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PROSOCIAL BEHAVIOR: Multilevel Perspectives

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■ **Abstract** Current research on prosocial behavior covers a broad and diverse range of phenomena. We argue that this large research literature can be best organized and understood from a multilevel perspective. We identify three levels of analysis of prosocial behavior: (a) the “meso” level—the study of helper-recipient dyads in the context of a specific situation; (b) the micro level—the study of the origins of prosocial tendencies and the sources of variation in these tendencies; and (c) the macro level—the study of prosocial actions that occur within the context of groups and large organizations. We present research at each level and discuss similarities and differences across levels. Finally, we consider ways in which theory and research at these three levels of analysis might be combined in future intra- and interdisciplinary research on prosocial behavior.

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PROSOCIAL BEHAVIOR: MULTILEVEL PERSPECTIVES

This chapter provides a comprehensive overview of current theory and research on prosocial behavior among humans. Prosocial behavior represents a broad category of acts that are defined by some significant segment of society and/or one's social group as generally beneficial to other people. Attention to prosocial behavior in psychology originated with McDougall (1908), who argued that prosocial behavior is the result of "tender emotions" created by the parental instinct, but most current research has its roots in lay and scientific reactions to the non-responsive bystanders in the brutal murder of Katherine "Kitty" Genovese in 1964. Since then, it has evolved to encompass a broad range of biological, motivational, cognitive, and social processes (see Dovidio & Penner 2001 and recent *Annual Review of Psychology* articles by Caporael 2001 and Eisenberg 2000). In light of these recent and continuing developments, we believe that it is time to examine prosocial behavior from a multilevel perspective that recognizes the diverse influences that promote actions for the benefit of others, considers the variety of ways in which prosocial behavior can be manifested, and explicates both the common and the unique processes that underlie prosocial acts across the different levels of analysis.

Our organization differs in many respects from that found in chapters on prosocial behavior in many social psychology textbooks and social psychology handbooks (e.g., Batson 1998), as well as in related works in sociology (e.g., Piliavin & Charng 1990). Specifically, we examine prosocial behavior from three distinct, but related, levels of analysis: micro, meso, and macro. Research at the micro level of analysis is primarily concerned with the origins of prosocial tendencies in humans (e.g., neural or evolutionary bases) and the etiology of individual differences in these tendencies. The meso level of analysis refers to studying the behaviors of helper-recipient dyads within the context of a specific situation; helping at this level has been the traditional focus of psychological work on prosocial behavior (see Dovidio & Penner 2001). The macro level of analysis focuses on prosocial actions that occur within the context of groups and large organizations (e.g., volunteering, cooperation). The chapter concludes by briefly considering future directions and questions that remain to be answered about prosocial behavior at each of the three levels. We begin our review by revisiting the original research questions that first spawned interest in helping behavior.

Meso Level of Analysis

Research at the meso level of analysis examines helping at the interpersonal level: one person helping another. Because this has been the traditional focus of research on helping in social psychology and relatively extensive reviews on this topic are available (e.g., Schroeder et al. 1995), we consider this level of prosocial behavior first to establish a benchmark from which to extend our presentation, but are relatively brief in our coverage.

Much of the work at the meso level of analysis, particularly from the mid 1960s until the early 1980s, investigated *when* people would help in emergency and none-emergency situations. Later research and theory, in the 1980s and 1990s, considered *why* people help, examining processes that motivated prosocial action. The most recent developments in the field have expanded the scope of this perspective to examine nonconscious and intergroup influences on helping.

WHEN PEOPLE HELP To organize the large number of research findings that were accumulating in the 1960s and 1970s, general frameworks were developed that modeled the decision process that determines whether individuals will intervene. The first of these, Latané & Darley's (1970) decision model of bystander intervention, proposed that whether or not a person renders aid depends upon the outcomes of a series of prior decisions that involve recognizing the situation as one requiring assistance, deciding to take personal responsibility, and deciding how to help. Although the model was initially developed to understand how people respond in emergencies requiring immediate assistance, aspects of the model have been successfully applied to many other situations, ranging from preventing someone from driving drunk to making a decision about whether to donate a kidney to a relative (Schroeder et al. 1995).

The cost-reward analysis of helping (Piliavin et al. 1981) assumed an economic view of human behavior—people are motivated to maximize their rewards and to minimize their costs. From this perspective, people are relatively rational and primarily concerned about their self-interest. In an emergency, potential helpers analyze the circumstances, weigh the probable costs and rewards of alternative courses of action, and then arrive at a decision that will result in the best personal outcome for them. Research findings are consistent with the central tenet of the cost-reward approach. Situational factors that make bystander interventions more likely to occur include those that decrease the net costs of helping (e.g., by framing helping as an opportunity for personal development; Perlow & Weeks 2002), increase potential rewards of helping (e.g., by enhancing mood; Gueguen & De Gail 2003), or increase the costs of not helping (e.g., by inducing guilt or shame for inaction) (Dovidio et al. 1991).

WHY PEOPLE HELP Although these approaches effectively modeled whether people would help in a given situation, research in the 1980s and 1990s moved to the question of why people engage in prosocial behavior. In general, approaches to the question of why people help focused on three types of mechanisms: (a) learning, (b) social and personal standards, and (c) arousal and affect. The learning explanation applied general principles from learning theories, particularly operant conditioning and social learning, to the acquisition of helping skills and of beliefs about why these skills should be used to benefit others (Grusec et al. 2002). Socialization experiences (Staub 2002) and developmental factors (Eisenberg & Fabes 1991) received considerable attention within this framework. The social and personal standards approach emphasized how norms such as social responsibility

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and reciprocity (Dovidio 1984) can promote helping as people strive to maintain positive self-images or achieve their ideals (Schwartz & Howard 1982) and fulfill personal needs (Omoto & Snyder 1995). This perspective contributed to the shift in emphasis from spontaneous, single-encounter helping to longer term, sustained prosocial behaviors such as volunteering, and thus contributed to the emergence of the macro level of analysis.

Arousal and affect approaches recognized the important role that emotion plays in motivating prosocial action. Affect is a fundamental element of many potential helping situations. People are aroused by the distress of others; this reaction appears even among very young children and occurs across cultures (see Eisenberg & Fabes 1991). Moreover, arousal and affect theories generally shared a guiding principle with learning theory that people are motivated to behave in ways that help them attain some goal—improving the person's own situation (egoistic motivation) or, in some cases, improving the welfare of another person (altruistic motivation).

Although most researchers agree that empathic arousal is fundamental to many kinds of helping (Davis 1994), there is much less agreement about the nature of this emotion and how it actually motivates people to help. Empathic arousal may produce different emotions. In severe emergency situations, bystanders may become upset and distressed (Piliavin et al. 1981); in less critical, less intense problem situations, observers may feel sad (Cialdini et al. 1987), tense (Hornstein 1982), or concerned and compassionate (Batson 1991). How arousal is interpreted can shape the nature of prosocial motivation. Feeling upset, personally distressed, guilty, or sad produces egoistically motivated helping with the goal of relieving one's own negative emotional state (Batson 1991, Cialdini et al. 1997, Piliavin et al. 1981). Feelings of empathic concern, such as sympathy and compassion, arouse altruistic motivation with the primary goal of improving the welfare of the person in need (Batson 1991). Although there is continuing debate about the role of feelings of "oneness" with the recipient of help, self-other merging, and negative self-directed emotions as potential factors underlying some of the empathy-altruism findings (see Maner et al. 2002), the preponderance of evidence indicates that, at least under some specific conditions, altruism can occur among humans (Batson 1998).

Over the years, research at the meso level has evolved in two new directions. One involves processes related to the micro level of analysis, whereas the other is more closely related to the macro level. We consider these developments in the next section.

NONCONSCIOUS AND INTERGROUP INFLUENCES The work more closely related to the micro level has built on significant recent interest in implicit cognition and how processes outside conscious awareness can influence behavior. This work has examined the effects of implicit cognitions on helping. For example, van Baaren et al. (2004) and Garcia et al. (2002) have found that a wide variety of primes can affect the likelihood that a person will offer help.

The line of research more related to the macro level analysis uses theories of intra- and intergroup behavior to investigate how perceived group memberships

influence helping. An extensive body of research based on these theories has consistently revealed a strong favoritism bias toward members of one's own group as opposed to members of other groups (Hewstone et al. 2002, Mullen et al. 1992). Hornstein and his colleagues (e.g., Flippen et al. 1996) have demonstrated that the effects of common group membership increases helping beyond the dyadic effects of interpersonal similarity or attraction. They proposed that factors such as similarity or common fate might give rise to a sense of "we-ness"—a sense of belonging to a common group. This sense of we-ness (analogous to self-other merging) facilitates empathy, which, in turn, leads to more prosocial behaviors. Emotional appeals reflecting a person's need for assistance that emphasize ingroup status can also effectively increase helping (Vaes et al. 2002).

