

The Role of Children's Lay Theories About the Malleability of Human Attributes in Beliefs About and Volunteering for Disadvantaged Groups

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Two studies with 9- to 12-year-old children supported the hypothesis that lay theories about the malleability of human traits impact judgments of and behavior toward groups in need of volunteer help. The more children endorsed an incremental view (attributes can change), the more they reported liking, desiring social contact with, and perceiving similarity between themselves and a disadvantaged outgroup (homeless, UNICEF-funded children). Moreover, children endorsing more of a malleable view reported greater past volunteering, active participation in collecting money for a UNICEF event, and intentions to volunteer again. These findings held when controlling for the effects of participants' gender, self-esteem, and perceived social pressure to help others. How a malleable view and intergroup volunteerism may be mutually sustaining is discussed.

Helping others appears to be a fundamental aspect of human nature that is expressed early in life and that receives societal support. In 1950, for example, a youth group in Philadelphia, Pennsylvania involved with the United Nations Children's Fund (UNICEF) started collecting money door to door on Halloween, and thus began the hugely successful Trick or Treat for UNICEF campaign. Since then, American children and adolescents have raised more than \$188 million to help children across the globe (UNICEF, 2003). Youth volunteerism in the United States continues to climb and is not limited to UNICEF. The number of 12- to 17-year-old volunteers increased from 12.4 million to 13.3 million between 1991 and 1996, generating an average of 2.4 billion volunteer hours (Independent Sector, 2000). In fact, in 1995 more than half of America's teenagers reported having participated in a volunteer activity, such as working at religious and educational institutions. Volunteerism among U.S. youth will likely continue to blossom as the government continues to increase its financial support for such efforts (e.g., see Americorps, 2001; UNICEF, 2002a).

The push for greater youth volunteerism comes both from a social need for volunteer help and from a growing body of research indicating that volunteerism has a positive impact on youth's psychological development (e.g., self-esteem, personal competence), academic competence (e.g., school grades, educational goals), and social development (e.g., social responsibility, prosocial behavior of volunteers; e.g., Conrad & Hedin, 1989; Hamilton &

Fenzel, 1988; Yates & Youniss, 1996). Given these encouraging findings, an important question is: What factors promote and sustain youth volunteerism?

Past research has revealed academic, social, and psychological factors that promote volunteerism. For example, males and females in the 9th grade were more likely to volunteer through 12th grade when they possessed higher educational aspirations, a higher grade point average, and higher intrinsic motivation toward school (Johnson, Beebe, Mortimer, & Snyder, 1998). Moreover, adolescents and young adults were more likely to volunteer when a family member volunteered and when they were members of organizations that promoted, encouraged, or required participation in service activities (Rosenthal, Feiring, & Lewis, 1998; see also Independent Sector, 1999, 2001). High self-esteem has also been implicated as a motivating force in promoting and sustaining volunteerism (e.g., Conrad & Hedin, 1989; for a review, see Yates & Youniss, 1996).

Thus, volunteering can serve goals related to academic, social, and personality development (see also Clary et al., 1998). However, volunteering, like most behaviors, may grow not only from people's desires for particular outcomes but also from their social-cognitive expectancies for the situation and outcome (e.g., Feather, 1990). Thus far, social-cognitive factors have been largely overlooked as determinants of volunteerism. A relevant line of research on social-cognitive expectancies is the lay theories approach (e.g., Hong, Levy, & Chiu, 2001; Wegener & Petty, 1998). In the present investigation, we tested whether particular lay theories—expectancies about

the malleability of human traits—relate to differences in volunteerism toward outgroups (groups of which one is not a member) in need of help. In short, we proposed that because volunteer activities aim to improve others' lives, the more individuals believe that people in general can change (e.g., improve), the more willing they will be to volunteer to help others who have the potential to change. We next briefly review the research that inspired this proposal.

Lay Theories Approach

Research on lay theories has roots in social and developmental psychology. Kelly (1955) and Heider (1958) proposed that lay people, like scientists, develop theories about their social world and that such theories create organizing frameworks, helping people interpret and forecast events as well as select courses of action. Likewise, Piaget and Garcia (1983/1989) proposed that during development children come to possess conceptions of their world that contribute to variation in their social judgments and actions. Dweck and colleagues, for example, have examined lay theories relating to the malleability of human nature. They have shown that children holding a malleable (incremental) view of human attributes are less quick to judge and are more flexible in their evaluations of others than children holding a fixed (entity) view (e.g., Erdley & Dweck, 1993; Levy & Dweck, 1999; see Dweck, 1999). Individuals who believe that traits are fixed seem to understand people in terms of these traits, whereas individuals who believe that people's qualities are malleable seem to rely less on traits and instead seek to understand people in more context-sensitive terms; thus, they render weaker, more flexible judgments. For instance, Erdley and Dweck (1993) showed that late grade school children holding a malleable (rather than a fixed) theory made less global trait judgments of a (fictitious) new boy at school who behaved negatively (e.g., he lied about his family); that is, they saw him as less mean and less bad. Additionally, when asked how they expected the boy to behave in the future, children who held a malleable theory predicted that the boy might be different, whereas those who held a fixed theory predicted the boy would not change. These differences held even when children learned that the boy behaved inconsistently (that he later returned the "special markers" from the art table that he had wrongfully taken), suggesting that children holding a fixed view of traits are steadfast in their trait assessments. Given that they made less extreme inferences about another's character from past

behavior and expected change in future behavior, children holding a more malleable view, we suggest, might be more willing to try to help someone change for the better.

In subsequent work, Levy and Dweck (1999) tested whether children holding a malleable view also would less readily form extreme impressions of an entire group of unfamiliar people. In one study, late grade school children were given (fictitious) information about several negative and neutral behaviors performed by different unknown students their age at an unknown school. Children holding a more malleable view made significantly less negative trait judgments of the students from the unknown school. They also perceived students at the school to be less similar to one another on those traits, suggesting that they see people as individuals and not merely as members of a group. Children holding a malleable view also made more external attributions for the fictitious students' behavior, whereas children holding a fixed view made more internal attributions. Thus, children holding a malleable view do not simply blame people for their behavior or predicament. Given that people are more willing to help those that they do not hold accountable for their life conditions (e.g., Weiner, Perry, & Magnusson, 1988), children holding a more malleable theory of human attributes, we suggest, might be more willing to help groups in need.

Levy, Stroessner, and Dweck (1998) tested whether people holding a malleable theory also would be less inclined to make extreme judgments of an existing group (see also Levy, Plaks, Hong, Chiu, & Dweck, 2001). They found that college students holding a more malleable view agreed less with societal stereotypes of ethnic groups (e.g., African Americans, Latinos). Additional studies showed that when fixed and malleable theories are temporarily induced (e.g., when children and college students are presented with compelling "scientific" evidence supporting either the fixed or malleable view via a brief article or a presentation), the theories affect stereotype endorsement in the same way as when they are simply measured (Levy, 1998; Levy et al., 1998). Thus, these lay theories appear to have a causal impact on people's endorsement of stereotypes of socially stigmatized groups.

