is a powerful predictor of various psychological phenomena including self- and social schemas, self-regulation of stress and emotion, the quality of relationships with romantic or marital partners, sexual motivation, and reactions to relationship breakup or loss (Mikulincer & Shaver, 2003). Attachment security (i.e., relatively low scores on the avoidance and anxiety dimensions) is related to positive conceptions of self and others, curiosity and interest in exploration, cognitive openness and flexibility, mental health, and relationship satisfaction (see Mikulincer & Shaver, 2003, for a review). Of special interest here, security has also been associated with empathy, in children as young as 2 or 3 years of age (Kestenbaum, Farber, & Sroufe, 1989; van der Mark, van IJzendoorn, & Bakermans-Kranenburg, 2002) and in adults (Mikulincer et al., 2001). It has also been associated with sensitive and responsive caregiving toward romantic or marital partners (e.g., B. C. Feeney & Collins, 2001) and greater tolerance of out-group members (Mikulincer & Shaver, 2001).

Attachment researchers view the association between attachment security and responsive caregiving as an example of the effects of one behavioral system, attachment, on another, caregiving (George & Solomon, 1999). This kind of effect was demonstrated first not with respect to caregiving but with respect to another behavioral system, exploration. Ainsworth et al. (1978) showed that a child's exploration system is inhibited or distorted by the need for attachment security in strange or threatening situations. Secure children know that if they encounter difficulties, their security-providing attachment figure will be available to help. Over time, this sense of security supports exploration even when an attachment figure is not immediately available. (See Mikulincer & Shaver, 2004, for an extension to adults of this notion of internalized resources related to attachment security.) Anxious children are so preoccupied with parental availability and responsiveness that they explore less confidently and coherently. Avoidant children use exploration as a distraction from anxiety, and hence play in a rather obsessive, uncreative way (Ainsworth et al.).

We (Gillath, Shaver, & Mikulincer, 2005) and others (e.g., B. C. Feeney & Collins, 2001) have argued that the natural tendency to provide care to dependent or needy others can also be suppressed or overridden by attachment insecurity (Kunze & Shaver, 1994). Under conditions of threat, adults often think of turning to others for support and comfort rather than thinking first of providing care to others. At such times, they are likely to be so focused on their own vulnerability that they lack the mental resources necessary to attend compassionately to other people's need for help. Only when relief is attained and a sense of attachment security is restored can a person easily direct attention and energy to other behavioral systems. Only a relatively secure person can easily perceive others not only as sources of security and support but also as human beings who themselves need and deserve support. An insecure person may have difficulty finding the mental resources necessary to provide sensitive and effective care to others.

From the perspective of attachment theory (as well as that of Batson, 1991, who con-

ducted pioneering research on empathy and altruism), the caregiving system is inherently altruistic (van der Mark et al., 2002). It was presumably selected over the course of human evolution because it contributed to the alleviation of others' distress and thereby contributed to their survival and reproductive success, although originally these "others" would have been mainly children, siblings, and tribe members with whom a person shared genes (Hamilton, 1964). Just as attachment-related motives, once they became a universal part of the human psychological repertoire, could affect a broad variety of social processes (as reviewed by Mikulincer & Shaver, 2003), caregiving motives can also be extended to anyone who is suffering or in need, either by natural generalization or deliberate ethical training (e.g., Hopkins, 2001). From this theoretical perspective, it is as reasonable to wonder what interferes with the innate tendency to provide care to someone who expresses need as it is to ask what special interventions are necessary to encourage empathy and altruism. Attachment theory suggests that attachment-related insecurities impede altruism, whereas attachment security makes empathy and altruism more likely.

Recently, researchers have begun to examine associations between the attachment and caregiving systems and the combined effects of these systems on prosocial feelings and behaviors. For example, Mikulincer and Shaver (2001) showed that subliminal or supraliminal enhancement of people's sense of security increased their willingness to interact with threatening out-group members, and that higher scores on the attachment anxiety dimension were negatively associated with this willingness. Mikulincer et al. (2001) and Mikulincer, Shaver, Gillath, Nitzberg (in press) found that contextual heightening of the sense of attachment security increased compassionate responses to others' suffering. The findings also revealed that higher scores on attachment avoidance were negatively associated with empathic reactions to others' suffering, including being willing to help a distressed person. Higher scores on the anxiety dimension were associated with personal distress in response to another's suffering but not with actual helping.

Anxiety appears to encourage self-preoccupation and a form of distress that, while aroused partly by empathy, fails to facilitate caregiving. In effect, people who score high on the attachment anxiety dimension are quick to occupy the role of needy person themselves, thereby disrupting effective compassion for others. In other recent studies (Mikulincer et al., 2003), experimentally engendered security increased the endorsement of two "self-transcendence values" (Schwartz, 1992), benevolence and universalism, which encourage caregiving. In these studies, higher scores on the avoidance dimension were negatively associated with endorsement of these values.

In studies conducted outside our research group, attachment insecurities have also been negatively related to the propensity for caregiving. For example, individuals who score high on anxiety or avoidance are less sensitive to their romantic partners' needs, report less cooperative caregiving, and spontaneously offer less comfort and reassurance to their distressed romantic partners (e.g., J. A. Feeney, 1996; B. C. Feeney & Collins, 2001; J. A. Feeney & Hohaus, 2001; Simpson, Rholes, & Nelligan, 1992). Priel, Mitrany, and Shahar (1998) found that high school students who are high on anxiety or avoidance were perceived by peers as less supportive than their secure classmates. In addition, insecurely attached students were less likely than secure students to engage in reciprocally supportive relationships. Soerensen, Webster, and Roggman (2002) found that lower scores on the anxiety and avoidance dimensions predicted a person's planning to care for older relatives, suggesting that secure adults are care oriented even before care is explicitly called for.

Volunteerism

Although the findings discussed so far consistently reveal an association between attachment security and compassionate reactions to others' needs, researchers have not examined the kinds of real-world caring for strangers that might also engage the caregiving behavioral system. Moreover, researchers who study volunteerism and some of the personality characteristics related to it (e.g., Penner, 2002) have

not focused on attachment style. There is, however, a substantial body of work (e.g., Clary et al., 1998; Omoto & Snyder, 1995; Penner & Finkelstein, 1998) suggesting that personal motives play an important role in volunteerism. In a longitudinal study, for example, Penner and Finkelstein measured the motives of people who volunteered to help AIDS victims over an extended period of time. They found that motives associated with having and expressing altruistic values correlated significantly with both the number of AIDS-related activities a person was involved in and the amount of time he or she devoted to such activities. Clary and Orenstein (1991) and Davis, Hall, and Meyer (2003) obtained similar results in studies of other kinds of volunteer activities.

In the studies reported in the present article, we assessed two aspects of volunteering, the range of activities engaged in and the time devoted to them, and six motives for volunteering (Clary et al., 1998), including four that might be considered self-serving (self-protection, self-enhancement, social approval, and career promotion), one that is altruistic (genuine concern for others), and one that is conceptually related to what Bowlby (1969/1982) called the exploration system (learning new things about oneself and the world). Since previous research suggests that anxiously attached individuals are especially preoccupied with their own worries about and wishes for security and that avoidant individuals are less empathic and less cognitively open (and in that sense, less exploration oriented), the range of motives covered by the Clary et al. (1998) scales provided a good opportunity to see whether and how much these two major attachment dimensions are associated with different motives for volunteering.

The distinction between volunteering for self-serving versus altruistic reasons is conceptually related to Batson's (1991) distinction between personal distress and empathy. Personal distress can promote helping for self-centered reasons (e.g., to repair one's own mood, to boost one's self-esteem). Mikulincer et al. (2001) found that this self-serving orientation was related to high scores on the attachment anxiety dimension. Empathy moves a person beyond selfish motives to the wish to

meet the needs of another person. Mikulincer et al. (2001, 2003) found that this altruistic orientation was inversely related to the avoidance dimension.

Hypotheses

Based on this line of reasoning, we hypothesized that individual differences in attachment anxiety and avoidance would help to explain involvement or lack of involvement in volunteer activities and the motives for volunteering. Specifically, attachment avoidance, which has already been associated with lack of empathic, helping responses to people in distress, low scores on measures of self-transcendent values, and cognitive closure rather than openness (see Mikulincer & Shaver, 2003, for a review), was expected to be associated with lower involvement in volunteering and less altruistic and exploration-oriented reasons for volunteering. Attachment anxiety, which has already been associated with personal distress while witnessing others' distress, self-related worries, and excessive reassurance seeking (see Mikulincer & Shaver, 2003, for a review), would also be associated with more self-soothing or self-enhancing reasons for volunteering. That is, we predicted that anxiously attached individuals would be likely to engage in volunteer activities so as to be socially accepted and appreciated or to feel better about themselves. Because people who are high in anxiety might be more willing than less anxious people to volunteer for these kinds of reasons, but might be less willing to volunteer for altruistic reasons, we made no predictions about the amount of volunteering people high in anxiety would engage in overall.