In a direct test of the influence of social categories on helping, Dovidio et al. (1997) found that inducing a "common group identity" (Gaertner & Dovidio 2000) increased helping toward others formerly perceived as outgroup members. Although factors associated with interpersonal helping, such as liking and empathy, were related to helping, only social recategorization as members of a common group fully mediated the effect of the manipulation on helping. Recent research by Sturmer et al. (2004) demonstrated further evidence of the distinction between personal and group processes in helping. They found that because attachment to the person in need is an important factor in the arousal of empathic concern, empathy is a stronger factor determining helping a member of the ingroup than a member of the outgroup. However, interpersonal factors, such as attraction, are stronger predictors of helping for an outgroup member than for an ingroup member (for whom attraction is often depersonalized).

Micro Level of Analysis

Whereas much of the work at the meso level of analysis was stimulated by the question of why people often do not help others in need (Darley & Latané 1968), scholars who studied the origins of prosocial tendencies and individual differences in those tendencies were initially puzzled by the fact that a behavior they thought should not occur (i.e., helping another person at some sacrifice to oneself) occurred quite frequently. Answers as to why this should be have involved evolutionary theory, biological and genetic bases of action, developmental processes, and personality factors.

EVOLUTIONARY THEORY Whereas social psychologists working at the meso level have defined altruism in terms of motivation, evolutionary theorists have defined it in terms of consequences. Contemporary neo-Darwinian models of evolution, which define evolutionary success as the survival of one's genes in subsequent generations, generally agree that prosocial tendencies exist in humans because of (a) genetically based predispositions to act prosocially, and (b) the evolutionary success of people who displayed such predispositions (see Barrett et al. 2002, Buss 2003, Dawkins 1989). The three evolutionary processes or mechanisms most

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commonly proposed to explain why prosocial acts lead to evolutionary success are kin selection, reciprocal altruism, and group selection.

Kin selection Kin selection is based on the premise that what matters in evolution is not individual fitness, but inclusive fitness, which is the successful transmission of one's genes from all sources to the next generation (Hamilton 1964). As a consequence, there is an evolutionary benefit in terms of inclusive fitness to those who regularly help their relatives.

Much of the empirical work on kin selection has focused on the relationship between "relatedness" (i.e., the percentage of genes two individuals share) and willingness to help. Several studies have shown that humans are more inclined to help relatives than unrelated individuals (see Barrett et al. 2002). Data that are even more persuasive have come from studies in which predictions derived from kin selection were essentially "pitted" against social norms and rules for helping. For example, Burnstein et al. (1994) found, consistent with kin selection theory but contrary to the norm of social responsibility, both Americans and Japanese reporting that in a "life-or-death" circumstance (e.g., saving someone from a fire) they would be more likely to help healthy relatives (who presumably were more likely to reproduce) than nonhealthy relatives. Thus, in this simulation participants helped their kin in a manner that maximized their own inclusive fitness (see also Wang 2002).

Other researchers have made more elaborate and refined predictions based on how helping of relatives would affect inclusive fitness. For example, Euler & Weitzel (1996) found that paternal certainty (the likelihood that a putative descendant is actually related to you) caused maternal grandparents to invest considerably more than paternal ones in their grandchildren. Webster (2003) replicated this finding, but also found that the effects of paternal certainty were greatest when the benefactor had limited resources.

Other research on kin selection has focused on learning more about the proximal mechanisms that are responsible for kin selection—how the presumed genetic tendencies are translated into behaviors. Korchmaros & Kenny (2001) demonstrated that emotional closeness partially mediated the effects of genetic relatedness on willingness to help. Kruger (2003) replicated the effect of kinship on helping intentions but found that proximal mechanisms, such as empathic concern and a sense of oneness with the target, did not mediate this relationship. Thus, the search for the proximal mechanisms that make people more likely to help relatives continues.

Reciprocal altruism The concept of reciprocal altruism was proposed to explain the evolutionary advantages of helping unrelated individuals. According to Trivers (1971), humans derive some evolutionary benefit from helping unrelated others *if* this favor is repaid in kind. Systematic investigations of reciprocal altruism as an explanatory mechanism in human prosocial behavior have been less frequent and explicit than have investigations concerned with kin selection. Some of this

research has examined how strangers play zero-sum Prisoner's Dilemma games and found, for example, that reciprocal or "tit-for-tat" strategies, in which people respond in kind to their partner's choice on the previous trial, produce greater payoffs for the players than any other strategy (Axelrod 1984).

Other indirect evidence in support of the notion that reciprocal altruism is a genetic expression is the fact that the norm of reciprocity (Gouldner 1960) apparently exists in every culture in the world (Schroeder et al. 1995), and reciprocity does provide benefits that might add to a person's evolutionary success. For example, people are more likely to help those who offer help (Boster et al. 2001), and offering help increases one's status and reputation among members of one's community (Wedekind & Braithwaite 2002). At least among males, higher status has been associated with greater desirability as a mating partner (Buss 2003). Some researchers have postulated that the reproductive advantages afforded by high status may also explain phenomena such as strong reciprocity or altruistic punishment—cooperation with cooperating others and punishment of noncooperators—even when the costs of cooperating and/or punishing are not likely to be recouped (Gintis et al. 2003).

Costly-signaling theory (Grafen 1990) also uses status gains to explain another seemingly counterintuitive phenomenon—people providing large benefits to others when they know these actions will not be reciprocated. McAndrew (2002) proposes that conspicuous displays of unreciprocated generosity may provide information to others about the benefactors that will enhance perceptions of their reputation and status within the group, because only people with considerable resources would engage in such "generous" behaviors.

Although these explanations of the origins of altruism are widely accepted, they are not without their critics. Caporael (2001), for example, has noted there are other, less male-oriented, explanations of the evolutionary gains that prosocial acts may provide. One of these is considered next.

Group selection The final mechanism proposed to explain the evolutionary benefits of altruism is group level selection (Sober & Wilson 1999). The group-level selection position argues that if two groups are in direct competition with one another, the group with a larger number of altruists (i.e., people willing to sacrifice themselves for the group) will have an advantage over a group comprised mainly of selfish individuals. Thus, the altruistic group would dominate the selfish group and derive a reproductive advantage over them. At a population level, the number of phenotypic (and presumably genotypic) altruists would therefore increase relative to selfish individuals.

Although early versions of group selection theory placed it somewhat in opposition to individual-level selection theories (e.g., kin selection), versions that are more recent allow selection to occur at both levels (multilevel selection theories; McAndrew 2002). Group selection theory has yet to receive much direct empirical support. However, as noted above, Caporael (2001) has provided a persuasive argument for its role in the evolution of altruism among humans.

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Although evolutionary theory is controversial and has its critics (e.g., see Rachlin 2002), it has generated considerable research in this area and has stimulated other productive directions of inquiry. In particular, the proposal that prosocial tendencies are passed from generation to generation via genes has two specific implications. The first is that there must be some physiological or neurological processes that facilitate prosocial behaviors. The second is that at least some of the processes that facilitate prosocial responses are inherited. We consider recent theory and research relevant to these implications in the next section.

BIOLOGICAL AND GENETIC BASES OF PROSOCIAL ACTIONS There have been some recent attempts to explain the neuroanatomy and neurochemistry of prosocial actions. Although the explanatory models differ in many respects, they share the underlying assumption that in most instances people do not reflexively act prosocially, but rather that some physiologically based affective or motivational state precedes prosocial actions. The models then attempt to specify the processes or mechanisms responsible for these states.

Buck (1999, 2002), for example, focused on biological “affects”—feelings and desires that have an innate neurochemical basis—and posited that there are prosocial and selfish kinds of affects. He suggests that the left hemisphere is more strongly associated with prosocial emotions and feelings than is the right. He argues that these emotions facilitate positive communication among members of a species and result in cooperative exchanges that confer an evolutionary advantage to the exchange partners. Buck thus posits, “communicative genes (rather than kin selection or reciprocal altruism) underlie genuine altruism” (Buck 2002, p. 742). However, Buck’s ideas have been strongly criticized by Gray (2002), who argued that there is relatively little empirical support for the proposal that hemispheric differences are reflected in prosocial and selfish affects. Rather, Gray claims that brain systems related to approach and withdrawal tendencies might provide a more parsimonious explanation of the hemispheric differences in affects.

Other attempts to understand the biological mechanisms that underlie prosocial actions have focused on a more specific affective process, empathy—the ability to discern and vicariously experience the emotional state of another being. It generally is agreed that empathic responses precede many (but certainly not all) prosocial acts. Empathic responses are found in most species and are present among human infants shortly after birth (Preston & de Waal 2002), suggesting that such responses are innate.