In summary, different lay theories about the malleability of human attributes foster different frameworks for understanding and judging others. Children holding a more malleable theory of human attributes are less judgmental and more flexible in their evaluations of individual others and groups. With an eye toward nondispositional explanations

for behavior, children holding a more malleable view also anticipate variability in the future behavior of an individual (Erdley & Dweck, 1993) and in the behavior of individuals within and across groups (Levy & Dweck, 1999). Furthermore, college students holding a more malleable view engaged in less stereotyping of socially stigmatized groups (Levy et al., 1998). Given these findings, we would expect people holding a more malleable view to have more positive inclinations toward groups in need of volunteer help.

Lay Theories and Volunteerism

As noted earlier, our main hypothesis is that because volunteer activities aim to improve others' lives, the more individuals believe that people in general can change (e.g., improve), the more willing they will be to volunteer to help others who potentially can change. In light of the past work just reviewed, consider how these lay theories might affect potential volunteers who are thinking about helping homeless people. If a potential volunteer thinks that people can change, his or her time and effort may not be wasted on trying to help homeless people. As noted earlier, people holding a more malleable view of human attributes tend to focus more on situational and environmental forces acting on a target (e.g., Levy & Dweck, 1999) likely because such forces leave more room for human malleability. Helping a person in one situation or helping change a group's environment (e.g., providing better nutrition, shelter, and schooling, which were emphasized to our participants in Study 2 as a result of their efforts) could promote, for example, attribute changes (e.g., improved sociability and motivation) as well as a categorical change (e.g., from impoverished to not impoverished).

In contrast, if a potential volunteer believes that change is less possible, he or she should be less willing to try to help homeless people. As noted earlier, people holding a more fixed view of human attributes tend to attribute poor outcomes to the person or group rather than to the situational context (e.g., Erdley & Dweck, 1993; Levy & Dweck, 1999). People holding a more fixed view likely believe that traits cause life conditions because they view traits as more innate (Levy et al., 1998). Accordingly, believing less in the malleability of traits, we argue, likely makes volunteering for any group seem like a less worthwhile activity.

In the present investigation, we sought to examine the relation between late grade school children's lay theories about the malleability of traits and their

evaluations of and willingness to volunteer for two outgroups in need: homeless people and UNICEF-funded children. Studying disadvantaged outgroups is a good place to begin our exploration of the relation between lay theories about malleability of human attributes and volunteerism for several reasons. First, past research (e.g., Cialdini, Brown, & Lewis, 1997) shows that, overall, people are less willing to help unfamiliar others (e.g., strangers) relative to familiar others (friends, family); thus, there is a greater need to understand factors related to helping unfamiliar outgroup members. Based on the median household income of our study participants' families, impoverished groups were a clear outgroup. Second, given research on the costs of stigma (for a review, see Crocker, Major, & Steele, 1998) and on the social, psychological, and physical costs of poverty (e.g., UNICEF, 2002b; Whitbeck, Hoyt, & Bao, 2000), we felt that understanding factors related to helping impoverished groups would be especially useful. Third, because of cutbacks in government services to socially stigmatized groups such as homeless (e.g., National Coalition for Homeless, 1997; U.S. Conference of Mayors, 2000) and the continued need for assistance for UNICEF, it seemed timely and important to understand factors that promote helping toward these groups.

Late grade school children were selected as study participants because this age is a critical time for the development of helping behaviors (e.g., Erikson, 1968; Mortimer, Finch, & Kumka, 1982), and by this age children have developed theories about the malleability of traits (e.g., Erdley & Dweck, 1993; Levy & Dweck, 1999). Also, by this age children are knowledgeable about groups and can perceive similarities across different groups and differences within the same groups (e.g., Aboud, 1988; Bigler & Liben, 1993; Katz, Sohn, & Zalk, 1975).

As a first step in examining the role of children's lay theories in their beliefs about outgroups in need of volunteer help, Study 1 assessed children's reported past helping behavior for groups in need. We predicted that the more children believed in the malleability of human attributes, the more involved they would have been in helping groups in need in the past. We also examined children's attitudes toward a group in need of volunteer help as an attempt to replicate and extend past work showing that children's lay theories about the malleability of traits relates to judgments of unfamiliar others (e.g., Erdley & Dweck, 1993; Levy & Dweck, 1999). Homeless children were selected as the target group because children of this age group are often called on to lend their services (e.g., assisting with food and

clothing drives during the holidays). We predicted that the more children believed in the malleability of human attributes, the more positive attitudes they would have toward homeless children—liking them more, desiring greater social contact with them, and perceiving greater overlap between themselves and homeless children.

In Study 2, we sought to replicate Study 1 findings by examining a different disadvantaged outgroup (UNICEF-funded children) and to extend Study 1 findings by measuring actual volunteer behavior. We selected UNICEF-funded children as a target group for Study 2 because the Trick or Treat for UNICEF campaign is a popular volunteer activity among children of this age group. This campaign affords children the opportunity to help through a structured volunteer activity that can be organized and studied in a classroom setting. To understand how theories about traits related to actual volunteerism, we followed the children across the academic year, measuring their evaluations of UNICEF-funded children before they volunteered, their evaluations of their experience immediately afterward, and their evaluations of the impact of their experience 5 months later. Before they volunteered, children who held more of a malleable view were expected to have more positive attitudes toward UNICEF-funded children. We also predicted that children who held a more malleable view would be more active volunteers, exerting more effort to trying to collect money for UNICEF. Furthermore, because volunteer activities aim to improve others' lives, the more individuals believe that people can change (e.g., improve), the more we expect them to view their volunteer actions as effective and competent. Much prior theory and evidence suggest that, in general, humans enjoy feeling competent and effective in their actions (e.g., Deci & Ryan, 2000; Harter, 1978; White, 1959). Thus, holding a more malleable view of human attributes should predict greater enjoyment of a volunteer experience. At the end of the academic year, we expected that lay theory differences would still be apparent, namely, that children holding a more malleable view would have greater intentions to volunteer in the future and would more highly recommend collecting money for UNICEF to a child their age.

In short, the goal of the present investigation was to explore the relation between children's lay theories about the malleability of traits and their beliefs about and willingness to volunteer for disadvantaged outgroups in need of help. By exploring the relation between children's lay theories and volunteerism, we can better understand

social-cognitive factors that relate to volunteerism. We also may gain insight into how to encourage volunteering as a habit. It is possible that a malleable view may both promote and sustain volunteerism. Determining ways to encourage and maintain volunteerism is important because volunteering affords social, academic, and psychological benefits for youth volunteers as well as benefits for recipients of help and society. In Study 2, we took a step toward examining the potential cyclical relation between children's theory about the malleability of traits and volunteerism.

Study 1

Study 1 was designed to assess whether children's lay theories about the malleability of traits relate to their attitudes toward volunteerism and to their past volunteerism for an outgroup in need of volunteer help. In this study, fifth and sixth graders drawn from two schools reported their attitudes toward homeless children with the prediction that the children who held more of a malleable view would have more positive attitudes toward homeless persons—liking them more, desiring greater social contact with them, and perceiving greater overlap between themselves and homeless children. In other words, we expected to replicate and extend past work on the relation between children's lay theories about traits and judgments of novel groups, which showed that a malleable theory of traits relates to more positive judgments of and greater desired social contact with unfamiliar others who are characterized in a slightly negative way (Levy & Dweck, 1999). In this study, we also hoped to take a first step toward showing that a more malleable view relates to greater past volunteering.