Another issue examined in a preliminary way in the present article is the possibility that engaging in caregiving activities can prove a person's sense of social well-being. In attachment-theoretical terms, this possibility is interpreted as a positive effect of the caregiving system on the attachment system. A person who has negative models of self and others—mental representations associated with attachment insecurity (Bartholomew & Horowitz, 1991)—can, through helping others, feel more positive about himself or herself and about the

value and deservingness of others. Although, as explained above, insecure attachment generally militates against caregiving, if caregiving is nevertheless undertaken, it may have positive effects on the caregiver, including an improvement in the caregiver's social well-being.

Compatible with these ideas, research has shown that volunteering can benefit the help provider as well as the help receiver (e.g., Musick, Herzog, & House, 1999; Oman, Thoresen, & McMahon, 1999). Benefits of helping include better mental and physical health, greater life satisfaction, larger social networks, and a further expansion of altruistic behavior (e.g., Armstrong, Korba, & Emard, 1995; Morrow-Howell, Hinterlong, Rozario, & Tang, 2003; Oman et al., 1999). Based on such findings and the possibility that positive caregiving might feed back favorably on the attachment system, just as the attachment system can promote caregiving, we predicted that volunteering would result in lower levels of interpersonal problems, especially for anxiously attached individuals who tend to seek social acceptance and appreciation. It seemed likely that, just as we expected individuals high in anxiety to be motivated partly by personal distress rather than other-focused altruism, they would also benefit from taking part in volunteer activities, which might increase their sense of being worthy, efficacious, and appreciated, hence they would be less lonely and less troubled by interpersonal problems. This beneficial effect of volunteerism was expected to be less notable among highly avoidant persons because they are not particularly concerned with social acceptance and generally try to maintain a positive self-view without engaging in satisfying interactions with needy others (Mikulincer & Shaver, 2003).

To summarize, in the two studies reported here, we expected attachment anxiety to be associated with self-comforting or security-enhancing motives for volunteering, such as volunteering in order to feel included in a group, have higher self-esteem, and feel less troubled by interpersonal problems. We expected attachment avoidance to be related to lower involvement in volunteer activities and less generous and exploration-oriented motives for volunteering. We also expected

engagement in volunteer activities to be associated with lower scores on measures of interpersonal problems (e.g., loneliness, hostility, and lack of assertiveness), especially among individuals high in anxiety, as a function of volunteering.

Finally, we were interested in determining whether the predicted findings would generalize across differences in societal and cultural norms. Attachment theory was intended to be a general theory, heavily rooted in conceptual and empirical literatures on primate ethology. There is nothing in the theory that leads to the prediction of cultural differences, and at least in the case of infant-to-parent attachments, research has turned up much more support for cross-cultural universality than for cultural differences (van IJzendoorn & Sagi, 1999). Nevertheless, there are a few published studies suggesting cross-cultural differences in either caregiving behavior or links between caregiver sensitivity and attachment style (Carlson & Harwood, 2003; Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000), so it seemed important to consider the cross-national generalizability of our own findings. We decided to conduct the studies reported here in our three countries: Israel, the Netherlands, and the United States. Although these are all modern, “western” societies, selected mainly on the basis of familiarity and convenience, they do differ in numerous ways (e.g., size, religiosity, threat of military violence, political values) while offering a similar range of volunteer activities for college-aged individuals, allowing us to use the same volunteerism measures in all three countries. If the findings are similar across these three societies, the relations between attachment dimensions and volunteerism variables are at least not unique to a single location. Further research is still necessary to see whether the findings generalize beyond these three societies.

Study 1

In Study 1, we examined the association between attachment dimensions and various aspects of volunteerism in three different countries: Israel, the Netherlands, and the United States. The main purpose of Study 1

was to determine whether or not volunteering, viewed as a form of caregiving, is related to the two dimensions of attachment style, anxiety and avoidance.

Method

Participants

Study 1 included three samples: (a) an American group consisting of 129 undergraduates at the University of California, Davis (66 women and 63 men, ranging in age from 19 to 29 years, *Mdn* = 21), (b) a Dutch sample of 141 undergraduates from Leiden University (100 women and 41 men, ranging in age from 19 to 34 years, *Mdn* = 22), and (c) an Israeli sample of 104 undergraduates from Bar-Ilan University (55 women and 49 men, ranging in age from 19 to 35 years, *Mdn* = 23). In neither this study nor Study 2 were there any significant gender differences on any of the measured variables or any significant interactions involving gender. Therefore, the results from both studies are presented without regard to gender.

The American sample consisted of 115 single and 14 married individuals; the Dutch sample, 130 single and 11 married individuals; and the Israeli sample, 91 single and 13 married individuals. The three samples were roughly equal in terms of father and mother’s education levels. The samples differed somewhat in age, with the Israeli sample being the oldest, perhaps mainly because most undergraduates in Israel begin their university studies only after completing compulsory military service (women at the age of 20 years, men at the age of 21 years).

Materials and procedure

Participants in all three samples received the same battery of questionnaires (each sample in its own language, English, Dutch, or Hebrew). Considerable care was taken in translating and back-translating each version of the questionnaire until all three versions seemed maximally similar. The questionnaire battery included scales assessing the attachment dimensions, volunteerism, and reasons for volunteering. Participants completed the

battery in small groups of 5–15 participants. The order of the questionnaires was randomized across participants.

Attachment orientation was assessed with the Experiences in Close Relationships Scale (ECR; Brennan et al., 1998), a 36-item self-report instrument designed to measure attachment-related anxiety and avoidance. Participants were asked to think about their close relationships, without focusing on a specific partner, and rate the extent to which each item accurately described their feelings in close relationships, using a 7-point scale ranging from *not at all* (1) to *very much* (7). Eighteen items tapped attachment anxiety (e.g., “I worry about being abandoned,” “I worry a lot about my relationships”), and 18 items tapped avoidance (e.g., “I prefer not to show a partner how I feel deep down,” “I get uncomfortable when a romantic partner wants to be very close”). The reliability and construct validity of the two subscales have been demonstrated in a wide variety of samples and in different languages (e.g., Brennan et al.; Mikulincer & Florian, 2000).

In our samples, Cronbach’s alphas were acceptable for the 18 anxiety items (.92 for the American sample, .89 for the Dutch sample, and .87 for the Israeli sample) and the 18 avoidance items (.94 for the American sample, .90 for the Dutch sample, and .92 for the Israeli sample). Two scores were computed by averaging items on each subscale after appropriately reverse scoring some of the items. The anxiety and avoidance scores were not significantly associated in any of the three samples (r s ranged from .06 to .11), supporting Brennan et al.’s (1998) and Bartholomew and Horowitz’s (1991) claims about the orthogonality of the anxiety and avoidance dimensions.

Volunteerism was assessed with a 26-item scale, constructed especially for this project, listing different volunteer activities (e.g., teaching, reading, counseling troubled people, providing health care to the sick) and tapping the number of activities a participant volunteered for and the time he or she devoted to each of them. Each item named a particular volunteer activity, and participants were asked to indicate whether or not they had engaged in it during the past year, and if so, how much

time they had devoted to it. The time assessments were made on a 7-point scale ranging from *once a year* (1) to *almost every day* (7). For each participant, we computed two total scores: (a) number of volunteer activities—the number of activities a participant marked in the list and (b) time devoted to volunteer activities—the averaged time assessments across all the activities a participant marked. (The scale and some descriptive information for the three samples are shown in the Appendix.)¹

Scale development consisted of the following steps. In the first step, 30 American and 30 Israeli undergraduates were asked to list and describe any philanthropic volunteer activities in which they had engaged during the past few years. They were asked to list as many activities as they actually engaged in, without regard to the time devoted to each one. These descriptions were content analyzed and used to compile a list of 98 nonredundant activities reported by more than 5% of the participants in each sample. This list did not constitute a comprehensive list of all possible volunteer activities, but it did include the most common ones reported by American and Israeli undergraduates.

In the next step of measure development, two judges (one American and one Israeli psychology graduate student) independently divided the list into nine categories (community activities, pro bono professional work, activities in hospitals, shelters, religious organizations, counseling centers, nonprofit organizations, government, and educational settings). The judges agreed on more than 95% of the cases, reflecting high interjudge reliability. They then chose from each category the three items that were most frequently reported in both the American and Israeli samples. Only in one category was it impossible to find three items that were frequently reported in the two

1. Across the two studies and three samples within each study, only 21 participants (3.1%) failed to mark any of the 26 volunteer activities—that is, either had not volunteered at all in the previous year or simply skipped that part of the questionnaire (4 participants from the American samples, 10 from the Dutch samples, and 7 from the Israeli samples). Excluding these participants from the statistical analyses did not notably change the results, so we left them in.

samples. As a result, this category included only two items, yielding a final list of volunteer activities that included 26 items. Later, the list was translated into Dutch, and 20 Dutch undergraduates were asked about the extent to which the listed activities were representative of the activities that Dutch undergraduates tend to volunteer for. All 26 items were considered highly representative of undergraduates' volunteer activities, so the same items were used in all three countries.