Recently, Preston & de Waal (2002) have put forth a more elaborate model of the neuroanatomy of empathic responses. In their perception action model, they propose that if one attends to another person’s “state,” this automatically activates one’s “representations of that state,” which, in turn, automatically “primes or generates the associated autonomic and somatic responses, unless inhibited (by learning or experience)” (Preston & de Waal 2002, p. 4). Like Buck, Preston & de Waal question the assumption that kin selection and reciprocal altruism are the core processes responsible for the evolution of prosocial tendencies. Instead, they

argue that because humans spend so much time with their relatives and people who have mutual interests with them, the evolutionary benefits of helping them are the result of a “highly adaptive nervous system organization” (p. 6). That is, the predisposition to experience empathy drives helping and other prosocial actions. This perspective is controversial, criticized for its assumptions about the neuroanatomy and neurochemistry that underlie empathic responses (e.g., Eslinger et al. 2002), its biologically reductionistic orientation (e.g., Bard 2002), and its oversimplification of complex social processes (e.g., Eisenberg 2002).

Although Buck’s and Preston & de Waal’s frameworks have yet to be subjected to direct empirical tests (e.g., neural imaging), these theories offer intriguing hints of how the architecture of the human nervous system can predispose people toward prosocial actions and further implicate the genetic basis of prosocial behavior.

Although there is no singular “altruistic gene,” there are certain affective and behavioral capacities or predispositions that are products of certain complex combinations of genes. There has been work on the heritability of tendencies associated with prosocial actions and the relative roles of genetic and environmental influences on prosocial tendencies. With respect to heritability, most of the research has used some variant of twin methodologies to estimate the percentage of differences among people in empathy that could be attributed to genetic influences. The various studies agree that heritability plays some role in the variability among people with respect to at least self-reported empathy (e.g., Davis et al. 1994), but the estimates vary widely, from well over 60% to less than 30%. On the other hand, Krueger et al. (2001) found little evidence of a genetic cause of differences in self-reported prosocial behaviors, but they did not study empathy or other prosocial thoughts/feelings.

DEVELOPMENT OF PROSOCIAL TENDENCIES Developmental psychology, with its interest in the origins and the causes of individual differences in prosocial responses to others, represents an important component of the micro level of analysis of prosocial behaviors. In the past 10 to 15 years, developmental theories regarding prosocial tendencies have moved from a rather strong environmental bias toward models that focus on the interplay between biologically based tendencies and socialization experiences. A great deal of attention has focused on temperament, which refers to broad ways of responding to one’s environment that appear very early in life and are assumed to have a very strong genetic component. No one seriously argues that there is such a thing as a prosocial temperament; rather it has been proposed that these affective and behavioral dispositions interact with other classes of variables to produce individual differences in prosocial tendencies.

This perspective has found its clearest expression in the work of Eisenberg (e.g., Eisenberg et al. 2000). For example, Eisenberg has focused on how emotionality interacts with other variables to affect empathy and other prosocial responses in children. Children who are inclined toward positive emotionality tend to be more prosocial. Whether children inclined toward negative emotionality are more or less prosocial depends on the specific kind of negative emotions they are feeling

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and their ability to regulate their emotions. Eisenberg's work suggests that children may actually show an increase in prosocial responses when they are sad or anxious if they have the ability not to let these emotions overwhelm them. However, if they cannot regulate these emotions, sadness and anxiety will result in decreases in prosocial actions (e.g., Grusec et al. 2002).

The shift to more biological models of the origins of differences in prosocial tendencies has not led developmentalists to discount environmental factors entirely. For example, Eisenberg et al. (2000) and Zhou et al. (2002) reported that children whose mothers are empathic, warm, good at perspective taking, and comforting are themselves highly empathic. Further, developmental psychology pays substantial attention to socialization processes in their explanations of the growth of prosocial responses as people mature (e.g., Grusec 1991). For example, in a longitudinal study, Hastings et al. (2000) found that an authoritative parenting style was associated with more prosocial behaviors two years later.

Among the micro-level analyses of prosocial behaviors, the developmental one is the first to explicitly address (a) the interplay of "nature" and "nurture" in the development of these behaviors, and (b) the development of individual differences in prosocial tendencies. Given these emphases, it should not be surprising that many developmentalists have attempted to identify stable personal characteristics associated with differences in prosocial thoughts, feelings, and actions. This leads us to the last major area in the micro level of analyses of prosocial behaviors, the influence of personality.

PERSONALITY AND PROSOCIAL BEHAVIOR The idea that children display stable differences in empathy and other prosocial tendencies has been widely accepted for a fairly long time. A more recent perspective, however, is that these tendencies are relatively stable across a person's life. Studies have revealed that there is long-term consistency in temperament and personality in general (Caspi et al. 2003) and in prosocial dispositions in particular. For example, Eisenberg et al. (2002) found stability in prosocial dispositions across five years in a sample of young adults, and they found that these dispositions were related to ratings of empathy and prosocial responding taken when the adults were young children. Atkins et al. (2004) used a "type" approach to classify children as resilient, overcontrolled, and uncontrolled, and found that resilient children were more likely to be volunteers ten years later than were the other two types.

Additional research has focused on other personal attributes and their relationship to prosocial behaviors. Graziano & Eisenberg (1997) and others (e.g., Ashton et al. 1998) have argued that variability in the Agreeableness dimension from the Big Five theory of personality might result in differences in people's propensity to act prosocially. Consistent with this proposition, Graziano et al. (2004) found that Agreeableness interacted with situational variables (e.g., ingroup versus outgroup status) to affect prosocial behaviors in three different experimental situations. Other personality traits strongly associated with Agreeableness also have been shown to correlate with prosocial actions. For example, Davis and colleagues found that

dispositional differences in empathic tendencies manifest themselves in differences in prosocial behaviors such as donating and volunteering (Davis 1994, Davis et al. 1999).

Building on prior work on the personality correlates of helping, Penner and his associates (Penner et al. 1995) have focused their attention on traits they believe comprise the “prosocial personality.” Factor analyses of these traits suggest that there are two dimensions to the prosocial personality. The first concerns prosocial thoughts and feelings, such as a sense of responsibility and a tendency to experience cognitive and affective empathy (“other-oriented empathy”). This first factor correlates substantially with measures of Agreeableness (Graziano et al. 2004, Penner et al. 1995) and dispositional empathy, and it overlaps substantially with the collection of personality traits Eisenberg and her associates (2002) believe to be associated with prosocial behaviors. The second factor is the self-perception that one is a helpful and competent individual (Helpfulness). At a conceptual level, the two factors are quite consistent with the Oliners’ (1988) description of individuals who rescued Jews during the time of the holocaust and with Colby & Damon’s (1992) description of 23 individuals whom they identified as lifelong altruists or moral exemplars.

Penner and others have demonstrated significant associations between these clusters of prosocial dispositions and prosocial actions, ranging from interpersonal helping to volunteering to helpful actions directed toward coworkers and the organizations for which people worked (e.g., Borman et al. 2002, Eisenberg et al. 2002, Penner 2002, Unger & Thumhuri 1997). These findings suggest there may well be a constellation of traits that form a prosocial personality that is consistently related to a broad range of prosocial behaviors. However, it is still not clear why these attributes lead to prosocial responses.

Macro Level of Analysis

We begin the section on the macro level by discussing prosocial behaviors performed by individuals within an organizational context, with our major focus on volunteering and related behaviors. The second part of this section explores the dynamics of cooperation, in which the outcomes of individuals are mutually interdependent and assistance to others has direct implications for personal and collective outcomes.

VOLUNTEERING Volunteering involves prosocial action in an organizational context, which is planned and that continues for an extended period (Penner 2002). It differs from interpersonal helping in many ways, but the most important of these is that, relative to interpersonal helping, volunteering is less likely to result from a sense of personal obligation (Omoto & Snyder 1995). That is, whereas most acts of interpersonal helping involve a sense of personal obligation to a particular person, volunteering to work for a charity or service organization is typically not motivated by such considerations. Given this aspect of volunteering and the fact

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that it usually begins with a thoughtful decision to join and contribute to an organization, it is not surprising that research on the reasons why people volunteer has taken a very different tack than has research on interpersonal helping. We begin with research on the decision to volunteer.