Method

Participants

Participants were recruited from two medium-sized suburban elementary schools in Long Island, New York and included children who agreed to participate and whose parents or legal guardians provided written consent. In one school, the sample comprised 169 fifth and sixth graders (80 boys and 89 girls) between the ages of 9 and 12 ($M = 10.46$, $SD = .60$). In the other school, the sample comprised 75 fifth and sixth graders (36 boys and 39 girls) between the ages of 9 and 11 ($M = 10.05$, $SD = .28$). Data from 7 children were not included because the children did not complete the lay theory measure.

According to information provided by the school district, the racial or ethnic makeup of students was approximately 1.5% African American; 2.7% American Indian, Alaskan, Asian, or Pacific Islander; 93.7% Caucasian; and 2.1% Hispanic. The median household income for families living in the towns for these schools ranged from \$103,600 to \$208,200.

Measures

Lay theories about the malleability of human traits. To assess their theories about traits, we presented children with four statements: two statements supporting the fixed view (e.g., "Someone's personality is a part of them that can't change very much"; "People can't really change what kind of personality they have. Some people have a good personality and some people don't, and that can't change much") and two statements supporting the malleable view (e.g., "Anybody can change their personality a lot"; "No matter who somebody is and how they act, they can always change their ways") and asked for their agreement on a 6-point scale (1 = very strongly disagree, 2 = strongly disagree, 3 = disagree, 4 = agree, 5 = strongly agree, 6 = very strongly agree; see Erdley & Dweck, 1993; Levy & Dweck, 1999). A theory about traits score was calculated by reverse-scoring responses to the fixed theory items and averaging all responses ($M = 3.91$, $SD = 1.02$, Cronbach's $\alpha = .79$). In data analyses, responses to the measure were used in a continuous way to keep all of the individual differences. Higher numbers indicate greater endorsement of the malleable view.

Past work indicates that responses to the theories about trait measure are related neither to respondents' gender, age, or academic performance nor to their responses to measures of self-presentational concerns (e.g., Dweck, Chiu, & Hong, 1995; Levy et al., 1998).

Attitudes toward homeless children. Our eight-item attitude measure asked for participants' overall evaluation of homeless children ("How much do you like homeless children?" [1 = not at all, 2 = a little, 3 = some, 4 = a lot, 5 = very much]), desired degree of social contact ("How much would you like to hang out with a homeless child your age [sit next to a homeless child in class, be friends with a homeless child]?" [1 = not at all, 2 = a little, 3 = some, 4 = very much, 5 = very, very much]), and perceived similarity to homeless children ("Do you think homeless children like to play the same games and sports [like to listen to the same music; like to go to the same movies; worry about the same things] as you?" [1 = none of the same, 2 = some of the same, 3 = most of the same, 4 = all of the same]). Because

children's responses to the eight questions had good internal reliability (Cronbach's $\alpha = .83$), we created an average composite score for attitudes ($M = 3.20$, $SD = .73$), in which higher numbers indicate more positive attitudes toward homeless children.

Past volunteering. Because everyday helping behavior typically requires a yes–no choice of helping versus not helping someone, to assess children's past volunteerism, children were asked: "Have you ever helped collect money for people in need?" (0 = no, 1 = yes; $M = .84$, $SD = .37$; for other examples of using dichotomous measures of helping, see Batson, Sager, Garst, Rubchinsky, & Dawson, 1997; Johnson et al., 1998).

Procedure

Each classroom was tested separately, but within each classroom the children participated as a group. The children were told that they were participating in a research study addressing children's opinions about others and helping. Participants were trained in how to use response scales as well as in the difference between giving their own opinion and someone else's. The children were then given a questionnaire packet and asked to give their personal opinion. The packet consisted of measures of their attitudes toward homeless children, of past volunteering, and of theories about the malleability of human traits.

Results and Discussion

We found evidence for our two main hypotheses. The more children reported believing in the malleability of human attributes, the more positive were their attitudes toward homeless children, $r(232) = .18$, $p < .01$, and the more past volunteering they reported for people in need, $r(164) = .19$, $p < .05$. It should be noted that fluctuations in the sample size for evaluation measures of homeless children are due to missing data from children who failed to answer all of the items in the survey packet. About 30% of the participants did not complete the measures of past volunteering because of an error in photocopying study materials.

Given that past work has shown that females tend to volunteer more than do males (e.g., Fitch, 1991; Serow, 1990), we examined the relation between children's gender and our dependent variables. Girls were significantly more positive in their attitudes toward homeless children, $r(233) = .22$, $p = .01$; however, girls and boys did not differ significantly in their reports of their past volunteering, $r(164) = .12$, ns . We may not have found a gender difference in

our measure of past reports of volunteerism because our measure of volunteerism was general. That is, previous research indicates that differences between males and females in volunteering may be found for only some target groups and for some types of volunteering (Signorella & Vegega, 1984), and thus our measure may not have been sensitive enough to tap into potential gender differences in volunteering.

Because children's theory and gender both related to attitudes toward homeless children, we tested whether the relation between participants' theory and gender were independent of the influence of each other. Participants' theory, gender, and the interaction between gender and theory were entered into a regression equation predicting attitudes toward homeless children. All three variables were centered by transforming them into deviation scores (see Aiken & West, 1991). Unique portions of the variance in attitudes toward homeless children were accounted for by participants' lay theory, $\beta = .19$, $F(1, 229) = 9.21$, $p < .01$, and participants' gender, $\beta = .22$, $F(1, 229) = 12.72$, $p < .01$. Thus, even when controlling for the effects of participants' gender, participants' theory scores accounted for a significant portion of the variance in attitudes toward homeless children. The interaction between lay theory and gender was not significant, $\beta = -.10$, $F(1, 229) = 2.71$, $p > .10$. We also should note that consistent with past work (e.g., Levy & Dweck, 1999), children's theory scores did not relate significantly to their gender, $r(244) = .00$. As another side note, children's attitudes toward homeless children were not significantly related to past volunteering, $r(156) = .09$, $p = .28$.

Taken together, findings from this study showed that children's lay theory beliefs significantly related to their attitudes toward homeless persons and to their reports of past volunteering.

Study 2

In the second study, we sought to replicate and extend the findings from Study 1 by assessing children's attitudes toward a different disadvantaged outgroup, UNICEF-funded children, as well as children's actual volunteer behavior for that group. To understand how theories about traits related to actual volunteerism, we followed the children across the academic year, measuring their evaluations of UNICEF-funded children before they volunteered and immediately afterward, and the impact of their experience 5 months later.