To assess motives for volunteering, participants completed the Volunteer Functions Inventory (VFI; Clary et al., 1998), which consists of 30 items tapping six major motives or reasons for volunteering (five items per motive). One scale taps altruistic reasons: *Values*—expressing values related to altruistic and humanitarian concern for others (e.g., “I feel compassion toward people in need,” “I am genuinely concerned about the particular group I am serving”). Another scale taps exploration-related reasons for volunteering (e.g., gaining new learning experiences and exercising one's skills and abilities) and is called *Understanding*. Sample items include: “Volunteering lets me learn things through direct, hands-on experience” and “Volunteering allows me to gain a new perspective on things.” The other four scales assess what we consider to be more self-soothing or self-serving motives for volunteering: *Career*—enhancing one's own career opportunities (e.g., “I can make new contacts that might help my business or career,” “Volunteering can help me to get my foot in the door at a place where I would like to work”); *Self-Enhancement* (which Clary et al., 1998, called “Enhancement”)—enhancing one's own self-esteem (e.g., “Volunteering makes me feel important,” “Volunteering makes me feel better about myself”); *Social*—conforming to social norms and fitting in with friends (e.g., “People I'm close to want me to volunteer”); and *Self-Protection* (which Clary et al., 1998, called “Protective”)—escaping from negative feelings (e.g., “Volunteering is a good escape from my own troubles”). Participants were asked to think about all of their volunteer activities, if they engaged in more than one, and then to read each VFI item and rate how important this reason for volunteering generally was to

them. Ratings were made on a 7-point scale ranging from *not at all an important/accurate reason* (1) to *a very important/accurate reason* (7).

Previous studies (e.g., Allison, Okun, & Dutridge, 2002; Clary et al., 1998) have shown that the VFI is reliable and have corroborated its six-factor structure. In our Study 1 samples, Cronbach's alphas for the six VFI scales were adequately high (ranging from .82 to .89 in the American sample, .76 to .83 in the Dutch sample, and .83 to .91 in the Israeli sample). We therefore computed six scores for each participant by averaging items on each of the six motive scales. Higher scores indicate greater importance or accuracy in accounting for a person's volunteer activity. Across the three samples, there were significant correlations among the VFI scales, with those between *Values* and *Understanding* ranging from .57 to .63, and all of the others ranging from .26 to .48. Since none of the correlations approached the alpha values of the scales, we analyzed the scales separately rather than combining them.

Interestingly, no significant association was found between the six VFI scores and the two total volunteerism scores (number of volunteer activities and time devoted to volunteer activities) in any of the three samples. This finding implies that variations in motives for volunteering are not a reflection of a person's engagement in volunteer activities and that, at least in our samples, these two kinds of variables are not confounded. At a conceptual level, it seems that engagement in volunteer activities is not due to a single altruistic or self-serving motive but can occur for a variety of reasons.

Results and Discussion

Preliminary analyses

Before examining the contribution of attachment dimensions to volunteerism in each of the three samples, we examined differences between the samples. A multivariate analysis of variance (MANOVA) revealed a significant difference between the three samples, $F(20, 558) = 6.41, p < .01$, across the set of variables under study. Univariate analyses of variance (ANOVAs) revealed significant differences

only in the number of volunteer activities, $F(2, 288) = 7.26, p < .01$, and two of the motives for volunteering—Understanding, $F(2, 288) = 5.14, p < .01$, and Career, $F(2, 288) = 15.27, p < .01$. No significant cross-national differences were found for the two attachment dimensions.

Scheffé post hoc tests revealed the following significant differences. First, American and Israeli participants reported being engaged in more volunteer activities ($M = 6.50, M = 6.22$) than Dutch participants ($M = 4.46$). Second, American participants attached more importance to understanding as a reason for volunteering ($M = 5.08$) than Dutch participants ($M = 4.41$). The mean for the Israeli participants ($M = 4.78$) was in the middle of the other two means. Third, American participants attached more importance to career promotion as a reason for volunteering ($M = 5.05$) than Israeli and Dutch participants ($M = 3.99, M = 4.09$).

The association between attachment dimensions and volunteerism

To determine the unique contributions of attachment dimensions to the volunteerism variables, we conducted a series of hierarchical regression analyses for each sample. In these regressions, the number of volunteer activities a person reported, the time he or she devoted to these activities, and the six VFI scores were the dependent variables. In the first step of each regression analysis, we entered attachment anxiety and attachment avoidance as predictors (after centering these variables). In the second step, we added the interaction between anxiety and avoidance (the product term) as another predictor.

The regressions yielded similar findings in all three samples. With the exception of career advancement as a reason for volunteering, attachment scores made significant unique contributions to volunteerism variables and explained between 8.5% and 15.2% of the variance in the Israeli sample, between 7.8% and 29.6% in the Dutch sample, and between 7.1% and 17.5% in the American sample. Since none of the interactions between anxiety and avoidance were significant, we will focus here

on the unique, independent contributions of attachment anxiety and attachment avoidance to accounting for variance in volunteerism. Table 1 displays Pearson correlations between each of the attachment dimensions and the volunteerism variables, along with the standardized regression coefficients (β s) for each attachment dimension.

In all three samples, attachment avoidance was significantly associated with, and made significant unique contributions to explaining, the number of volunteer activities engaged in, the time devoted to them, and the endorsement of altruistic values and understanding (exploration) as reasons for volunteering (see Table 1). The higher the avoidance score, the fewer the activities participants volunteered for, the less the time they devoted to these activities, and the weaker their endorsement of altruistic values and understanding as reasons for volunteering. All three findings—regarding less volunteering and less motivation based on exploration-oriented and altruistic values as function of avoidance—were as predicted.

In all three samples, attachment anxiety was significantly associated with, and made a significant unique contribution to, self-centered reasons for volunteering, except for career enhancement. The higher the attachment anxiety score, the higher the endorsement of self-enhancement, social, and self-protection reasons for volunteering (see Table 1). Attachment anxiety was not significantly associated with, and did not make a significant unique contribution to, the number of volunteer activities or the time devoted to such activities in the American and Dutch samples. Thus, although individuals high in anxiety endorsed various self-enhancing reasons for volunteering, their degree of volunteering was not greater than that of less anxious individuals among American and Dutch students. In the Israeli sample, however, attachment anxiety made a significant unique contribution to the number of volunteer activities, with higher attachment anxiety being associated with volunteering for more activities.

Conclusions

Overall, the results of Study 1 were in line with our hypotheses. Whereas avoidant attachment

Table 1. Pearson correlations and standardized regression coefficients (β) showing associations between attachment dimensions and volunteerism variables (Study 1)

| Measures | Attachment anxiety | | | Attachment avoidance | | |
|--------------------------------------|--------------------|-----------------|--------|----------------------|-----------------|---------|
| | USA | The Netherlands | Israel | USA | The Netherlands | Israel |
| Number of philanthropic activities | | | | | | |
| <i>R</i> | -0.01 | 0.03 | 0.19* | -0.37** | -0.35** | -0.38** |
| <i>B</i> | 0.08 | 0.07 | 0.20* | -0.37** | -0.31** | -0.38** |
| Time devoted to volunteer activities | | | | | | |
| <i>R</i> | -0.02 | -0.08 | -0.01 | -0.36** | -0.32** | -0.36** |
| <i>B</i> | -0.05 | -0.05 | 0.05 | -0.32** | -0.24* | -0.36** |
| Other-regarding values | | | | | | |
| <i>R</i> | -0.11 | 0.01 | 0.01 | -0.35** | -0.33** | -0.48** |
| <i>B</i> | -0.05 | 0.03 | 0.05 | -0.29** | -0.31** | -0.47** |
| Understanding | | | | | | |
| <i>R</i> | -0.04 | 0.04 | -0.01 | -0.29** | -0.34** | -0.40** |
| <i>B</i> | -0.01 | 0.08 | 0.03 | -0.26** | -0.27** | -0.39** |
| Career | | | | | | |
| <i>R</i> | 0.02 | 0.13 | 0.13 | 0.08 | -0.19 | -0.06 |
| <i>B</i> | 0.02 | 0.11 | 0.14 | 0.09 | -0.14 | -0.07 |
| Self-enhancement | | | | | | |
| <i>R</i> | 0.28** | 0.43** | 0.42** | -0.02 | -0.05 | -0.06 |
| <i>B</i> | 0.20* | 0.37** | 0.41** | -0.14 | -0.03 | -0.15 |
| Social | | | | | | |
| <i>R</i> | 0.31** | 0.27** | 0.32** | 0.09 | 0.08 | 0.06 |
| <i>B</i> | 0.27** | 0.25* | 0.31** | 0.01 | 0.03 | 0.01 |
| Self-protection | | | | | | |
| <i>R</i> | 0.33** | 0.37** | 0.34** | -0.14 | 0.11 | -0.01 |
| <i>B</i> | 0.31** | 0.32** | 0.35** | -0.15 | 0.07 | -0.04 |

* $p < .05$. ** $p < .01$.

was associated with less engagement in volunteer activities and lower endorsement of altruistic and exploration-oriented reasons for volunteering, anxious attachment was associated with more self-soothing and self-promoting reasons for volunteering. While there were a few cross-national differences (see General Discussion), the general pattern of findings was similar across the samples. Therefore, we were encouraged to replicate and extend the study in the same three societies.