DECISION TO VOLUNTEER The 2000 issue of the *Annual Review of Sociology* contained a contribution solely concerned with volunteering (Wilson 2000). Not surprisingly, Wilson and other sociologists focus attention on the social institutions and demographic factors that are associated with volunteering. With regard to social institutions, the family and religious organizations play important roles in the initial decision to volunteer. With regard to the former, people are more likely to volunteer and commit more strongly to these activities if their parents have also been volunteers (Piliavin 2004a, Sundeen & Raskoff 1995). Turning to religion, among both youths and adults, there is a positive association between affiliation with some religion and being a volunteer (Lam 2002, Reed & Selbee 2000, Uslander 2002). Although volunteering for one's church, synagogue, or mosque is the most common form of volunteering, at least in the United States (Independent Sector 2002, U.S. Department of Labor 2003), people who identify more strongly with an organized religion also have a higher incidence of other types of volunteer activities (Penner 2002, Piliavin 2004a).

Volunteering is also strongly associated with level of education and income (Independent Sector 2002). One possible explanation of these findings is that better educated, wealthier people have more free time to donate because they are less constrained by their jobs [e.g., salaried, rather than hourly, employees (Wilson & Musick 1997b)]. The problem with this explanation, however, is that in the United States, the United Kingdom, Canada, and Australia, volunteerism is substantially more common among employed than unemployed individuals (Independent Sector 2002, Institute for Volunteering Research 1997, Reed & Selbee 2000, Volunteering Australia 2003). Thus, the relationship between economic status and volunteering cannot simply be explained by the amount of free time, but may involve other factors, such as more awareness of the problems of others, greater empathy for their distress, and an expectation of greater effectiveness (Wilson 2000).

Another explanation of these findings is that people at upper socioeconomic levels, especially those who also are active members of some religion, are better integrated into and involved with their communities than are people at the lower levels. More active involvement and participation in the civic and social activities of one's community, as well as more positive moral and civic attitudes, have been shown to be strongly associated with volunteering in both the United States and Canada (Hart et al. 2002, Reed & Selbee 2000). The more involved people are in their community, the more likely they are to be asked to volunteer and then to agree when asked.

Sex and ethnicity also are related to volunteering. In North America, women are somewhat more likely to be volunteers than are men (Independent Sector 2002, Reed & Selbee 2000), but this difference is not found in Europe or Australia

(Volunteering Australia 2003, Wilson 2000). However, across these specific locations there are sex differences in the kinds of work volunteers do. For example, women are less likely to be found in leadership positions (Wilson 2000).

In the United States, members of ethnic minorities (e.g., African Americans and Hispanic/Latino Americans) historically have been less likely to volunteer than have European Americans, although the percentage of African Americans who reported volunteering increased dramatically in the last Independent Sector survey (Independent Sector 2002). Part of the reason for these ethnic differences is probably social exclusion (Ferreer et al. 1998). Moreover, when education, income, and other socioeconomic factors are controlled, these racial/ethnic differences largely disappear (Latting 1990).

Psychologists who study why people volunteer have, not surprisingly, focused, much more than have sociologists, on how the personality and needs of potential volunteers and the social situations they confront affect volunteering. For example, Davis et al. (1999) found an association between dispositional empathy and willingness to engage in certain kinds of volunteer activities. Both Penner and his associates (e.g., Penner 2002) and Hart and his associates (Atkins et al. 2004, Hart et al. 2004) have demonstrated that a cluster of personality dispositions (which include empathy) plays a significant role in the decision to volunteer.

Recently, Hart and his associates (2004) have proposed an innovative model that attempts to integrate both sociological and psychological approaches to volunteering. Using data from a national survey, they presented evidence that both personality factors and social structures (e.g., family, culture) played roles in the incidence of volunteering, but this relationship was mediated by intrapersonal cognitive processes (e.g., attitudes, identity, commitment to ideals) and the richness of people's social networks. Similarly, Wilson & Musick (1997a) presented a model in which both volunteering and informal helping are predicted from demographic variables and various kinds of "capital," including "human capital" (education, income, functional health), "social capital" (number of children, social interaction patterns), and "cultural capital" (religiosity and valuing helping).

THE MAINTENANCE OF VOLUNTEERING Volunteering can be a long-term activity, and thus the processes relating to the maintenance of the activity need to be considered. There have been two major theoretical models of what factors sustain volunteering over an extended period of time: Omoto & Snyder's (1995, 2002) volunteer process model, and the role identity model proposed by Piliavin and her associates (Grube & Piliavin 2000, Piliavin & Callero 1991). The models agree on many points (e.g., the inclusion of organizational variables) and are not really "competitors" for the best explanation of sustained volunteer activities, but they diverge somewhat in both focus and emphasis. Omoto & Snyder's model appears to give greater attention to intrapersonal variables (specifically motives), whereas the Piliavin et al. model is more concerned with social roles and the social context in which volunteering occurs.

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Omoto & Snyder's volunteer process model sees sustained volunteerism as being primarily determined by the extent to which there is a match between the motives or needs that originally led the person to volunteer and that person's actual experiences as a volunteer. Snyder and his associates and other researchers (e.g., Independent Sector 2002, Institute for Volunteering Research 2002, Omoto & Snyder 2002, Reed & Selbee 2000, Snyder et al. 2000) have found that volunteers claim that they were, at least initially, most motivated by other-oriented or prosocial motives. However, additional evidence suggests that volunteering can also be motivated by less selfless motives, such as advancing one's career or developing social relationships (Clary et al. 1998, Clary & Snyder 1999).

Omoto & Snyder's model also posits that prosocial dispositions, social support for the volunteer's activities, satisfaction with the volunteer experience, and integration with the organization play important roles in sustained volunteering. Consistent with this framework, personal motives, social and organizational support, and satisfaction with the volunteer experience are critical factors in sustaining volunteer activity (Kiviniemi et al. 2002, Penner & Finkelstein 1998, Vecina 2001).

The two key constructs in Piliavin et al.'s (2002) role identity model are perceived expectations (i.e., beliefs about how significant others feel about the person's behavior) and role identity [i.e., the extent to which a particular role (e.g., being a volunteer) becomes part of the person's personal identity (Grube & Piliavin 2000)]. The model posits that perceived expectations lead to becoming a volunteer, but organizational variables (e.g., prestige of the service organization) and the experiences and behaviors associated with actually volunteering facilitate the development of a volunteer role identity, which is the immediate precursor of sustained volunteering. Grube & Piliavin (2000) have conducted the most direct test of this model and found that perceived expectations and organizational attributes (e.g., prestige) were associated with the development of a volunteer role identity, and this identity was significantly associated with intentions to continue volunteering and number of hours devoted to the organization (see also Penner & Finkelstein 1998).

RELATED ORGANIZATIONAL BEHAVIORS Models of sustained volunteerism have been successfully applied to organizational citizenship behavior (OCB). An OCB is a voluntary "extrarole" behavior; that is, it is not part of the worker's formal job requirements, and there is no explicit or formal demand that the worker engage in OCB (Brief & Weiss 2002). Rioux & Penner (2001) found that OCB motives were significantly associated with self and peer ratings of OCB, and an OCB role identity has been shown to be significantly related to self, peer, and supervisor ratings of a target person's level of OCB (Finkelstein & Penner 2004, Krueger 2004).

Another potential extension of the volunteering models has been suggested by Piliavin et al. (2002), who considered how role identities might influence another kind of prosocial behavior, "principled organizational dissent"—efforts by an organization's employee to protest or change current organizational policies or

practices because they violate some personal standard of justice or honesty. The clearest example of a principled organizational dissent might be whistle-blowing by a government official or organizational employee. Grube et al. (2004), for example, found that nurses were more likely to report healthcare errors when they had a strong role identity, when they felt more valued, and when observed error rates were high.

Volunteering, civic service, and OCB are all strongly encouraged and praised because they are intended to improve the well being of other individuals and of society in general. Recently some researchers have begun to investigate whether there are effects of these prosocial actions on the people who perform them.

THE POTENTIAL CONSEQUENCES OF VOLUNTEERING At the micro level of analysis, researchers have generally assumed the benefits to a helper for prosocial action in terms of increased inclusive fitness, higher status, and certain reproductive advantages. At the meso level of analysis, there traditionally has been more interest in the causes of helping than in its consequences. Thus, there were relatively few meso-level studies concerned with the personal consequences of helping for the helper. In general, successful helping is experienced positively, in part because it can relieve a negative affective state caused by witnessing another's problem and thus is a reinforcing event (Piliavin et al. 1981). Unsuccessful attempts at helping can have an adverse effect (Rosen et al. 1987).

There is considerably more research at the macro level about the possible benefits of prosocial actions to the person who engages in them. Much of this research has used survey methodologies, and therefore one must be cautious about inferring specific causes and effects.

Researchers have expected that volunteering by adolescents will benefit the children by enhancing self-esteem and psychological well-being, improving social and career skills, and increasing prosocial attitudes, values, and identities. Further, volunteering should reduce the incidence of dangerous and antisocial behaviors and increase community participation as adults.