In our prevolunteer event assessment, we expected to replicate our findings from Study 1 that children who hold more of a malleable view would

have more positive attitudes toward outgroup children in need of volunteer help. In the immediate assessment of their volunteer experience, we planned to extend the findings from Study 1 by demonstrating that children holding a more malleable view would be more active volunteers (i.e., carrying their UNICEF collection container for a longer amount of time while trick-or-treating and more frequently asking strangers for donations). We further proposed that, because volunteer activities aim to improve others' lives, the more children believe people can change (e.g., improve), the more they would view their volunteer actions as effective and competent. Much prior theory and evidence suggest that, in general, humans enjoy feeling competent and effective in their actions (e.g., Deci & Ryan, 2000; Harter, 1978; White, 1959). Thus, holding a more malleable view of human attributes should predict greater enjoyment of a volunteer experience.

At the end of the academic year, many months after their volunteer experience, we expected that differences as a function of lay beliefs would still be apparent, namely, that children holding more of a malleable view would have greater intentions to volunteer in the future and would more highly recommend collecting money for UNICEF to a child their age.

Also in this study, we took a step toward examining the potential cyclical relation between children's theory about the malleability of traits and volunteerism by examining one potential mediator, that is, whether enjoyment of collecting money for UNICEF mediates the relation between theories about traits and willingness to volunteer again in the future. Prior work directly indicates that enjoyment of a volunteer experience promotes greater willingness to volunteer in the future (e.g., Omoto & Snyder, 1995; see also Yates & Youniss, 1996). Enjoyment of current volunteering, then, may be a mechanism linking one's lay theory of traits to one's willingness to volunteer in the future.

To help isolate the relation between lay theories about the malleability of traits and volunteerism, we also assessed and controlled statistically for children's general levels of self-esteem and perceived social pressure to volunteer, which are factors related to youth volunteerism (e.g., Conrad & Hedin, 1989; Independent Sector, 1999, 2001; Yates & Youniss, 1996).

Method

Participants

Participants were recruited from a medium-sized suburban elementary school in Long Island, New

York and included children who agreed to participate and whose parents or legal guardians provided written consent. The sample comprised 176 fifth and sixth graders (86 boys and 90 girls) between the ages of 9 and 12 ($M = 10.45$, $SD = .59$). According to information provided by the school, the ethnic makeup of fifth and sixth graders was approximately 1.8% African American; 1% American Indian, Alaskan, Asian, or Pacific Islander; 96.8% Caucasian; and .4% Hispanic. The median household income for families living in the towns for these schools ranged from \$103,600 to \$208,200.

Prevolunteering Measures (4–6 Days Before Halloween)

Lay theories about the malleability of human traits. Children completed the same four-item measure from Study 1 with the addition of two new items (“Who can change their personality?” [1 = no one, 2 = only a few people, 3 = some people, 4 = medium number of people, 5 = a lot of people, 6 = everybody]; “How much can people can change their personality?” [1 = none, 2 = a little, 3 = some, 4 = a medium amount, 4 = a lot, 5 = completely]). These two items were added to help tap into beliefs about degree and scope of change. The measure showed good internal reliability (Cronbach’s $\alpha = .86$; $M = 4.13$, $SD = 1.06$). As in Study 1, in data analyses, responses to the measure were used in a continuous way to keep all of the individual differences. Higher numbers indicate greater endorsement of the malleable view.

Attitudes toward UNICEF-funded children. We used the same eight-item attitude measure described in Study 1, replacing “homeless” with “UNICEF.” As in Study 1, children’s responses to the eight questions had good internal reliability (Cronbach’s $\alpha = .86$); thus, we created an average composite score for attitudes ($M = 3.38$, $SD = .69$), in which higher numbers indicate more positive attitudes toward UNICEF-funded children.

Social pressure to collect money for UNICEF. Children were asked four questions to assess the degree of social pressure they felt to collect money for UNICEF: “How important does/do your teacher [school; friends; parents] think it is to collect money for UNICEF?” Responses were based on a scale ranging from 1 (*not at all*) to 5 (*very much*). Children’s responses to the questions had good internal reliability (Cronbach’s $\alpha = .82$) and thus were averaged to create a composite score for social pressure ($M = 4.30$, $SD = .65$).

Self-esteem. We assessed children’s level of self-esteem using Rosenberg’s (1965) self-esteem scale,

which contains 10 items (e.g., “I take a positive attitude toward myself”), which participants evaluate on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Participant’s responses to the scale items (reverse-scoring when needed) were summed and averaged to create a self-esteem index, with higher scores indicating higher self-esteem (Cronbach’s $\alpha = .79$; $M = 3.15$, $SD = .43$).

Immediate Postvolunteering Measures (Day After Halloween)

Active participation in collecting money for UNICEF while trick or treating. We used a measure of perceived effort to assess active participation, which is similar to measures of perceived time cost used in understanding helping behavior (e.g., Batson et al., 1997; Cialdini et al., 1997). Children were asked two questions to assess their degree of active participation in collecting money for UNICEF while trick-or-treating: “How much of the time did YOU carry your UNICEF collection can while trick or treating?”; “While trick or treating, how often did YOU ask people who were giving treats to also donate money to UNICEF?” (1 = none of the time, 2 = some of the time, 3 = most of the time, 4 = the whole time). Children’s responses to the two questions were significantly correlated, $r(93) = .75$, $p < .001$, and thus were averaged to create a composite score for active participation ($M = 2.84$, $SD = 1.06$).

Enjoyment of volunteering. Children were asked two questions to assess their enjoyment of helping collect money for UNICEF-funded children: “How much did you enjoy collecting money for UNICEF on Halloween?” (1 = not at all, 2 = a little, 3 = some, 4 = very much, 5 = very, very much); “How fun was collecting money for UNICEF?” (1 = not at all fun, 2 = a little fun, 3 = some fun, 4 = a lot of fun, 5 = very fun). Children’s responses to the two questions were significantly correlated, $r(82) = .67$, $p < .001$, and thus were averaged to create a composite score for enjoyment with volunteering ($M = 3.82$, $SD = 1.03$).

Delayed Postvolunteering Measures (Approximately 5 Months After Halloween)

Willingness to volunteer in the future. To assess participants’ willingness to volunteer in the future, they were asked two questions: “Would you like to collect money for UNICEF next year on Halloween?” (1 = not at all, 2 = a little, 3 = some, 4 = very much, 5 = very, very much); “How willing would you be to help people who are less fortunate than you in the

future?" (1 = not at all, 2 = a little, 3 = some, 4 = a lot, 5 = very much). Children's responses to the two questions were significantly correlated, $r(84) = .43$, $p < .001$, and thus were averaged to create a composite score for willingness to volunteer in the future ($M = 4.24$, $SD = .82$).

Recommendation of volunteering to a peer. To further tap children's enjoyment with volunteering, children were asked: "How much would you recommend collecting money for UNICEF to a kid your age?" (1 = not at all, 2 = a little, 3 = some, 4 = a lot, 5 = very much; $M = 4.19$, $SD = .86$).