Study 2

In Study 2, we pursued two main goals. The first was to evaluate the replicability of Study

1's findings in a new set of samples. The second goal was to explore in a preliminary way the possibility that engagement in volunteer activities is beneficial for insecure individuals, especially those with an anxious attachment orientation. That is, in the language of attachment theory, we examined the possibility that engagement in caregiving activities weakens the link between anxious attachment and interpersonal problems. This might occur for at least two reasons: (a) to the extent that anxious individuals volunteer to feel more efficacious, valuable, or appreciated, volunteering might actually have these effects, resulting in decreased self-assessments of interpersonal problems and (b) focusing on

caregiving rather than one's own needs might result in a slightly changed self-conception, leaving a person with more images of self as a loving, helpful person rather than a needy person. We thought this effect would be especially interesting if it occurred most strongly when an insecure person engaged in volunteer activities for altruistic, other-valuing reasons, because it might imply that caring for others as an expression of loving-kindness, rather than as an expression of selfish needs, is especially beneficial, a view often advocated by religious writers (e.g., His Holiness the Dalai Lama, 1999). If initial support for this idea was obtained, we could then look into it more thoroughly in subsequent studies.

Previous research has consistently shown that attachment anxiety and avoidance are associated with higher levels of loneliness and interpersonal problems (e.g., Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987; Mickelson, Kessler, & Shaver, 1997). We were interested in the possibility that participating in volunteer activities might weaken this connection due to the satisfying social experiences, increased sense of personal value and self-efficacy, and receipt of expressions of gratitude that can accompany volunteering to help others. In Study 2, new samples in Israel, the Netherlands, and the United States completed the scales used in Study 1 (the ECR, our 26-item measure of volunteer activities, and the VFI) as well as the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980) and the Inventory of Interpersonal Problems (IIP), a well-validated measure of relational problems such as being socially avoidant, lacking in assertiveness, and being exploited by others (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988).

Method

Participants

Study 2 involved three samples: (a) an American sample of 106 undergraduates at the University of California, Davis (77 women and 29 men, ranging in age from 19 to 32 years, *Mdn* = 21), (b) a Dutch sample of 140 under-

graduates from Leiden University (96 women and 44 men, ranging in age from 19 to 35 years, *Mdn* = 23), and (c) an Israeli sample of 100 undergraduates from Bar-Ilan University (68 women and 32 men, ranging in age from 19 to 32 years, *Mdn* = 23). The American sample consisted of 94 single and 12 married participants; the Dutch sample, 128 single and 12 married participants, and the Israeli sample, 88 single and 12 married participants.

Materials and procedure

Participants completed a battery of self-report questionnaires (each sample in its own language, English, Dutch, or Hebrew) in small groups of 5–15 participants. The order of the questionnaires was randomized across participants.

In Study 2, reliability analyses for the ECR, volunteerism, and VFI scales produced results similar to those of Study 1. With regard to the ECR, Cronbach's alphas were high for the 18 anxiety items (.84 for the Israeli sample, .88 for the Dutch sample, and .92 for the American sample) and the 18 avoidance items (.91, .92, and .95, respectively). As expected theoretically and as found in Study 1, the two dimensions were not significantly correlated in any of the three samples (*rs* ranged from .09 to .14). With regard to our volunteerism scale, we computed two scores: (a) number of volunteer activities—the number of activities a participant had engaged in during the past year and (b) time devoted to volunteer activities—the average frequency rating across all of the activities engaged in during the past year. Cronbach's alphas for the time ratings were adequate in all three samples (.75, .77, and .72). With regard to the VFI, Cronbach's alphas for the six motives for volunteering were adequate (ranging from .75 to .84 in the Israeli sample, .79 to .87 in the Dutch sample, and .83 to .90 in the American sample). The pattern of correlations between the six VFI subscales was highly similar to that observed in Study 1.

Participants also completed the 20-item UCLA Loneliness Scale (Russell et al., 1980). They were asked to indicate, using a 4-point scale (1 = *not at all*, 4 = *very often*), how often they experienced the feelings mentioned in the items. High scores indicate greater loneliness.

In our samples, Cronbach's alphas for the UCLA scale were high (.86 for the Israeli sample, .91 for the Dutch sample, and .92 for the American sample).

The 64-item IIP (Horowitz et al., 1988) taps interpersonal difficulties that people may have while interacting or attempting to interact with others. Difficulties are assessed with two kinds of items: those referring to "things that are hard for you to do" (e.g., "It is hard for me to say 'no' to other people") and those referring to "things that you do too much" (e.g., "I trust other people too much"). Participants were instructed as follows: "For each item, rate how much of a problem that item has been for you." Ratings were made on a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*).

The 64 IIP items form eight subscales (with eight items per scale), each tapping a specific category of interpersonal problems: domineering, vindictive, cold, socially avoidant, non-assertive, exploitable, overly nurturant, and intrusive. Previous studies have validated the 8-factor structure (e.g., Bartholomew & Horowitz, 1991; Horowitz et al., 1988). In our samples, coefficient alphas for the eight IIP subscales were high (ranging from .83 to .87 in the Israeli sample, .80 to .89 in the Dutch sample, and .83 to .91 in the American sample). An overall interpersonal problems score was also calculated by averaging all 64 items. Alphas for the overall score were .93 for the Israeli sample, .93 for the Dutch sample, and .92 for the American sample. To save space in the present article, we report results only for the overall score.² Pearson correlations yielded significant associations between the loneliness and the total IIP score; the *rs* ranged from .40 to .57, all *ps* < .01.

Results and Discussion

Preliminary analyses

Before examining associations between the attachment dimensions, volunteerism, and

interpersonal problems in each of the three samples, we examined differences between these samples on all the measures. A MANOVA revealed a significant difference between the three samples, $F(24, 622) = 8.93, p < .01$. As in Study 1, ANOVAs revealed significant differences only in the number of volunteer activities, $F(2, 322) = 19.39, p < .01$, and in two reasons for volunteering—Understanding, $F(2, 322) = 6.52, p < .01$, and Career, $F(2, 322) = 23.70, p < .01$. No significant cross-national differences were found in attachment, loneliness, or IIP scores. Scheffé tests revealed that American participants engaged in more volunteer activities ($M = 8.15$) than Dutch or Israeli participants ($M = 4.95, M = 5.52$). In addition, American participants attached more importance to understanding and career reasons for volunteering ($M = 5.25, M = 5.09$) than Dutch ($M = 4.63, M = 3.98$) or Israeli participants ($M = 4.68, M = 3.91$).

The association between attachment dimensions and volunteerism

Pearson correlations and hierarchical multiple regressions examining the contribution of attachment dimensions to the volunteerism variables replicated the findings of Study 1. Attachment scores made significant unique contributions to the volunteerism variables and explained between 6.3% and 27.4% of the variance in the Israeli sample, 4.7% and 20.8% in the Dutch sample, and 9.3% and 28.2% in the American sample. Because none of the interactions between anxiety and avoidance were significant in any of the samples, we focus here on the unique contributions of these variables.