Although there is some support for a positive impact on self-esteem (Yogev & Ronen 1982) and academic achievement (Osguthorpe & Scruggs 1986), overall support is mixed. Some research finds that service learning (i.e., educational programs that involve volunteering) positively affects personal efficacy, self-esteem, and confidence (Giles & Eyler 1994, Yates & Youniss 1996), but Lee (1997) found no such effects among first-year college students. High levels of volunteering among adolescents appear to lead to the development of prosocial attitudes, values, and identities, and a greater probability of volunteering when they become adults (Astin et al. 1999, Reidel 2002), which is consistent with the assumption that volunteering has a positive developmental impact (Hansen et al. 2003, Johnson et al. 1998). There is also evidence for the impact of adolescent volunteering on dangerous and antisocial behaviors. Several well-controlled cross-sectional and longitudinal studies provide evidence that high school students who engage in community service are less likely to smoke marijuana, abuse alcohol, perform

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poorly in school, become pregnant, commit delinquent acts, or be arrested (Barber et al. 2001, Eccles & Barber 1999, Moore & Allen 1996, Uggen & Janikula 1999, Youniss et al. 1997).

The other major line of research on the consequences of volunteering has focused on whether it affects the psychological and physical health of adult volunteers. Thoits & Hewitt (2001) carried out analyses showing that the amount of volunteering in 1986 was positively related to volunteers' well-being and psychological and physical health in 1989. Using the same data set, Musick & Wilson (2003) found that volunteering was related to a subsequent decrease in depression, but only among adults over 65. Studies have also revealed greater self-reported well-being among elderly volunteers (Morrow-Howell et al. 2003). Some of the most impressive data from studies of elderly volunteers concern the relation of volunteering to physical health and mortality. For example, both Moen et al. (1992) and Oman et al. (1999) have followed adult volunteers over many years and found that they were healthier and lived longer than nonvolunteer groups (also see Brown et al. 2003).

These striking findings beg the question of what processes or mechanisms underlie these effects. Midlarsky (1991) proposed that helping others may benefit the helper because it distracts one from one's own troubles, enhances a sense of value in one's life, improves self-evaluations, increases positive moods, and causes social integration. Oman et al. (1999) suggested that several of Midlarsky's proposed mechanisms could influence the body through psycho-neuro-immunologic pathways, thus reducing mortality in aging populations. Consistent with this reasoning, Oman et al. found that the negative relationship between volunteering and mortality got stronger with increasing age. In the same vein, the positive psychological and physical outcomes associated with volunteering appear to be greatest for those who are otherwise socially isolated (Musick & Wilson 2003, Musick et al. 1999, Piliavin 2004b). If alienation from society is indeed unhealthy, then volunteering may serve to reduce this alienation. Finally, volunteering could also contribute to a sense of control and efficacy, which can provide protection against morbidity and mortality (see Rodin & Langer 1977), possibly by improving functioning of the autoimmune system (Wiedenfled et al. 1990).

In summary, volunteering is a form of prosocial behavior that can extend across time. It provides considerable benefits to others, even when the specific recipients of aid are personally unidentifiable. Volunteering also can have significant psychological and physical benefits for the volunteer. In the next section we examine another form of prosocial behavior at the macro level, one in which people are mutually interdependent.

COOPERATION AND GROUP-LEVEL PROSOCIAL ACTION Cooperation differs from the kinds of prosocial actions discussed thus far in the following respect. In interpersonal helping (of the kind studied primarily at the meso level) and volunteering, the parties involved are typically not equal partners (that is, one person needs assistance and the other possesses the resources necessary to provide it). In contrast, cooperation involves two or more people coming together as partners to work

interdependently toward a common goal that will benefit all involved. Much of the current research on cooperation has been conducted in the context of social dilemmas (e.g., Komorita & Parks 1999, Weber et al. 2004). All social dilemmas have two fundamental characteristics: (a) each individual receives a higher payoff for not doing (i.e., defecting from) what is in the group's best interest, and (b) all individuals are better off if they cooperate than if they defect. We consider below some of the factors that influence cooperation in social dilemmas.

Individual differences Whereas research on individual differences in helping has examined a large number of personality variables, research on individual differences in reactions to social dilemmas has primarily focused on one set of characteristics—an individual's social value orientation. The four most consistently identified social value orientations are: altruists, cooperators, individualists, and competitors (Liebrand et al. 1986). People who hold one of these four main social value orientations differ fundamentally in their preferences for allocating resources to themselves and others. For example, people classified as having a "prosocial" orientation (i.e., altruistic and cooperative) show greater concern for the common good than do individualists and competitors ("proself" orientation; van Lange et al. 1997).

Prosocial motivations Batson has extended his work on the effects of prosocial and altruistic motivations from interpersonal helping to cooperation in a Prisoner's Dilemma. Batson & Moran (1999) found that participants induced to experience empathic concern for their partner were more likely to cooperate than were those in a control condition. In another study, Batson & Ahmad (2001) found that people who experienced empathic concern tended to show high levels of cooperative responses even when they knew that their partner had already made a competitive choice. However, Batson et al. (1995) also reported that targeted help in a social dilemma might be given to a specific individual with whom a person has empathized, even when that help compromises cooperative action that would have benefited a larger group.

Social influence Several variables that affect helping at the meso level also affect cooperation. For example, just as the presence of others inhibits bystander intervention in emergencies (Latané & Nida 1981), anonymity increases the incidence of free riding—that is, attempting to benefit from the group's actions without personally contributing to the public good (Kerr & MacCoun 1985). Not surprisingly, overt communication among group members consistently promotes cooperation (Dawes 1988) by reducing the impact of pluralistic ignorance, coordinating actions of those involved, and helping in the development of closer personal relationships. Kerr et al. (1997) found that communicating a public commitment to cooperate led to greater subsequent cooperation, even if the person to whom the original commitment was made would not know if the commitment had been fulfilled (also see Kerr 1995, 1999).

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Social identity As noted in the section on meso-level helping, people consistently favor ingroup members over both outgroup members and those not identified by group membership. This is true even when the basis of categorization is random and would be nonconsequential outside of a laboratory context. Moreover, people are more likely to be cooperative and exercise more personal restraint when using endangered common resources if the resources are being shared with ingroup members rather than with outgroup members (Van Vugt et al. 2000). Furthermore, they work harder for and are more loyal to groups they identify as their ingroup (Van Vugt & Hart 2004).

In society-level social dilemma situations, the impact of an individual's identity with a group and the associated acceptance of the norms and values of those superordinate entities (including governmental agencies) has also been shown to be important for increasing a wide variety of cooperative actions, ranging from participation in social activism and protests (Klandermans 2000) to organizational citizenship (Cropanzano & Byrne 2000). The process of social categorization of people as ingroup and outgroup members is alterable, and even though people may continue to view others in terms of group membership, the perceptions of group boundaries may change as people become aware of higher-level categories (e.g., nations) that are more inclusive of lower-level ones (e.g., cities or towns).

The process of changing perceptions of group boundaries, known as recategorization, has been the focus of considerable research in the common ingroup identity model (Gaertner et al. 2000). According to this model, intergroup bias and conflict can be reduced by factors that transform participants' representations of memberships from two groups to one more inclusive group. As we noted earlier, recategorization of former outgroup members as members of a common ingroup increases helping. One explanation of why people may be more cooperative when common group membership is emphasized is that fairness and procedural justice increase in importance relative to personal outcomes (DeCremer & Tyler 2004).

Thus, there are many parallels in the processes underlying actions in which one person helps another and in which a person responds prosocially toward a collective entity, through either volunteering or cooperation. However, research on cooperation has also identified emergent phenomena that occur uniquely in interdependent relations and do not have parallels in other kinds of prosocial actions.

Within- and Between-Group Cooperation

Unlike helping, which is a unilateral and individual action, cooperation often involves relationships within and between groups. Thus, the within- and between-group distinction is a more basic and complex one in cooperation than in helping and involves processes—some quite fundamental—that are not necessarily key determinants of helping. One of the most important of these factors is trust (Kramer 1999). Because trust often is based on an expectation of reciprocity (Yamagishi & Kiyonari 2000), it has special significance in situations of interdependence (Chaudhuri et al. 2002). Establishing a reputation as being trustworthy can be a critical factor for eliciting cooperation in future interactions (e.g., Milinski et al.

2001). Because ingroup members are attributed more positive characteristics than are outgroup members (Mullen et al. 1992), they are viewed as more distinctly individual than are outgroup members (Mullen & Hu 1989) and are seen as more similar to the self. Thus, people are generally more trusting of ingroup than of outgroup members (Turner et al. 1987) and are more likely to dismiss and forgive negative actions of ingroup than of outgroup members.