Procedure

As in Study 1, each classroom was tested separately, but within each classroom the children participated as a group. Children completed measures on three occasions. During the prevolunteering session, which occurred 4 to 6 days before Halloween (depending on which day the classroom was tested), children were told that they were participating in a research study about UNICEF. As part of this session, children listened to a presentation on UNICEF in which they learned about the mission of UNICEF and ways in which this organization helps impoverished children around the world. Children also learned about the fundamentals of the Trick-or-Treat for UNICEF campaign, as well as ways in which the money they collected would be used to help promote changes in children supported by UNICEF. Children learned how the money would help supply shelter, vaccinations, nourishing food, and school supplies to UNICEF-sponsored children, and they were provided with specific examples ("\$1 buys 20 water tablets to purify 4.4 gallons of water"; "\$2.46 buys a complete set of school supplies for one needy child") so that they could envision how the money would produce concrete changes in the children's lives (e.g., including changes that would affect the children's attributes [e.g., greater motivation and sociability due to improved health and better school environment] and status as impoverished). To capture and keep the children's attention, high-quality colorful posters supplied by UNICEF were used during the presentation. Following the presentation, children were trained in how to use response scales, as well as in the difference between giving their own opinion and someone else's. The children were then given a questionnaire packet and asked to give their personal opinion. Children completed measures of their attitudes toward UNICEF-funded children, of social pressure to collect money for UNICEF, of theories about the malle-

ability of human traits, and of self-esteem. At the end of the session, children were given UNICEF collection containers to take with them when they went trick-or-treating on Halloween.

In the immediate postvolunteering session, which occurred the day after Halloween, children were asked about their trick-or-treating experience: how actively they participated in collecting money for UNICEF while trick-or-treating and how enjoyable they found this experience. (We were unable to measure how much money children actually collected for UNICEF.)

In the delayed postvolunteering session, which occurred approximately 5 months after Halloween, children were asked follow-up questions about their volunteer experience: how willing they would be to help collect money for UNICEF and other organizations in the future and whether they would recommend collecting money for UNICEF to a child their age.

Results and Discussion

Overview of Analyses

The analyses that follow are organized into three parts: participants' evaluations of children supported by UNICEF (prevolunteering session), their reports of the volunteer experience (immediate postvolunteering session), and their reports of the impact of the experience on future volunteering (delayed postvolunteering session). We examined the correlations between each of these outcome measures and participants' theory about the malleability of traits as well as the relation between each of these outcome measures and three other variables relevant to judging and helping groups in need (participants' gender, self-esteem, and reports of social pressure to volunteer). Because these four predictors share predictive validity and some are correlated with one another (see Table 1), we followed up our correlational analyses with regression analyses in which we attempted to show that participants' theory about the malleability of traits significantly relates to the outcome measures even when statistically controlling for these three other relevant predictors (i.e., when all four variables are included in the regression). Finally, as an initial test of the potential cyclical relation between children's theory about the malleability of traits and volunteerism, we conducted a mediational analysis to test a potential mediator of the relation between theories about traits and future volunteering. Table 1 contains

Table 1
Correlations among Variables, Study 2

Measure	Theory	Self-esteem	Social pressure	Gender
Prevolunteer experience				
1. Theory ($n = 176$)	—			
2. Self-esteem ($n = 173$)	.26**	—		
3. Social pressure to help ($n = 176$)	.08	.13 [†]	—	
4. Gender ($n = 176$)	-.05	.15*	.15*	—
5. Attitudes ($n = 171$)	.22**	.29***	.43***	.20*
Volunteer experience				
6. Active participation ($n = 92$)	.32**	.00	.25*	-.15
7. Enjoyment ($n = 82$)	.44***	.17	.40***	.13
Impact of experience				
8. Willingness to help in the future ($n = 158$)	.23**	.15 [†]	.36***	.18*
9. Recommendation to peer ($n = 144$)	.24**	.26**	.50***	.15 [†]

Note. Theory = Theory about malleability of traits. Fluctuations in the sample size reflect missing data from children who failed to answer all the items in the survey packet or attrition across sessions. Because we had a low turnout for the third session, we examined the relation between attrition in the third session and children's theory score and found no relation, $r(176) = .01$, *ns*.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

the correlations among the predictors and outcome measures. As a side note, the relation between children's attitudes toward UNICEF-funded children and active volunteering was not statistically significant, $r(90) = .20$, $p = .07$.

Evaluations of Children Supported by UNICEF

In the top portion of Table 1 are participants' prevolunteering ratings of children supported by UNICEF. As predicted and consistent with the findings from Study 1, the more children believed in a malleable view, the more positive attitudes they had to UNICEF-funded children—liking them more, desiring more social contact with them, and perceiving greater similarity between themselves and children supported by UNICEF. Thus, the findings from Study 1 do not appear to be specific to judgments of homeless children. The findings from the two studies suggest that children's lay theories about the malleability of traits relate to different evaluations of outgroups in need of volunteer help.

Other variables relevant to volunteerism also were significantly related to attitudes toward children supported by UNICEF. As anticipated from past work on volunteerism (e.g., Fitch, 1991; Serow, 1990) and results from Study 1, girls were significantly more positive in their attitudes toward children supported by UNICEF. Also as suggested by past work (e.g., Conrad & Hedin, 1989; Yates & Youniss, 1996), children's reported levels of self-esteem related significantly positively to their attitudes toward UNICEF-funded children. Moreover, as anticipated from past work (e.g., Indepen-

dent Sector, 1999, 2001; Rosenthal et al., 1998), the social pressure that children felt to help UNICEF-funded children also was significantly related to their attitudes toward them.

To examine whether the relation between participants' theory and attitudes toward children supported by UNICEF was independent of the influence of the other three predictors, all four predictors were entered into a regression equation predicting attitudes toward UNICEF-funded children. Unique portions of the variance in attitudes toward UNICEF-funded children were accounted for by all four predictors: participants' lay theory, $\beta = .16$, $F(1, 163) = 5.41$, $p < .05$; participants' self-esteem levels, $\beta = .18$, $F(1, 163) = 6.63$, $p < .05$; participants' reports of social pressure to help, $\beta = .36$, $F(1, 163) = 28.62$, $p < .001$; and participants' gender, $\beta = .15$, $F(1, 163) = 4.65$, $p < .05$, with girls having more positive attitudes toward children supported by UNICEF than boys. Most germane to our investigation, these findings indicate that even when controlling for these three variables, participants' theory scores accounted for a significant portion of the variance in reported attitudes toward UNICEF-funded children; thus, this relation cannot easily be explained by these other relevant variables.

Volunteer Experience

In the middle portion of Table 1 are participants' reports of the actual volunteer experience as assessed in the immediate postvolunteering measure. As predicted, the more children subscribed to a malleable belief, the greater active participation they

reported and the greater was their enjoyment with their volunteer experience. Thus, children holding a more malleable view are not only more positively inclined toward children supported by UNICEF but also become more actively involved in helping them, that is, by carrying their UNICEF collection container for a longer amount of time while trick-or-treating and more frequently asking strangers for donations. Moreover, they enjoyed the experience.

In terms of the other three predictors, children's gender and reported self-esteem were neither significantly related to their enjoyment of their volunteer experience nor to their active participation, whereas the social pressure that children felt to help UNICEF-funded children related both to greater active participation and to greater enjoyment of their volunteer experience.