In all three samples, avoidance was significantly associated with, and made a significant, unique negative contribution to, the number of volunteer activities, the time devoted to them, and the VFI Values and Understanding scores (see Table 2). The higher the avoidance score, the fewer the activities participants volunteered for, the less the time they devoted to these activities, and the weaker their endorsement of altruistic, other-regarding values and understanding as reasons for volunteering. In the American sample, higher avoidance was also

2. Results for the individual subscales are available from the authors on request.

Table 2. Pearson correlations and standardized regression coefficients (β) showing associations between attachment dimensions and volunteerism variables (Study 2)

| Volunteerism measures | Attachment anxiety | | | Attachment avoidance | | |
|--------------------------------------|--------------------|-----------------|--------|----------------------|-----------------|---------|
| | USA | The Netherlands | Israel | USA | The Netherlands | Israel |
| Number of philanthropic activities | | | | | | |
| <i>R</i> | 0.09 | -0.03 | -0.12 | -0.29** | -0.34** | -0.38** |
| <i>B</i> | 0.09 | -0.12 | -0.06 | -0.29** | -0.36** | -0.31** |
| Time devoted to volunteer activities | | | | | | |
| <i>R</i> | 0.03 | -0.03 | -0.08 | -0.33** | -0.40** | -0.30** |
| <i>B</i> | 0.03 | -0.04 | -0.08 | -0.33** | -0.35** | -0.30** |
| Other-regarding values | | | | | | |
| <i>R</i> | -0.12 | 0.04 | 0.05 | -0.34** | -0.42** | -0.48** |
| <i>B</i> | -0.13 | 0.12 | 0.11 | -0.34** | -0.45** | -0.51** |
| Understanding | | | | | | |
| <i>R</i> | -0.01 | 0.13 | 0.05 | -0.35** | -0.30** | -0.49** |
| <i>B</i> | -0.01 | 0.14 | 0.11 | -0.36** | -0.33** | -0.47** |
| Career | | | | | | |
| <i>R</i> | 0.01 | 0.20* | 0.21* | -0.32** | 0.11 | -0.09 |
| <i>B</i> | 0.01 | 0.19* | 0.25* | -0.32** | 0.07 | -0.14 |
| Self-enhancement | | | | | | |
| <i>R</i> | 0.44** | 0.43** | 0.39** | -0.10 | -0.04 | -0.09 |
| <i>B</i> | 0.44** | 0.46** | 0.43** | -0.09 | -0.04 | -0.11 |
| Social | | | | | | |
| <i>R</i> | 0.34** | 0.34** | 0.23* | -0.10 | -0.02 | -0.07 |
| <i>B</i> | 0.33** | 0.36** | 0.20* | -0.09 | -0.09 | -0.01 |
| Self-protection | | | | | | |
| <i>R</i> | 0.42** | 0.43** | 0.36** | -0.15 | 0.01 | -0.12 |
| <i>B</i> | 0.41** | 0.45** | 0.37** | -0.14 | -0.08 | -0.07 |

* $p < 0.05$. ** $p < 0.01$.

associated with weaker endorsement of career-related reasons for volunteering (see Table 2).

As can be seen in Table 2, attachment anxiety was significantly and positively associated with, and made a significant unique contribution to, self-serving reasons for volunteering. In all three samples, the higher the attachment anxiety, the stronger the endorsement of self-enhancement, social, and self-protective reasons for volunteering (see Table 2). In the Dutch and Israeli samples, greater attachment anxiety was also associated with stronger endorsement of career-related reasons (see Table 2), which was not the case in Study 1.

As in Study 1, across all three samples, anxiety was not significantly associated with, and did not make a significant unique contribution to, the number of volunteer activities or the time devoted to them.

Attachment dimensions, volunteerism, and interpersonal functioning

To examine the possibility that volunteer experiences might be particularly beneficial to individuals with insecure attachment styles, especially those who scored high on anxiety, we conducted a series of hierarchical regression

Table 3. The unique and interactive contributions (R^2 , β) of attachment dimensions and volunteerism variables to loneliness and interpersonal problems

| Effect | UCLA Loneliness | | | Overall IIP score | | |
|------------------------------------|-----------------|-----------------|---------|-------------------|-----------------|---------|
| | USA | The Netherlands | Israel | USA | The Netherlands | Israel |
| Step 1— R^2 (%) | 31.9 | 22.8 | 28.7 | 33.9 | 26.7 | 27.2 |
| Attachment anxiety | 0.27** | 0.27** | 0.24* | 0.34** | 0.34** | 0.33** |
| Attachment avoidance | 0.33** | 0.35** | 0.26** | 0.27** | 0.25** | 0.11 |
| Number of volunteer activities | -0.27** | -0.05 | -0.13 | -0.35** | -0.32** | -0.32** |
| Step 2— R^2 increase (%) | 7.6 | 1.2 | 8.4 | 6.6 | 11.8 | 10.2 |
| Anxiety \times Avoidance | 0.14 | 0.13 | 0.17 | 0.06 | 0.10 | 0.16 |
| Anxiety \times Volunteerism | -0.24* | -0.04 | -0.38** | -0.25* | -0.32** | -0.30** |
| Avoidance \times Volunteerism | -0.02 | 0.01 | 0.02 | 0.05 | 0.13 | -0.06 |
| Step 3— R^2 increase (%) | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.4 |
| Three-way interaction | -0.01 | 0.08 | 0.12 | 0.01 | 0.06 | -0.07 |
| Effects of anxiety for | | | | | | |
| -1 <i>SD</i> on volunteerism | 0.44** | 0.24* | 0.38** | 0.49** | 0.38** | 0.34** |
| +1 <i>SD</i> on volunteerism | 0.04 | 0.32** | 0.08 | 0.07 | 0.02 | 0.01 |
| Effects of volunteerism for | | | | | | |
| -1 <i>SD</i> on attachment anxiety | -0.06 | -0.13 | -0.05 | -0.11 | -0.02 | -0.11 |
| +1 <i>SD</i> on attachment anxiety | -0.48** | -0.14 | -0.39** | -0.44** | -0.37** | -0.39** |

* $p < 0.05$. ** $p < 0.01$.

analyses examining the unique and interactive contributions of attachment anxiety, avoidance, and number of volunteer activities a participant reported having engaged in during the past year to the UCLA Loneliness score and the overall IIP score. These regression analyses were conducted separately for each of the three samples (American, Dutch, and Israeli). The unique contributions of attachment anxiety, attachment avoidance, and number of volunteer activities were examined in the first step of the regressions (after centering these variables); the contributions of the two-way interactions (products) of anxiety and avoidance, anxiety and volunteerism, and avoidance and volunteerism were examined in the second step; and the contribution of the three-way interaction was examined in the third step. Table 3 displays the standardized regression

coefficients (betas) from these regression analyses.³

In all three samples, the overall regression model significantly predicted the UCLA Loneliness score: $F(7, 98) = 8.79, p < .01$, for the American sample; $F(7, 132) = 7.29, p < .01$, for the Dutch sample; and $F(7, 92) = 9.27, p < .01$, for the Israeli sample, accounting for between 24.1% and 39.7% of the variance in loneliness. As can be seen in Table 3, the main effects for attachment anxiety and attachment avoidance

3. Very similar findings were obtained when the average time devoted to volunteer activities or a composite score indicating a participant's total engagement in volunteer activities (computed by multiplying the number of activities engaged in by the average frequency rating across all of those activities) was entered into the hierarchical regressions. We, therefore, report only one set of analyses in the text.

were significant in all three samples. In line with previous studies (beginning with Hazan & Shaver, 1987), the greater the attachment anxiety or avoidance, the lonelier a person tended to be. The main effect of number of volunteer activities was significant in the American sample (see Table 3), with a higher number of volunteer activities being associated with lower levels of loneliness. This effect, while running weakly in the same direction in the Dutch and Israeli samples, was not statistically significant.

With regard to interaction effects, the regression analyses revealed a significant anxiety by volunteerism interaction in the American and Israeli samples, which added 8.4% and 7.6% to the explained variance (see Table 3). This interaction was not significant in the Dutch sample. No other interactions were significant. As can be seen in Table 3, the nature of the significant interaction was similar in the American and Israeli samples. First, attachment anxiety was significantly associated with higher loneliness scores only when participants reported having engaged in relatively few volunteer activities (1 *SD* below the volunteerism mean). However, when participants reported having engaged in a relatively high number of volunteer activities (1 *SD* above the mean), the association between attachment anxiety and loneliness, which had been documented in previous studies, was not significant. Second, the number of volunteer activities was significantly associated with lower loneliness scores only among highly anxious people (1 *SD* above the anxiety mean) and not when attachment anxiety was 1 *SD* below the mean.

Thus, at least in the American and Israeli samples, volunteerism significantly moderated the association between attachment anxiety and loneliness. In the Dutch sample, volunteerism did not contribute uniquely to loneliness and did not significantly moderate the effects of the attachment variables.

With regard to the overall IIP score, the regression model significantly predicted interpersonal problems in all three samples: $F(7, 132) = 15.84, p < .01$, for the American sample; $F(7, 98) = 12.56, p < .01$, for the Dutch sample; and $F(7, 92) = 12.24, p < .01$ for the Israeli sample, explaining between 37.8% and 40.7% of the variance in interpersonal prob-

lems. As can be seen in Table 3, whereas the main effect of attachment anxiety was significant in all three samples, the main effect of attachment avoidance was significant in the American and Dutch samples but not in the Israeli sample. As expected, the higher the attachment anxiety or avoidance, the higher the overall level of interpersonal problems. The main effect of number of volunteer activities was also significant in all three samples: the higher the number of volunteer activities, the lower the overall IIP score.