Trust is also a critical factor in intergroup relations—that is, in interactions between groups. However, trust between groups is more difficult to achieve than trust between individuals. Insko, Schopler, and their colleagues have demonstrated a fundamental individual-group discontinuity effect in which groups are less trusting and less trustworthy in their interactions and exchanges with other groups than are individuals (Insko et al. 2001). In part as a consequence of greater distrust between groups than between individuals (Insko et al. 2004), groups are substantially less cooperative with one another than are individuals.

Whereas replacing separate group identities with a common ingroup identity generally enhances prosocial interaction, maintaining separate group identities while simultaneously emphasizing common group membership at a more inclusive level can have conflicting effects. Hewstone & Brown (1986), for instance, have proposed that positive and generalizable intergroup consequences result when cooperative interactions between groups are introduced without redefining or degrading the original ingroup-outgroup categorization. However, others have suggested that introducing a common, superordinate group identity can threaten existing social identities, thereby arousing needs for positive distinctiveness and differentiation and leading people to assert their own group's standards as the standards for the superordinate group (Waldzus et al. 2003). These forces tend to reduce prosocial relations between groups. Thus, emphasizing or creating common identity tends to increase cooperation between individuals, but it may increase competition between groups (Insko et al. 2004).

FUTURE DIRECTIONS

The study of prosocial behavior has a long history in psychology in general and in social psychology in particular. However, perhaps because of the maturity of the area, there has been a decline in research attention to many traditional aspects of prosocial activity, that is, dyadic helping at the meso level. Yet, the study of prosocial behavior still has much to contribute to psychology and other disciplines. Although it may still be valuable to refine current focused theories about when and why people offer help, we believe that the best way to maximize new contributions at this time is to adopt a more comprehensive perspective to prosocial behavior. Two promising ways to do this involve (*a*) developing an integrative understanding of how certain cognitive, neurological, and genetic processes and mechanisms affect prosocial behavior across the three levels of analysis; and (*b*) conceptualizing prosocial behavior as an element within ongoing interpersonal and intergroup relations.

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Integrative Understanding

One way to develop a broader and more integrative understanding of prosocial behavior might be to focus more attention on the proximal causes of prosocial actions. The personal tendencies, motives, cost-reward calculations, and responsiveness to situational demands that have been demonstrated to be critical to prosocial responding are not always consciously accessible. Thus, work on implicit cognitive processes that immediately precede social behaviors (e.g., Greenwald et al. 2002) might be useful for developing a more comprehensive understanding of when and why people do or do not act prosocially in interpersonal as well as in interdependent and group contexts. This research might also add to an understanding of how the prosocial dispositions posited by evolutionary theorists are translated into actual prosocial behaviors.

Understanding the link between distal evolutionary causes and proximal causes of prosocial actions may also be enhanced by introducing to this area new research techniques, such as the rapidly advancing technology of neural imaging, which could help illuminate the relation between brain functioning and facilitating processes, such as cognitive and emotional empathy. Psychologists' perspective on prosocial behavior could also be broadened by applying the techniques and principles of behavioral genetics more directly to this topic, illustrating how the interplay between genetic factors, life experiences, and situational influences affect this kind of behavior (see Caspi et al. 2002).

Prosocial Behavior and Ongoing Relations

A second strategy may be to widen the "lens" through which prosocial behavior is viewed. Specifically, rather than consider helping, cooperation, and volunteering as end points, these behaviors may be conceived of as parts of ongoing processes. For example, research should continue on the possibly positive mental and physical benefits of prosocial actions. [Some preliminary experimental work in this area suggests that interpersonal helping may facilitate cardiovascular recovery (SL Brown, K Johnson, & B Fredrickson, personal communication, May 17, 2004)]. Future work could also consider the ongoing contribution of prosocial actions to interpersonal and intergroup relations. For instance, prosocial behavior may be an integral component of forgiveness, which is an important contributor to stable relationships (Ripley & Worthington 2002), and a key element of reconciliation, which strengthens collective identity and action (de Waal 2000).

Another avenue for future research is to explore the factors that sustain cooperation within, as well as between, groups. Recent works by DeCremer & Tyler (2004), Schroeder et al. (2003), and Tyler & Blader (2003) have investigated ways in which formal, justice-based procedural systems can serve to maintain intra-group harmony. This linkage of prosocial behavior and justice research could have important implications for public and organizational policy development.

Finally, future work might consider how different forms of prosocial behavior can function quite differently in intergroup contexts. Whereas successful

cooperation, which involves mutual coordination and trust, may be a critical element in reconciliation and social integration between groups, helping behavior can be a tool that promotes social differentiation. The act of helping can be used to establish or reinforce perceptions of status differences between helpers and recipients, and helping over time could create a sense of lower status, dependency, and powerlessness among recipients (Nadler 2002, Nadler & Fisher 1986). Future research might thus focus on the effects of certain prosocial actions on social relations and stratification.

CONCLUSION

The research presented in this chapter suggests that the study of prosocial behavior is still growing and expanding. The multilevel approach that we have taken allows the integration and synthesis of a broad range of questions, from ones relevant to evolutionary psychology, behavioral genetics, and neuroscience to those relevant to social psychology, developmental psychology, personality theory, industrial/organizational psychology, and the study of intra- and intergroup behavior. Because of its breadth, research on prosocial behavior is able to contribute to connections between psychology and other social science disciplines and can facilitate the development of interdisciplinary and multidisciplinary collaborations and perspectives for both theory and application.

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LITERATURE CITED

- Ashton M, Paunonen SV, Helmes E, Douglas N. 1998. Kin altruism, reciprocal altruism, and the Big Five personality factors. *Evol. Hum. Behav.* 1:243–55
- Astin A, Sax L, Avalos J. 1999. The long-term effects of volunteerism during the undergraduate years. *Rev. High. Educ.* 22:187–202
- Atkins R, Hart D, Donnelly T. 2004. The influence of childhood personality on volunteering during adolescence. *Merr. Palmer. Q.* In press
- Axelrod R. 1984. *The Evolution of Cooperation*. New York: Basic Books
- Barber BL, Eccles JS, Stone MR. 2001. What ever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *J. Adolesc. Res.* 16:429–55
- Bard K. 2002. Developmental processes in empathy. *Behav. Brain Sci.* 25:25–26
- Barrett L, Dunbar R, Lycett J. 2002. *Human Evolutionary Psychology*. Princeton, NJ: Princeton Univ. Press
- Batson CD. 1991. *The Altruism Question: Toward a Social-Psychological Answer*. Hillsdale, NY: Erlbaum
- Batson CD. 1998. Altruism and prosocial behavior. In *The Handbook of Social Psychology*, ed. DT Gilbert, ST Fiske, G Lindzey, vol. 2, pp. 282–316. New York: McGraw-Hill. 4th ed.
- Batson CD, Ahmad N. 2001. Empathy-induced altruism in a prisoner's dilemma II: What if the target of empathy has defected? *Eur. J. Soc. Psychol.* 31:25–36
- Batson CD, Batson J, Todd R, Brummett B,