In regression analyses including all four predictors, we again explored unique relations between the four predictors and the volunteer experience measures. Unique portions of the variance in active participation were accounted for by participants' theory scores, $\beta = .37$, $F(1, 85) = 12.22$, $p = .001$, and by participants' reports of social pressure to help, $\beta = .20$, $F(1, 85) = 3.99$, $p < .05$. Unique portions of the variance in enjoyment were accounted for by participants' theory scores, $\beta = .40$, $F(1, 77) = 15.21$, $p < .001$, as well as by participants' reports of social pressure to help, $\beta = .33$, $F(1, 77) = 10.69$, $p < .01$, and participants' gender, $\beta = .14$, $F(1, 77) = 2.29$, $p < .05$.

Thus, children holding a more malleable view reported being more active and satisfied volunteers, and this difference does not seem easily attributable to the effects of other relevant variables.

Impact of Volunteer Experience

The results of our initial analyses relating participants' reports of the impact of their volunteer experience as assessed in the delayed postvolunteering survey are given in the bottom portion of Table 1. As predicted, the more children subscribed to a malleable view of traits, the more willing they were to help in the future and the more they recommended volunteering to a peer.

In addition, we found that girls were significantly more willing to help in the future, but only marginally significantly higher in their recommendations of volunteering to a peer. Children's reported self-esteem was significantly related to their recommendations of volunteering to a peer but was marginally significantly related to their willingness to help in the future. The social pressure that children felt to help UNICEF-funded children was also related to

greater willingness to help in the future and to higher recommendations of volunteering to a peer.

We also explored whether the predictors had unique relations to the measures of the impact of the experience by including all four predictors in a regression. Unique portions of the variance in willingness to help were accounted for by participants' theory scores, $\beta = .20$, $F(1, 158) = 6.81$, $p = .01$, as well as by participants' reports of social pressure to help, $\beta = .31$, $F(1, 158) = 17.55$, $p < .001$, and participants' gender, $\beta = -.15$, $F(1, 158) = 4.45$, $p < .05$. Unique portions of the variance in recommendations of volunteering were accounted for by participants' theory scores, $\beta = .20$, $F(1, 144) = 3.90$, $p = .05$, and by participants' reports of social pressure to help, $\beta = .45$, $F(1, 144) = 40.82$, $p < .001$.

Taken together, these findings show that children's theory scores related significantly to their reports of the impact of the volunteer experience and these relations are not easily attributable to other relevant variables.

Mediational Analysis

These delayed postvolunteering findings nicely replicate the immediate postvolunteering findings. It may be that because children holding a more malleable view enjoyed their experience more, they were more willing to volunteer again. To test this idea, we examined whether enjoyment with volunteering mediates the effect of theory about traits on future volunteering. We conducted a series of three regression analyses to test for conditions for mediation as delineated by Baron and Kenny (1986; see also Kenny, Kashy, & Bolger, 1998). In the first regression analysis, the hypothesized cause (lay theory) was the predictor variable, and the hypothesized mediator (enjoyment) was the criterion variable. Consistent with previously presented results, we found that lay theory was a significant predictor, $\beta = .44$, $F(1, 80) = 18.97$, $p < .001$. In the second regression analysis, the hypothesized cause (lay theory) was the predictor variable, and the hypothesized effect (future volunteering) was the criterion variable. Again, consistent with previously presented results, we found that lay theory was a significant predictor, $\beta = .38$, $F(1, 80) = 13.85$, $p < .001$. In the third regression analysis, both the hypothesized mediator (enjoyment) and hypothesized cause (lay theory) were simultaneous predictors, and the hypothesized effect (future volunteering) was the criterion variable. Participants' degree of enjoyment with volunteering remained significant, $\beta = .78$, $F(1, 79) = 110.40$, $p < .001$, suggesting that enjoyment predicts future volunteering over

and above any direct influence of lay theory on future volunteering. Finally, in this third regression analysis, the beta for lay theory was reduced to .04 (from .38 in the unmediated second equation) and no longer significant, $F(1, 79) < 1$. Furthermore, using Baron and Kenny's (1986; see also Kenny et al., 1998) modification of the Sobel (1982) test, we found that this reduction, which reflects the indirect effect of theory (through enjoyment) on future volunteering, was statistically significant, $Z = 4.00$, $p < .001$. Thus, it is possible that perceived enjoyment of volunteering is one route through which a potentially cyclical relation between people's lay theory about the malleability of traits and volunteerism is maintained. In the general discussion, we further take up the topic of how a malleable view may both promote and sustain volunteerism.

General Discussion

Findings from the present investigation suggest that children's lay theories about the malleability of traits relate significantly to their evaluations of and volunteerism for disadvantaged others. Across two studies with fifth and sixth graders, we found that children differed in their beliefs about the malleability versus fixedness of human attributes and that this difference significantly related to their evaluations of and volunteerism for disadvantaged outgroups. These differences held across two target groups (homeless children and UNICEF-funded children). Participants holding a more malleable view reported more positive attitudes—reporting greater liking of, desiring greater social contact with, and perceiving greater similarity between themselves and both homeless children and UNICEF-supported children. Moreover, children holding a more malleable view reported greater active past volunteering for groups in need and greater current active participation in volunteering. Furthermore, children holding a more malleable view reported enjoying their volunteer experience more, more highly recommended volunteering for UNICEF to a peer, and had greater intentions to volunteer to help people less fortunate than themselves in the future. It is important to note that the role of children's lay theories in their attitudes and volunteer experience were found across the academic year. Furthermore, our findings as a function of lay theories were not attributable to the effects of other variables relevant to judging disadvantaged groups and volunteering for disadvantaged groups, such as children's gender, self-esteem levels, or perceived social pressure to help. As a whole, our findings

suggest that children's beliefs in the malleability of human traits support more accepting views of disadvantaged outgroups in need and greater active intergroup volunteerism.

Implications and Extensions: Do Lay Theories about the Malleability of Human Traits Contribute to a Cycle of Volunteerism?

Our findings showed that children's lay theories are related to the extent to which children have volunteered in the past (Study 1) and the extent to which they currently volunteer and intend to volunteer in the future for disadvantaged outgroups in need of help (Study 2). A malleable view, then, may be part of a promising cycle of volunteerism in which the malleable view and volunteerism may be mutually sustaining. How might this work? We suggest three possible mediators that may grow out of a malleable view and help sustain a malleable view and intergroup volunteerism.

First, enjoyment or satisfaction with volunteering appears to be a mediator. That is, as revealed in the mediational analyses in Study 2, children's enjoyment with volunteering (collecting money for UNICEF) mediated the relation between their lay theories about the malleability of traits and willingness to volunteer in the future. Because a malleable view, by definition, points to the possibility of change in people's qualities and thereby their life conditions, children holding this view likely expected their efforts on behalf of UNICEF to help bring about positive changes in the conditions of children supported by UNICEF, which may lead to greater pleasure in their volunteering experience than holding a less malleable view. The finding that children holding a more malleable view enjoyed their experience more is consistent with much prior theory and evidence suggest that, in general, humans enjoy feeling competent and effective in their actions (e.g., Deci & Ryan, 2000; Harter, 1978; White, 1959). Results from our mediational analysis suggest that having enjoyed their experience, children holding a more malleable view were more willing to volunteer again. This finding is consistent with prior work (e.g., Omoto & Snyder, 1995; see also Yates & Youniss, 1996) showing volunteers' greater enjoyment and satisfaction with a volunteer experience relates to greater willingness to volunteer in the future.