The regression analyses also revealed a significant anxiety by volunteerism interaction in all three samples, which added between 6.6% and 11.8% to the explained variance (see Table 3). No other interactions were significant. As can be seen in Table 3, the source of the significant interaction was similar in the three samples and replicated the pattern of interaction observed for two of the samples in the analyses involving loneliness. First, attachment anxiety was significantly associated with higher IIP scores only when participants reported having engaged in few volunteer activities. When participants reported having engaged in a relatively high number of such activities, this association was not significant and approached zero. Second, level of volunteerism was significantly associated with lower IIP scores only among anxiously attached participants and not among those with relatively low attachment anxiety. In other words, across the three samples, volunteerism diminished what we are interpreting as a detrimental effect of attachment anxiety on interpersonal problems, and the beneficial effect of volunteering was most notable among anxiously attached people.⁴

Given the significant role that volunteerism seemed to play in moderating the association between attachment anxiety and interpersonal functioning, we wanted to examine more specifically whether reporting selfless, altruistic reasons for volunteering (the VFI Values score) also played an important role. If so, this

4. Regressions examining interactions between attachment scores and either loneliness or interpersonal problems as predictors of the number of volunteer activities a person reported engaging in yielded no significant interactions.

would be especially compelling evidence for the possibility that engaging in nonegoistically motivated caregiving is negatively correlated with the interpersonal problems usually associated with an anxious attachment style. For this purpose, we conducted a series of three-step hierarchical regression analyses examining the unique and interactive effects of attachment anxiety, attachment avoidance, and the endorsement of altruistic reasons for volunteering (VFI Values score) on the UCLA Loneliness score and the overall IIP score. These regression analyses were similar to the ones described above. In order to control statistically for individual differences in the endorsement of other reasons for volunteering, we computed a total score for each participant by averaging the remaining 25 VFI items and included this score as an additional predictor in the first step of the regressions. Table 4 presents the relevant standardized regression coefficients (betas) for these regression analyses.

Beyond the already reported main effects of attachment anxiety and avoidance, the regressions revealed a significant unique contribution

of the VFI Values score to loneliness and overall IIP scores in the American and Israeli samples (see Table 4): The stronger the endorsement of altruistic reasons for volunteering (i.e., the higher the VFI Value score), the lower the reported levels of loneliness and interpersonal problems. In the Dutch sample, the VFI Value score did not have a significant effect on either loneliness or interpersonal problems (see Table 4). The regression analyses revealed no significant interaction between attachment anxiety and volunteering for altruistic reasons. Thus, although there is evidence, at least in the American and Israeli samples, that volunteering for altruistic reasons might be beneficial in general, its benefits are not peculiar to individuals high in attachment anxiety.

We also conducted exploratory regression analyses examining the contribution of each of the other VFI scales to loneliness and interpersonal problems (while controlling for the remaining VFI scores), and found that the Understanding scale contributed uniquely to the prediction of both variables in the

Table 4. *The unique and interactive contributions (R^2 , β) of attachment dimensions and altruistic reasons for volunteering (VFI Values score) to loneliness and interpersonal problems*

| Effect | UCLA Loneliness | | | Overall IIP score | | |
|---------------------------------------|-----------------|-----------------|--------|-------------------|-----------------|---------|
| | USA | The Netherlands | Israel | USA | The Netherlands | Israel |
| Step 1— R^2 (%) | 25.1 | 25.8 | 19.9 | 27.3 | 29.4 | 26.4 |
| Attachment anxiety | 0.23* | 0.32** | 0.20* | 0.30** | 0.36** | 0.35** |
| Attachment avoidance | 0.28** | 0.35** | 0.27* | 0.25** | 0.39** | 0.08 |
| Altruistic reasons for volunteering | -0.29** | 0.02 | -0.19* | -0.28** | 0.04 | -0.31** |
| Step 2— R^2 increase (%) | 3.8 | 2.2 | 2.7 | 2.9 | 2.5 | 4.1 |
| Anxiety \times Avoidance | 0.16 | 0.11 | 0.12 | 0.17 | 0.12 | 0.20 |
| Anxiety \times Altruistic Reasons | 0.01 | 0.09 | -0.08 | 0.01 | -0.01 | -0.10 |
| Avoidance \times Altruistic Reasons | -0.12 | 0.03 | 0.06 | -0.04 | -0.02 | 0.11 |
| Step 2— R^2 Increase (%) | 0.2 | 0.3 | 0.5 | 0.2 | 0.5 | 0.6 |
| Three-way interaction | -0.05 | 0.08 | 0.13 | -0.05 | 0.09 | -0.12 |

Note. VFI, Volunteer Functions Inventory.

* $p < 0.05$. ** $p < 0.01$.

American and the Israeli samples (β s ranging from $-.21$ to $-.29$, all $ps < .05$): The higher the VFI Understanding score, which we interpret as indicating exploration-oriented reasons for volunteering, the lower the levels of loneliness and interpersonal problems. In the Dutch sample, these effects were not significant (β s $< .09$). No other VFI scale contributed significantly to explaining loneliness or interpersonal problems in any of the samples, nor did any of the interactions between attachment dimensions and any of the VFI scores reach significance in any of the samples.⁵

Conclusions

The results of Study 2 replicated and extended those of Study 1. Across the three different countries, avoidant attachment was associated with less engagement in volunteer activities and lower endorsement of altruistic and exploration-oriented reasons for volunteering, and anxious attachment was associated with more self-centered reasons for volunteering. There was also a significant interaction between attachment anxiety and volunteering as factors affecting interpersonal functioning, which suggests that volunteering might be one route to improved social functioning (although other interpretations of these correlational findings are possible as well). Finally, volunteering for altruistic and exploration-oriented reasons was associated with better interpersonal functioning, at least in the American and Israeli samples, but the benefits of volunteering for these two kinds of reasons were not moderated by scores on either attachment dimension. Thus, volunteering for reasons related to caregiving or exploration may be especially beneficial in reducing interpersonal problems, although other interpretations of these findings are also possible.

General Discussion

We were interested in the possibility that attachment insecurities interfere with altruistic

caregiving, operationalized as volunteering to help others. We also explored the possibilities (a) that different forms of attachment insecurity are associated with different motives for volunteering and (b) that volunteering (interpreted as caregiving) reduces insecure, especially highly anxious, individuals' level of interpersonal problems (a reduction interpreted as a step toward increased security). In two questionnaire-based, correlational studies conducted in three countries—Israel, the Netherlands, and the United States—we measured attachment-related anxiety and avoidance, number of volunteer activities, time devoted to such activities, and the extent to which a person volunteered for either self-serving reasons or more altruistic and exploration-oriented reasons. In Study 2, we also administered a loneliness scale and a broad measure of interpersonal problems to determine whether participating in volunteer activities might alleviate self-perceived problems in interpersonal functioning.

Most of the observed associations between attachment dimensions and volunteerism were similar across the three countries and the two studies. Avoidant attachment was consistently associated with engaging in fewer volunteer activities, devoting less time to such activities, and being less motivated by desires to express altruistic values and to understand, learn, and explore oneself and the world. Attachment anxiety was not generally related to engaging (or not engaging) in volunteer activities (except for the Israeli sample in Study 1, a finding that did not replicate in Study 2), or to devoting more or less time to such activities, but it was associated with more self-soothing and self-enhancing reasons for volunteering, an indication of anxious individuals' previously well-documented sense of personal inadequacy and needs for affection and social validation. The higher the attachment anxiety score, the stronger the endorsement of self-enhancement, social-acceptance, and self-protection reasons for volunteering.

To the extent that secure individuals are defined in terms of low scores on the attachment anxiety and avoidance dimensions, the findings suggest that attachment security is generally associated with volunteering to help

5. Regression analyses examining the contribution of interactions between either attachment anxiety or avoidance and either loneliness or interpersonal problems to accounting for scores on the six VFI factors yielded no significant interactions.

others for altruistic and exploration-oriented reasons. This conclusion meshes well with previous findings indicating that attachment security, measured categorically, is associated with empathy, humane values, willingness to care for others, and cognitive openness (see Gillath et al., 2005; Mikulincer, 1997) and that experimental augmentation of people's sense of security increases the likelihood of empathy, compassion, and prosocial behavior.⁶ Future experimental research should be conducted to reduce the remaining ambiguity about the causal direction of some of the correlational findings reported here.

For example, Study 2 revealed a promising interaction between attachment anxiety and volunteerism in explaining participants' feelings of loneliness and quality of interpersonal functioning. In line with previous findings, attachment anxiety was significantly associated with greater loneliness and more severe interpersonal problems in all three samples (e.g., Bartholomew & Horowitz, 1991; Mickelson et al., 1997). But these associations were significant only when participants were relatively unengaged in volunteer activities. Frequent engagement in volunteer activities moderated the associations between attachment anxiety and loneliness and interpersonal problems. In addition, engaging in volunteer activities was significantly associated with less loneliness and fewer interpersonal problems only among relatively attachment-anxious people. This suggests that engaging in volunteer activities contributed to people's sense of well-being mainly when they suffered from doubts about being lovable, esteemed, and cared for. We realize, however, that other interpretations could be placed on these correlational findings. Perhaps anxious people who have fewer interpersonal problems for other reasons are the ones who are able to engage in more altruistic activities. Longitudinal and experimental studies are needed to determine the correct causal interpretation.