14.22 PENNER ET AL.

- Shaw L, Aldeguez C. 1995. Empathy and the collective good: caring for one of the others in a social dilemma. *J. Personal. Soc. Psychol.* 84:619–31
- Batson CD, Moran T. 1999. Empathy-induced altruism in a prisoner's dilemma. *Eur. J. Soc. Psychol.* 29:909–24
- Borman WC, Penner LA, Allen TD, Motowidlo SJ. 2001. Personality predictors of citizenship performance. *Int. J. Sel. Assess.* 9:52–69
- Boster FJ, Fediuk TA, Kotowski R. 2001. The effectiveness of an altruistic appeal in the presence and absence of favors. *Commun. Monogr.* 68:340–46
- Brief AP, Weiss HM. 2002. Organizational behavior: affect in the workplace. *Annu. Rev. Psychol.* 53:279–307
- Brown SL, Nesse RM, Vinokur AD, Smith DM. 2003. Providing social support may be more beneficial than receiving it: results from a prospective study of mortality. *Psychol. Sci.* 14:320–27
- Buck R. 1999. The biological affects: a topology. *Psychol. Rev.* 106:301–36
- Buck R. 2002. The genetics and biology of true love: prosocial biological affects and the left hemisphere. *Psychol. Rev.* 109:739–44
- Burnstein E, Crandall C, Kitayama S. 1994. Some neo-Darwinian decision rules for altruism: weighing cues for inclusive fitness as a function of the biological importance of the decision. *J. Personal. Soc. Psychol.* 67:773–89
- Buss D. 2003. *Evolutionary Psychology: The New Science of the Mind*. Boston, MA: Allyn Bacon
- Caporael LR. 2001. Evolutionary psychology: toward a unifying theory and a hybrid science. *Annu. Rev. Psychol.* 52:607–28
- Caspi A, Harrington H, Milne B, Amell JW, Theodore RF, Moffitt TE. 2003. Children's behavioral styles at age 3 are linked to their adult personality traits at age 26. *J. Personal.* 71:495–513
- Caspi A, McClay J, Moffitt T, Mill J, Martin J, et al. 2002. Role of genotype in the cycle of violence in maltreated children. *Science* 297:851–54
- Chaudhuri A, Sopher B, Strand P. 2002. Cooperation in social dilemmas, trust, and reciprocity. *J. Econ. Psychol.* 23:231–50
- Cialdini RB, Brown SL, Lewis BP, Luce C, Neuberg SL. 1997. Reinterpreting the empathy-altruism relationship: when one into one equals oneness. *J. Personal. Soc. Psychol.* 72:481–94
- Cialdini RB, Schaller M, Houlihan D, Arps K, Fultz J, Beaman AL. 1987. Empathy-based helping: Is it selflessly selfishly motivated? *J. Personal. Soc. Psychol.* 52:749–58
- Clark MS. 1991. *Review of Personality and Social Psychology: Volume 12. Prosocial Behavior*. Newbury Park, CA: Sage
- Clary EG, Orenstein L. 1991. The amount and effectiveness of help: the relationship of motives and abilities to helping behavior. *Personal. Soc. Psychol. Bull.* 17:58–64
- Clary EG, Snyder M. 1999. The motivations to volunteer: theoretical and practical considerations. *Curr. Dir. Psychol. Sci.* 8:156–59
- Clary EG, Snyder M, Ridge RD, Copeland J, Stukas AA, et al. 1998. Understanding and assessing the motivations of volunteers: a functional approach. *J. Personal. Soc. Psychol.* 74:1516–30
- Colby A, Damon W. 1992. *Some Do Care*. New York: Free Press
- Cropanzano R, Byrne ZS. 2000. Workplace justice and the dilemma of organizational citizenship. In *Cooperation in Modern Society: Promoting the Welfare of Communities, States and Organizations*, ed. M Van Vugt, M Snyder, T Tyler, A Biel, pp. 142–61. London: Routledge
- Darley JM, Latané B. 1968. Bystander intervention in emergencies: diffusion of responsibility. *J. Personal. Soc. Psychol.* 8:377–83
- Davis MH. 1994. *Empathy: A Social Psychological Approach*. Madison, WI: Brown Benchmark
- Davis MH, Luce C, Kraus SJ. 1994. The heritability of characteristics associated with dispositional empathy. *J. Personal.* 62:369–91
- Davis MH, Mitchell KV, Hall JA, Lothert J,

- Snapp T, Meyer M. 1999. Empathy, expectations, and situational preferences: personality influences on the decision to volunteer helping behaviors. *J. Personal.* 67:469–503
- Dawes RM. 1988. *Rational Choice in an Uncertain World*. San Diego, CA: Harcourt Brace Jovanovich
- Dawkins R. 1989. *The Selfish Gene*. Oxford: Oxford Univ. Press. 2nd ed.
- de Waal FB. 2000. Primates—a natural heritage of conflict resolution. *Science* 289:586–90
- DeCremer D, Tyler TR. 2004. Managing group behavior: the interplay between procedural fairness, sense of self, and cooperation. In *Advances in Experimental Social Psychology*, ed. M Zanna. In press
- Dovidio JF. 1984. Helping behavior and altruism: an empirical and conceptual overview. In *Advances in Experimental Social Psychology*, ed. L Berkowitz, vol. 17, pp. 361–427. New York: Academic
- Dovidio JF, Gaertner SL, Validzic A, Matoka A, Johnson B, Frazier, S. 1997. Extending the benefits of recategorization: evaluations, self-disclosure, and helping. *J. Exp. Soc. Psychol.* 33:401–20
- Dovidio JF, Penner LA. 2001. Helping and altruism. In *International Handbook of Social Psychology: Interpersonal Processes*, ed. G Fletcher, M Clark, pp. 162–95. Oxford: Blackwell Sci.
- Dovidio JF, Piliavin JA, Gaertner SL, Schroeder DA, Clark RD III. 1991. The Arousal: Cost-Reward Model and the process of intervention: a review of the evidence. See Clark 1991, pp. 86–118
- Eccles JS, Barber BL. 1999. Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *J. Adolesc. Res.* 14:10–43
- Eisenberg N. 2000. Emotion, regulation, and moral development. *Annu. Rev. Psychol.* 51:665–97
- Eisenberg N. 2002. Distinctions among various modes of empathy-related reactions: a matter of importance in humans. *Behav. Brain Sci.* 25:33–34
- Eisenberg N, Fabes RA. 1991. Prosocial behavior and empathy: a multimethod developmental perspective. See Clark 1991, pp. 34–61
- Eisenberg N, Fabes RA, Guthrie IK, Reiser M. 2000. Dispositional emotionality and regulation: their role in predicting quality of social functioning. *J. Personal. Soc. Psychol.* 78:136–57
- Eisenberg N, Guthrie IK, Cumberland A, Murphy BC, Shepard SA, et al. 2002. Prosocial development in early adulthood: a longitudinal study. *J. Personal. Soc. Psychol.* 82:993–1006
- Eslinger P, Moll J, de Oliveira-Souza R. 2002. Emotional and cognitive processing in empathy and moral behavior. *Behav. Brain Sci.* 25:34–35
- Euler HA, Weitzel B. 1996. Discriminative grandparental solicitude as reproductive strategy. *Hum. Nat.* 7:39–59
- Ferree G, Barry J, Manno B. 1998. *The National Survey of Philanthropy and Civic Renewal*. Washington, DC: Natl. Comm. Philan. Civic Renew
- Finkelstein M, Penner L. 2004. Predicting organizational citizenship behavior: integrating functional and role identity approaches. *Personal. Soc. Behav.* 32:383–98
- Flippen AR, Hornstein HA, Siegal WE, Weitzman EA. 1996. A comparison of similarity and interdependence as triggers for in-group formation. *Personal. Soc. Psychol. Bull.* 22:882–93
- Gaertner SL, Dovidio JF, Rust MC, Nier JA, Banker BS, et al. 2000. Reducing intergroup bias: elements of intergroup cooperation. *J. Personal. Soc. Psychol.* 76:388–402
- Garcia SM, Weaver K, Moskowitz GB, Darley JM. 2002. Crowded minds: the implicit bystander effect. *J. Personal. Soc. Psychol.* 83:843–53
- Giles DE Jr, Eyler J. 1994. The impact of a college community service laboratory on students' personal, social, and cognitive outcomes. *J. Adolesc.* 17:327–39
- Gintis H, Bowles S, Boyd R, Fehr E. 2003. Explaining altruistic behavior in humans. *Evol. Hum. Behav.* 24:153–72