A second possible mediator that may sustain and even elicit a malleable view is a volunteer identity. Past research and theorizing indicates that volunteering can promote changes in identity develop-

ment (e.g., Erikson, 1968; Mortimer et al., 1982; Youniss & Yates, 1997). For example, Youniss and Yates (1997) found that adolescents who were initially required to work at a soup kitchen for homeless people as part of a service-learning program continued to volunteer past their required visits in part because of the development of an identity as someone who respects and helps others. Building on this, we suggest that youth who hold a more malleable view may be more inclined to develop an identity as a volunteer because while volunteering, the malleable belief that "people can change" seems amenable to the volunteer identity belief that "I help people change," which would then sustain volunteering and a malleable belief. The reverse seems plausible, too—that children who already have a volunteer identity would be more inclined to adopt a malleable view of people.

A third possible mediator that may help sustain a malleable view and maintain active volunteerism is direct contact with help recipients. When volunteerism involves contact with outgroup help recipients, we propose that the malleable view and volunteerism can help sustain one another. This proposal is based on two assumptions. First, because holding a malleable view draws one to dynamic situational explanations for people's behaviors and outcomes (e.g., Levy & Dweck, 1999; Levy et al., 1998), we expect youth holding more malleable views to try to learn about or consider both the circumstances fostering recipients' situations and how recipients' situations could improve. Second, because holding a more malleable view fosters a view of greater overlap between social groups as revealed in the findings of Studies 1 and 2, we expect youth holding a more malleable view to imagine role reversals more easily (i.e., the self as homeless, a homeless person as a student in one's school). We hypothesize that the greater accessibility of malleability-relevant information produced by these two mechanisms may then maintain a more malleable view and, as a result, sustain volunteerism. Accordingly, volunteers initially lacking a malleable view may develop one if volunteer situations are structured to draw attention to malleability-relevant information about recipients. Although in the present investigation we have shown that holding a more malleable view relates to higher levels of volunteerism that do not involve direct interaction with help recipients, our findings suggest that lay theories also may play a role in interactive volunteerism. That is, our finding that children holding a more malleable view were more willing to interact with homeless children and children supported by UNICEF suggest that youth holding a

more malleable view of others might be more willing to try to get to know help recipients when this is possible, for example, when they volunteer at homeless shelters or soup kitchens. In short, we expect a more malleable view of human attributes to set in motion intergroup interactions in volunteer situations that can help maintain a malleable view and that can activate a cycle of volunteerism.

Thus, there are several means through which a malleable view and volunteerism may be linked and mutually sustaining; a malleable view may promote enjoyment with volunteering, promote a volunteer identity, or promote interaction with help recipients including exposure to malleability-relevant information. In contrast, youth holding a more fixed view are expected to invest less time and energy in intergroup volunteerism and be less likely to notice progress, thereby maintaining their more fixed view and sustaining their low investment in volunteerism.

Future work is needed to test these potential mediators and to address when the malleable view is the motivator of volunteering and when it is the outcome of volunteering (i.e., a malleable view developed as a result of past volunteer behavior). Accordingly, a next step is to test the causal relationship between a malleable view and volunteerism. Past work has shown that students' lay theories about the malleability of traits can be changed, at least temporarily, with the use of brief articles or presentations of "scientific" findings supporting either a fixed or malleable view (Chiu, Hong, & Dweck, 1997; Levy, 1998; Levy et al., 1998). Similar inductions of the malleable view could be used to promote volunteerism.

To summarize, future work is needed to test the causal and cyclical effects of these lay theories on intergroup volunteerism. With the findings from the present investigation, future work can contribute to the further development of a new theoretical approach to volunteerism based on the lay theories model.

Practical Implications

Beyond these theoretical issues, what are the practical implications of identifying factors such as lay theories that play a role in intergroup volunteerism? For one, we need to understand better the factors that relate to volunteerism due to volunteerism is needed in the United States. Due to cutbacks in government-funded social services, disadvantaged groups are in growing need of support (e.g., National Coalition for the Homeless, 1997; UNICEF, 2001; U.S. Conference of Mayors, 2000). In addition, understanding mechanisms that can promote

prosocial behavior toward socially stigmatized groups is critical because of the increasing diversity of the U.S. population and the continued presence of prejudice among children (e.g., Aboud & Fenwick, 1999; Bigler & Liben, 1993) and adults (e.g., Herek, 2000; Southern Poverty Law Center, 2000) and the costs of stigma (e.g., Crocker et al., 1998; Whitbeck et al., 2000). Moreover, not only do volunteers make significant contributions to the people they assist and to society, but a growing body of research shows that volunteerism benefits volunteers' psychological development (e.g., personal competence), academic competence (e.g., school grades), and social development (e.g., social responsibility; e.g., Conrad & Hedin, 1989; Yates & Youniss, 1996). Volunteerism, then, can serve as a primary prevention tool, breaking the vicious cycle of prejudice and buffering volunteers against later negative outcomes such as delinquency (e.g., Moore & Allen, 1996; Newmann & Rutter, 1983). Furthermore, the positive benefits of early volunteering may translate into volunteering through adulthood (e.g., Independent Sector, 2001) and modeling volunteerism for one's children. Accordingly, school service-learning programs are growing in number and scope in the United States. The formal coursework required of these community service programs encourages volunteerism through teaching responsibility, as well as making salient the significance of community service and how it benefits society and the individual (for a review, see Ferrari & Chapman, 1999). Even for schools that require volunteerism, it is crucial to identify which factors sustain volunteerism once required service ends (e.g., Omoto & Snyder, 1995; Yates & Youniss, 1996).

Conclusion

Given increases in youth volunteerism and in the need for volunteered help especially for socially stigmatized groups, it is timely and important to investigate factors that contribute to intergroup volunteerism. The current research has provided initial evidence for a new approach to intergroup volunteerism based on the lay theories approach. We have shown that the more children hold a malleable view of others, the more positive attitudes they hold toward homeless children and UNICEF-supported children, and the more likely they are to have volunteered in the past, be more likely to engage in volunteerism, and be more willing to volunteer for disadvantaged outgroups in the future. We also provided evidence of how the potentially cyclical relation between people's theory about the malle-

ability of traits and volunteerism may be maintained. By exploring how lay theories about traits affect the ways youth negotiate the intergroup volunteer process, this line of work can provide concrete recommendations for maximizing the benefits of volunteerism and improving intergroup relations.