Avoidant attachment was also associated with greater loneliness in all three samples and with more severe interpersonal problems in the American and Dutch samples but not in the Israeli sample. However, these associations were not moderated by level of volunteering, perhaps suggesting that avoidant people do not benefit from volunteering in the same way that anxious people do. This might be the case because they volunteer for reasons other than meeting their social needs or because they remain relatively unaffected by social interactions generally (a finding consistent with several experimental studies summarized by Mikulincer & Shaver, 2003).

We also considered the effects of motives or reasons for volunteering on interpersonal problems. In the American and Israeli samples, altruistic and exploration-oriented reasons for volunteering, which in previous studies have been associated with attachment security, were associated with lower scores on measures of loneliness and interpersonal problems. Taken together, these findings may suggest that encouraging altruistic and exploration-oriented motives for volunteering might improve a person's sense of social well-being. This conclusion must also remain tentative, however, because of the correlational nature of our findings. It is possible that people with few interpersonal problems more often volunteer for security-related reasons.

Although the findings were generally similar across the three countries we sampled, there were differences that may be worth pursuing in future studies. For example, American participants, compared to their Dutch counterparts, reported being involved in more volunteer activities and attached more importance to understanding and career promotion as reasons for volunteering. In addition, engagement in volunteer activities was associated with being less lonely in the American sample but not significantly so in the Dutch and Israeli samples. In all three samples, however, volunteering was associated with lower scores on the IIP, making the different pattern for loneliness seem special in some way.

At present, we have no compelling explanations for the occasional cross-national differences we obtained. Future studies might examine the possible rewards for volunteering

6. See Mikulincer and Shaver (2001) and Mikulincer et al. (2001) for examples of such procedures used in experimental studies and Bakermans-Kranenburg, van IJzendoorn, and Juffer (2003) for a meta-analysis of security-enhancing clinical and educational techniques.

in different societies. Perhaps in the United States, there is more of a school-related or professional payoff for volunteering, which would fit with the American participants' higher score on the VFI Career motives scale. As for the higher American scores on the Understanding scale, this may have something to do with the fact that many college students in the United States are living away from home for the first time and attending school with the goal of attaining greater self-understanding and a clearer sense of identity; the participants at the higher end of the age range in the Dutch and Israeli samples were older than the oldest participants in the American samples, and most of the Israeli participants had already completed compulsory military service. These possible explanations need to be followed up with appropriate measures.

We did not examine possible differences between different kinds of volunteer activities. We did not create our list of activities with conceptual distinctions between them in mind. Instead, most of our work went into sampling a wide range of activities and assuring that they made sense for each of the countries under study. Moreover, we did not ask detailed questions about types of compensation our study participants might have received for different activities. We used the term "volunteer" or its equivalent in each country, implying that no formal financial compensation was involved, but we did not ask about things like course credit or social credit in student organizations, which might have played a role in some cases. This is another issue that could be examined in future studies.

On the whole, the results support our theoretical hypotheses. More attachment-anxious individuals are not less likely to volunteer to help others, but their reasons for volunteering are often tinged with the wish to fit in, be thanked and appreciated, and be either distracted from or relieved of their own problems. Study 2 suggested that these motives may sometimes be gratified, in that volunteering seemed to go along with less loneliness and fewer interpersonal problems among participants who scored higher on attachment anxiety. Avoidant individuals apparently have less motivation to help others, and even when they

do provide assistance, they seem to do so for reasons other than altruism or exploration. It remains unclear, in their case, why they volunteer at all because they do not score higher than nonavoidant individuals on the self-centered motive scales used here.

Although we cannot be certain that our theoretically guided causal interpretations of our correlational findings are correct, we have already shown in experimental studies that contextual manipulation of the sense of attachment security, including by subliminal methods not subject to demand characteristics, leads to greater empathy, a shift in values toward altruism, and more willingness to help a distressed person (Mikulincer et al., 2001, 2003, in press). We are currently exploring the effects of experimentally induced security augmentation on volunteering to help, so we will soon know whether our theoretically based causal interpretations of the results presented here are justified. If they are, they will suggest ways to encourage forms of volunteerism that will benefit both the volunteers and the people they help.

References

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: Assessed in the strange situation and at home*. Hillsdale, NJ: Erlbaum.
- Allison, L. D., Okun, M. A., & Dutridge, K. S. (2002). Assessing volunteer motives: A comparison of an open-ended probe and Likert rating scales. *Journal of Community and Applied Social Psychology, 12*, 243–255.
- Armstrong, M. L., Korba, A. M., & Emard, R. (1995). Of mutual benefit: The reciprocal relationship between consumer volunteers and the clients they serve. *Psychiatric Rehabilitation Journal, 19*, 45–49.
- Bakermans-Kranenburg, M. J., van IJzendoorn, M. H., & Juffer, F. (2003). Less is more: Meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin, 129*, 195–215.
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226–244.
- Batson, C. D. (1991). *The altruism question: Toward a social psychological answer*. Hillsdale, NJ: Erlbaum.
- Belsky, J. (1999). Modern evolutionary theory and patterns of attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 141–161). New York: Guilford.
- Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York: Basic Books. (Original edition 1969).
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.),

- Attachment theory and close relationships* (pp. 46–76). New York: Guilford.
- Carlson, V. J., & Harwood, R. L. (2003). Attachment, culture, and the caregiving system: The cultural patterning of everyday experiences among Anglo and Puerto Rican mother-infant pairs. *Infant Mental Health Journal*, 24, 53–73.
- Choi, L. H. (2003). Factors affecting volunteerism among older adults. *Journal of Applied Gerontology*, 22, 179–196.
- Clary, E. G., & Orenstein, L. (1991). The amount and effectiveness of help: The relationship of motives and abilities to helping behavior. *Personality and Social Psychology Bulletin*, 17, 58–64.
- Clary, E. G., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J., et al. (1998). Understanding and assessing the motivations of volunteers: A functional approach. *Journal of Personality and Social Psychology*, 74, 1516–1530.
- Davis, M. H., Hall, J. A., & Meyer, M. (2003). The first year: Influences on the satisfaction, involvement, and persistence of new community volunteers. *Personality and Social Psychology Bulletin*, 29, 248–260.
- De Waal, F. (1996). *Good nature: The origins of right and wrong in humans and other animals*. Cambridge, MA: Harvard University Press.
- Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: An attachment theoretical perspective. *Journal of Personality and Social Psychology*, 80, 972–994.
- Feeney, J. A. (1996). Attachment, caregiving, and marital satisfaction. *Personal Relationships*, 3, 401–416.
- Feeney, J. A., & Hohaus, L. (2001). Attachment and spousal caregiving. *Personal Relationships*, 8, 21–39.
- Fraley, R. C., & Shaver, P. R. (2000). Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions. *Review of General Psychology*, 4, 132–154.
- George, C., & Solomon, J. (1999). Attachment and caregiving: The caregiving behavioral system. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 649–670). New York: Guilford.
- Gillath, O., Shaver, P. R., & Mikulincer, M. (2005). An attachment-theoretical approach to compassion and altruism. In P. Gilbert (Ed.), *Compassion: Conceptualizations, research, and use in psychotherapy*. (pp. 121–147). London: Brunner-Routledge.
- Hamilton, W. D. (1964). The genetical evolution of social behavior, I and II. *Journal of Theoretical Biology*, 7, 1–52.
- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511–524.
- His Holiness the Dalai Lama. (1999). *Ethics for a new millennium*. New York: Riverhead Books.
- Hopkins, J. (2001). *Cultivating compassion: A Buddhist perspective*. New York: Broadway Books.
- Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureno, G., & Villasenor, V. A. (1988). Inventory of Interpersonal Problems: Psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology*, 56, 885–892.
- Kestenbaum, R., Farber, E. A., & Sroufe, L. A. (1989). Individual differences in empathy among preschoolers: Relation to attachment history. In N. Eisenberg (Ed.), *Empathy and related emotional competence*. New Directions for Child Development, No. 44 (pp. 51–64). San Francisco: Jossey-Bass.
- Kunce, L. J., & Shaver, P. R. (1994). An attachment-theoretical approach to caregiving in romantic relationships. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 5, pp. 205–237). London: Kingsley.
- McCullough, M. E., & Snyder, C. R. (Eds.). (2000). Special issue: Classical sources of human strength: A psychological analysis. *Journal of Social and Clinical Psychology*, 19(1), 1–160.
- Mickelson, K. D., Kessler, R. C., & Shaver, P. R. (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology*, 73, 1092–1106.
- Mikulincer, M. (1997). Adult attachment style and information processing: Individual differences in curiosity and cognitive closure. *Journal of Personality and Social Psychology*, 72, 1217–1230.
- Mikulincer, M., & Florian, V. (2000). Exploring individual differences in reactions to mortality salience: Does attachment style regulate terror management mechanisms? *Journal of Personality and Social Psychology*, 79, 260–273.
- Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality and Social Psychology*, 81, 1205–1224.
- Mikulincer, M., Gillath, O., Sapir-Lavid, Y., Yaakobi, E., Arias, K., Tal-Aloni, L., et al. (2003). Attachment theory and concern for others' welfare: Evidence that activation of the sense of secure base promotes endorsement of self-transcendence values. *Basic and Applied Social Psychology*, 25, 299–312.
- Mikulincer, M., & Shaver, P. R. (2001). Attachment theory and intergroup bias: Evidence that priming the secure base schema attenuates negative reactions to outgroups. *Journal of Personality and Social Psychology*, 81, 97–115.
- Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 53–152). San Diego, CA: Academic Press.
- Mikulincer, M., & Shaver, P. R., (2004). Security-based self-representations in adulthood: Contents and processes. In W. S. Rholes & J. A. Simpson (Eds.), *Adult attachment: Theory, research, and clinical implications* (pp. 159–195). New York: Guilford.
- Mikulincer, M., Shaver, P. R., Gillath, O., & Nitzberg, R. E. (in press). Attachment, caregiving, and altruism: Boosting attachment security increases compassion and helping. *Journal of Personality and Social Psychology*.
- Morrow-Howell, N., Hinterlong, J., Rozario, P. A., & Tang, F. (2003). Effects of volunteering on the well-being of older adults. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, 58B, S137–S145.
- Musick, M. A., Herzog, A. R., & House, J. S. (1999). Volunteering and mortality among older adults: Findings from a national sample. *Journals of Gerontology: Psychological Sciences and Social Sciences*, 54B, 173–180.
- Oman, D., Thoresen, C. E., & McMahon, K. (1999). Volunteering and mortality among the community-dwelling elderly. *Journal of Health Psychology*, 4, 301–316.