References

- Aboud, F. E. (1988). *Children and prejudice*. New York: Blackwell.
- Aboud, F. E., & Fenwick, V. (1999). Evaluating school-based interventions to reduce prejudice in preadolescents. *Journal of Social Issues, 55*, 767–785.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. London: Sage.
- Americorps. (2001, February 28). *President Bush continues support for national service: Budget promotes volunteerism and funds new senior service initiatives*. Retrieved April 18, 2002, from <http://www.nationalservice.org/news/pr/022801.html>.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Batson, C. D., Sager, K., Garst, E., Rubchinsky, M. K., & Dawson, K. (1997). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology, 73*, 495–509.
- Bigler, R. S., & Liben, L. S. (1993). A cognitive–developmental approach to racial stereotyping and reconstructive memory in Euro–American children. *Child Development, 64*, 1507–1518.
- Chiu, C., Hong, Y., & Dweck, C. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology, 73*, 19–30.
- Cialdini, R. B., Brown, S. L., & Lewis, B. P. (1997). Reinterpreting the empathy–altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology, 73*, 481–494.
- 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.
- Conrad, D., & Hedin, D. (1989). *High school community service: A review of research and programs*. Madison: Wisconsin Center for Education Research.
- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology: Vol. 2* (4th ed., pp. 504–553). New York: McGraw Hill.
- Deci, E. L., & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.
- Dweck, C. S., Chiu, C., & Hong, Y. (1995). Implicit theories and their role in judgments and reactions: A world from two perspectives. *Psychological Inquiry, 6*, 267–285.

- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia: Psychology Press.
- Erdley, C. A., & Dweck, C. S. (1993). Children's implicit personality theories as predictors of their social judgments. *Child Development, 64*, 863–878.
- Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: Norton.
- Feather, N. T. (1990). *Bridging the gap between values and actions: Recent applications of the expectancy-value model* (In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior*, Vol. 2 (pp. 151–192). New York: Guilford Press.
- Ferrari, J. R., & Chapman, J. G. (1999). *Educating students to make a difference: Community-based service learning*. New York: Haworth Press.
- Fitch, R. T. (1991). Differences among community service volunteers, extracurricular volunteers, and nonvolunteers on the college campus. *Journal of College Student Development, 32*, 534–540.
- Hamilton, S. F., & Fenzel, L. M. (1988). The impact of volunteer experience on adolescent social development: Evidence of program effects. *Journal of Adolescent Research, 3*, 65–80.
- Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. *Human Development, 21*, 34–64.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Herek, G. (2000). The psychology of sexual prejudice. *Current Directions in Psychological Science, 9*, 19–22.
- Hong, Y. Y., Levy, S. R., & Chiu, C. Y. (2001). The contribution of the ideologies approach to the study of groups. *Personality and Social Psychology Review, 5*, 98–106.
- Independent Sector. (1999). *Giving and volunteering in the United States: Findings from a national survey 1999 edition*. Washington, DC: Author.
- Independent Sector. (2000). *Summary of teen volunteering*. Retrieved April 18, 2002, from http://www.independentsector.org/media/Archive/teen_summary.html.
- Independent Sector. (2001). *Giving and volunteering in the United States: Findings from a national survey 2001 edition*. Washington, DC: Author.
- Johnson, M. K., Beebe, T., Mortimer, J. T., & Snyder, M. (1998). Volunteerism in adolescence: A process perspective. *Journal of Research on Adolescence, 8*, 309–332.
- Katz, P. A., Sohn, M., & Zalk, S. R. (1975). Perceptual concomitant of racial attitudes in urban grade-school children. *Developmental Psychology, 11*, 135–144.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology: Vol. 1* (4th ed., pp. 233–265). New York: McGraw-Hill.
- Levy, S. R. (1998). *The impact of children's static vs. dynamic conceptions of people on their intergroup attitudes*. Unpublished doctoral dissertation, Columbia University, New York.
- Levy, S. R., & Dweck, C. S. (1999). The impact of children's static vs. dynamic conceptions of people on stereotype formation. *Child Development, 70*, 1163–1180.
- Levy, S. R., Plaks, J. E., Hong, Y. Y., Chiu, C. Y., & Dweck, C. S. (2001). Static vs. dynamic theories and the perception of groups: Different routes to different destinations. *Personality and Social Psychology Review, 5*, 156–168.
- Levy, S. R., Stroessner, S. J., & Dweck, C. S. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology, 74*, 1421–1436.
- Moore, C. W., & Allen, J. P. (1996). The effects of volunteering on the young volunteer. *Journal of Primary Prevention, 17*, 231–258.
- Mortimer, J. T., Finch, M. D., & Kumka, D. (1982). Persistence and change in development: The multidimensional self-concept. *Life-Span Development and Behavior, 4*, 263–312.
- National Coalition for the Homeless. (1997). *Homelessness in America: Unabated and increasing, 1997*. Washington, DC: Author.
- Newmann, F. A., & Rutter, R. A. (1983). *The effects of high school community service programs on students' social development: Final report*. Madison: Wisconsin Center for Educational Research.
- 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.
- Piaget, J., & Garcia, R. (1989). *Psychogenesis and the history of the sciences* (H. Fielder, Trans.). Paris: Flammarion (Original work published 1983).
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rosenthal, S., Feiring, C., & Lewis, M. (1998). Political volunteering from late adolescence to young adulthood: Patterns and predictors. *Journal of Social Issues, 54*, 477–493.
- Serow, R. C. (1990). Volunteering and values: An analysis of students' participation in community service. *Journal of Research and Development, 23*, 198–203.
- Signorella, M. L., & Vegega, M. E. (1984). A note on gender stereotyping of research topics. *Personality and Social Psychology Bulletin, 10*, 107–109.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290–312). San Francisco: Jossey-Bass.
- Southern Poverty Law Center. (2000). *Klan watch*. Retrieved April 18, 2002, from <http://www.splcenter.com/intelligenceproject/ip-index.html>.
- United Nations Children's Fund. (2001). *Poverty and children: Lessons of the 90s for least developed countries*. New York: Author.

- United Nations Children's Fund. (2002a). *Kids helping kids: Dear teacher*. Retrieved April 18, 2002, from <http://www.unicefusa.org/issues96/sep96/guide/english.html>.
- United Nations Children's Fund. (2002b). *The Official Summary of the State of the World's Children 2003*. New York: Author.
- United Nations Children's Fund. (2003). *Trick-or-Treat for UNICEF*. Retrieved May 6, 2003, from <http://www.unicef.org/noteworthy/trickortreat>.
- U.S. Conference of Mayors. (2000). *A Status Report on Hunger and Homelessness in America's Cities*. Washington, DC: Author.
- Wegener, D. T., & Petty, R. E. (1998). The naive scientist revisited: Naive theories and social judgment. *Social Cognition, 16*, 1–7.
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigma. *Journal of Personality and Social Psychology, 55*, 738–748.
- Whitbeck, L. B., Hoyt, D. R., & Bao, W. (2000). Depressive symptoms and co-occurring depressive symptoms, substance abuse, and conduct problems among run-away and homeless adolescents. *Child Development, 71*, 721–732.
- White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*, 297–333.
- Yates, M., & Youniss, J. (1996). A developmental perspective on community service in adolescence. *Social Development, 5*, 85–111.
- Youniss, J., & Yates, M. (1997). *Community service and social responsibility in youth*. Chicago: University of Chicago Press.