- Omoto, A. M., & Snyder, M. (1995). Sustained helping without obligation: Motivation, longevity of service, and perceived attitude change among AIDS volunteers. *Journal of Personality and Social Psychology*, *68*, 671–686.
- Penner, L. A. (2002). Dispositional and organizational influences on sustained volunteerism: An interactionist perspective. *Journal of Social Issues*, *58*, 447–467.
- Penner, L. A., & Finkelstein, M. A. (1998). Dispositional and structural determinants of volunteerism. *Journal of Personality and Social Psychology*, *74*, 525–537.
- Priel, B., Mitrany, D., & Shahar, G. (1998). Closeness, support, and reciprocity: A study of attachment styles in adolescence. *Personality and Individual Differences*, *25*, 1183–1197.
- Rothbaum, F., Weisz, J., Pott, M., Miyake, K., & Morelli, G. (2000). Attachment and culture: Security in the United States and Japan. *American Psychologist*, *55*, 1093–1104.
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity. *Journal of Personality and Social Psychology*, *39*, 472–480.
- Schroeder, D. A., Penner, L. A., Dovidio, J. F., & Piliavin, J. A. (1995). *The psychology of helping and altruism: Problems and puzzles*. New York: McGraw-Hill.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). Orlando, FL: Academic Press.
- Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology*, *62*, 434–446.
- Snyder, M., & Clary, E. G. (2004). Volunteerism and the generative society. In E. de St. Aubin, D. P. McAdams, & K. Tae-Chang (Eds.), *The generative society: Caring for future generations* (pp. 221–237). Washington, DC: American Psychological Association.
- Snyder, M., Clary, E. G., & Stukas, A. A. (2000). The functional approach to volunteerism. In G. R. Maio & J. M. Olson (Eds.), *Why we evaluate: Functions of attitudes* (pp. 365–393). Mahwah, NJ: Erlbaum.
- Soerensen, S., Webster, J. D., & Roggman L. A. (2002). Adult attachment and preparing to provide care for older relatives. *Attachment and Human Development*, *4*, 84–106.
- van der Mark, I. L., van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2002). Development of empathy in girls during the second year of life: Associations with parenting, attachment, and temperament. *Social Development*, *11*, 451–468.
- van IJzendoorn, M. H., & Sagi, A. (1999). Cross-cultural patterns of attachment: Universal and contextual dimensions. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (pp. 713–734). New York: Guilford.

Appendix. *The 26-item volunteerism scale and percentage of participants in each sample and country who indicated engaging in each volunteer activity during the past year*

| Item | Study 1 | | | Study 2 | | |
|--|---------|-----------------|--------|---------|-----------------|--------|
| | USA | The Netherlands | Israel | USA | The Netherlands | Israel |
| 1. Community services (e.g., roadside cleanups, beach cleaning, planting trees or flowers) | 48.2 | 17.4 | 43.9 | 53.2 | 15.7 | 40.1 |
| 2. Volunteer civil service (e.g., firefighting, police work, Red Cross) | 17.9 | 12.6 | 15.5 | 23.5 | 17.8 | 14.0 |
| 3. Working with the terminally ill (e.g., hospice, hospital visits) | 33.1 | 18.4 | 20.6 | 37.7 | 17.6 | 24.2 |
| 4. Helping disabled people | 45.2 | 36.3 | 44.7 | 46.6 | 40.1 | 41.3 |
| 5. Volunteering at a general hospital | 20.2 | 22.9 | 18.4 | 30.2 | 22.4 | 22.2 |
| 6. Volunteering at a counseling center, counseling “hotline,” or psychiatric treatment facility | 10.7 | 14.8 | 16.5 | 12.6 | 15.6 | 16.1 |
| 7. Helping people who are less fortunate than yourself (e.g., at soup kitchens, battered women’s shelters, Salvation Army centers) | 52.5 | 10.8 | 41.1 | 50.9 | 12.7 | 44.2 |
| 8. Volunteering in religious activities (e.g., religious youth groups, being a “Sunday School” teacher) | 41.1 | 27.2 | 32.2 | 38.1 | 21.6 | 35.5 |

(continued)

Appendix. (continued)

| Item | Study 1 | | | Study 2 | | |
|--|---------|-----------------|--------|---------|-----------------|--------|
| | USA | The Netherlands | Israel | USA | The Netherlands | Israel |
| 9. Nonreligious youth groups (e.g., Boy Scouts, Girl Scouts) | 19.6 | 33.2 | 29.1 | 21.7 | 26.7 | 29.2 |
| 10. Working with animals (e.g., Humane Society) | 16.4 | 17.7 | 14.6 | 14.5 | 18.9 | 16.7 |
| 11. Conventional political activities (e.g., campaigning, stuffing envelopes, answering phones) | 17.7 | 13.8 | 24.3 | 21.6 | 16.9 | 15.4 |
| 12. Political activism (e.g., attending demonstrations, hanging signs for demonstrations) | 18.9 | 15.8 | 24.3 | 18.8 | 13.8 | 24.2 |
| 13. Volunteering through sororities or fraternities | 15.9 | 22.5 | 24.3 | 17.1 | 22.8 | 23.1 |
| 14. Being active in student organizations or associations | 56.3 | 32.2 | 22.6 | 61.3 | 24.7 | 24.2 |
| 15. Tutoring (university/college/high school/elementary students) | 54.7 | 25.2 | 37.8 | 50.9 | 25.0 | 45.1 |
| 16. Working with special-needs children (e.g., disabled, retarded, autistic, blind, orphans, new immigrants) | 26.5 | 40.7 | 30.3 | 33.9 | 38.6 | 28.4 |
| 17. Coaching, refereeing sports | 31.8 | 17.4 | 37.8 | 31.1 | 19.8 | 28.8 |
| 18. Mentoring programs (e.g., Big Brother, boys or girls clubs) | 11.4 | 20.3 | 34.3 | 16.1 | 28.4 | 38.2 |
| 19. Pro bono (volunteer) law, accounting, medical, or other professional work | 10.8 | 14.8 | 14.7 | 9.4 | 11.8 | 7.8 |
| 20. Participating in a research project without credit/being an unpaid research assistant | 27.8 | 24.2 | 54.4 | 33.1 | 26.4 | 56.6 |
| 21. Unpaid internships | 27.9 | 38.2 | 18.8 | 34.7 | 28.4 | 19.2 |
| 22. Participating in support groups to help others | 16.5 | 11.2 | 19.7 | 23.5 | 14.9 | 18.8 |
| 23. Helping elderly people (e.g., Meals on Wheels, nursing homes, household help) | 28.5 | 33.9 | 25.2 | 29.2 | 28.4 | 20.4 |
| 24. Helping with road safety (e.g., serving as a volunteer crossing guard) | 5.6 | 2.9 | 7.8 | 9.4 | 4.9 | 5.2 |
| 25. Volunteering as a provider of information and referral services (e.g., in a museum, at a library) | 3.2 | 3.2 | 5.8 | 7.5 | 7.8 | 5.2 |
| 26. Helping members of the armed services (e.g., writing letters, sending food, or "care packages") | 5.7 | 5.8 | 29.1 | 11.3 | 3.9 | 24.2 |