14.24 PENNER ET AL.

- Gouldner A. 1960. The norm of reciprocity: a preliminary statement. *Am. Sociol. Rev.* 25:161–78
- Grafen A. 1990. Biological signals as handicaps. *J. Theor. Biol.* 144:517–46
- Gray JR. 2002. Does a prosocial-selfish distinction help explain the biological affects? Comment on Buck 1999. *Psychol. Rev.* 109:729–38
- Graziano WG, Habashi M, Sheese BE, Tobin R. 2004. Feeling compassion and helping the unfortunate: a social motivational analysis. Submitted
- Graziano WG, Eisenberg N. 1997. Agreeableness: a dimension of personality. In *Handbook of Personality Psychology*, ed. R Hogan, R Johnson, S Briggs, pp. 795–824. San Diego, CA: Academic
- Greenwald AG, Banaji MR, Rudman LA, Farnham SD, Nosek BA, Mellott DS. 2002. A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychol. Rev.* 109:3–25
- Grube JA, Piliavin JA. 2000. Role identity, organizational experiences and volunteer performance. *Personal. Soc. Psychol. Bull.* 26:1108–19
- Grube JA, Piliavin JA, Turner JW. 2004. Role identity and the courage of one's convictions. Submitted
- Grusec JE. 1991. The socialization of empathy. See Clark 1991, pp. 9–33
- Grusec JE, Davidov M, Lundell L. 2002. Prosocial and helping behavior. In *Blackwell Handbook of Childhood Social Development: Blackwell Handbooks of Developmental Psychology*, ed. PK Smith, CH Hart, pp. 457–74. Malden, MA: Blackwell Sci.
- Gueguen N, DeGail M. 2003. The effect of smiling on helping behavior: smiling and Good Samaritan behavior. *Commun. Rep.* 16:133–40
- Hamilton WD. 1964. The genetic evolution of social behavior. I, II. *J. Theor. Biol.* 7:1–52
- Hansen DM, Larson RW, Dworkin JB. 2003. What adolescents learn in organized youth activities: a survey of self-reported developmental experience. *J. Res. Adolesc.* 11:25–55
- Hart D, Atkins R, Donnelly T. 2004. Psychological and socio-structural influences on involvement in volunteering. Submitted
- Hart D, Southerland N, Atkins R. 2002. Community service and adult development. In *Handbook of Adult Development*, ed. J Demick, C Andreoletti, pp. 585–97. Norwell, MA: Kluwer Acad.
- Hastings PD, Zahn-Waxler C, Robinson J, Usher B, Bridges D. 2000. The development of concern for others in children with behavior problems. *Dev. Psychol.* 36:531–46
- Hewstone M, Rubin M, Willis H. 2002. Intergroup bias. *Annu. Rev. Psychol.* 51:575–604
- Hewstone M, Brown RJ. 1986. Contact is not enough: an intergroup perspective on the “contact hypothesis.” In *Contact and Conflict in Intergroup Encounters*, ed. M Hewstone, R Brown, pp. 1–44. Oxford: Blackwell
- Hornstein HA. 1982. Promotive tension: theory and research. In *Cooperation and Helping Behavior: Theories and Research*, ed. VJ Derlega, J Grezlak, pp. 229–48. New York: Academic
- Independent Sector. 2002. *Giving and Volunteering in the United States*. Washington, DC: Independent Sector
- Insko C, Kirchner JL, Pinter B, Efaw J, Wildschut T. 2004. Interindividual-intergroup discontinuity as a function of ingroup and outgroup procedural interdependence. *J. Personal. Soc. Psychol.* In press
- Insko CA, Schopler J, Gaertner L, Wildschut T, Kozar R, et al. 2001. Interindividual-intergroup discontinuity reduction through the anticipation of future interaction. *J. Personal. Soc. Psychol.* 80:95–111
- Institute for Volunteering Research. 1997. National survey of volunteering in the UK. <http://www.ivr.org.uk>
- Johnson MK, Beebe T, Mortimer JT, Snyder M. 1998. Volunteerism in adolescence: a process perspective. *J. Res. Adolesc.* 8:309–32
- Kerr NL. 1995. Norms in social dilemmas. In *Social Dilemmas: Perspectives on Individuals and Groups*, ed. DA Schroeder, pp. 31–48. Westport, CT: Praeger
- Kerr NL. 1999. Anonymity and social control in

- social dilemmas. In *Resolving Social Dilemmas: Dynamic, Structural, and Intergroup Aspects*, ed. M Foddy, M Smithson, M Hogg, S Schneider, pp. 103–19. Philadelphia, PA: Psychol. Press
- Kerr NL, Garst J, Lewandowski DA, Harris SE. 1997. That still, small voice: commitment to cooperate as an internalized versus a social norm. *Personal. Soc. Psychol. Bull.* 23:1300–11
- Kerr NL, MacCoun RJ. 1985. Role expectations in social dilemmas: sex roles and task motivation in groups. *J. Personal. Soc. Psychol.* 49:1547–56
- Kiviniemi MT, Snyder M, Omoto AM. 2002. Too many of a good thing? The effects of multiple motivations on stress, cost, fulfillment and satisfaction. *Personal. Soc. Psychol. Bull.* 28:732–43
- Klandersman B. 2000. Identity and protest: how group identification helps to overcome collective action dilemmas. In *Cooperation in Modern Society: Promoting the Welfare of Communities, States and Organizations*, ed. M Van Vugt, M Snyder, T Tyler, A Biel, pp. 162–83. London: Routledge
- Komorita SS, Parks CD. 1999. Reciprocity and cooperation in social dilemmas: review and future directions. In *Games and Human Behavior: Essays in Honor of Amnon Rapoport*, ed. D Budescu, I Erev, pp. 315–30. Mahwah, NJ: Erlbaum
- Korchmaros JD, Kenny DA. 2001. Emotional closeness as a mediator of the effect of genetic relatedness on altruism. *Psychol. Sci.* 12:262–65
- Kramer RM. 1999. Trust and distrust in organizations: emerging perspectives, enduring questions. *Annu. Rev. Psychol.* 50:569–98
- Krueger RF, Hicks BM, McGue M. 2001. Altruism and antisocial behavior: independent tendencies, unique personality correlates, distinct etiologies. *Psychol. Sci.* 12:397–402
- Krueger T. 2004. The influence of an organizational citizen role identity on sustained organizational citizenship behavior. Unpubl. dissert., Univ. S. Florida
- Kruger DJ. 2003. Evolution and altruism: combining psychological mediators with naturally selected tendencies. *Evol. Hum. Behav.* 24:118–25
- Lam P. 2002. As the flocks gather: how religion affects voluntary association participation. *J. Sci. Stud. Relig.* 41:405–22
- Latané B, Darley JM. 1970. *The Unresponsive Bystander: Why Doesn't He Help?* New York: Appleton-Century-Crofts
- Latané B, Nida S. 1981. Ten years of research on group size and helping. *Psychol. Bull.* 89:308–24
- Latting J. 1990. Motivational differences between black and white volunteers. *Nonprofit Volunt. Sect. Q.* 19:121–36
- Lee L. 1997. Change of self-concept in the first year of college life: the effect of gender and community involvement. Unpubl. dissert., Univ. Wisc.
- Liebrand WBG, Jansen RWTL, Rijken V, Suhre CJM. 1986. Might over morality: social values and the perception of other players in experimental games. *J. Exp. Soc. Psychol.* 21:203–15
- Maner JK, Luce CL, Neuberg SL, Cialdini RB, Brown S, Sagarin BJ. 2002. The effects of perspective taking on motivations for helping: still no evidence for altruism. *Personal. Soc. Psychol. Bull.* 28:1601–10
- McAndrew FT. 2002. New evolutionary perspectives on altruism: multilevel-selection and costly-signaling theories. *Curr. Dir. Psychol. Sci.* 11:79–82
- McDougall W. 1908. *Social Psychology*. London: Methuen
- Midlarsky E. 1991. Helping as coping. See Clark 1991, pp. 238–64
- Milinski M, Semmann D, Bakker T, Krambaeck HJ. 2001. Cooperation through indirect reciprocity: image scoring or standing strategy? *Proc. R. Soc. Lond. B: Biol. Sci.* 268:2495–501
- Moen P, Dempster-McClain D, Williams RM Jr. 1992. Successful aging: a life-course perspective on women's multiple roles and health. *Am. J. Sociol.* 97:1612–38
- Moore CW, Allen JP. 1996. The effects of

14.26 PENNER ET AL.

- volunteering on the young volunteer. *J. Prim. Prev.* 17:231–58
- Morrow-Howell N, Hinterlong J, Rozario PA, Tang F. 2003. Effects of volunteering on the well-being of older adults. *J. Gerontol. B: Psychol. Sci. Soc. Sci.* 58:S137–45
- Mullen B, Brown RJ, Smith C. 1992. Ingroup bias as a function of salience, relevance, and status: an integration? *Eur. J. Soc. Psychol.* 22:103–22
- Mullen B, Hu L. 1989. Perceptions of ingroup and outgroup variability: a meta-analytic integration. *Basic Appl. Psychol.* 10:233–52
- Musick MA, Herzog AR, House JS. 1999. Volunteering and mortality among older adults: findings from a national sample. *J. Gerontol. B: Psychol. Sci. Soc. Sci.* 54:S173–80
- Musick MA, Wilson J. 2003. Volunteering and depression: the role of psychological and social resources in different age groups. *Soc. Sci. Med.* 56:259–69
- Nadler A. 2002. Inter-group helping relations as power relations: maintaining or challenging social dominance between groups through helping. *J. Soc. Issues* 58:487–502
- Nadler A, Fisher JD. 1986. The role of threat to self-esteem and perceived control in recipient reaction to help: theory development and empirical validation. In *Advances in Experimental Social Psychology*, ed. L Berkowitz, vol. 19, pp. 81–122. San Diego, CA: Academic
- Oliner S, Oliner P. 1988. *The Altruistic Personality: Rescuers of Jews in Nazi Europe*. New York: Free Press
- Oman D, Thoresen E, McMahon K. 1999. Volunteerism and mortality among the community-dwelling elderly. *J. Heal. Psychol.* 4:301–16
- Omoto AM, Snyder M. 1995. Sustained helping without obligation: motivation, longevity of service, and perceived attitude change among AIDS volunteers. *J. Personal. Soc. Psychol.* 68:671–87
- Omoto AM, Snyder M. 2002. Considerations of community: the context and process of volunteerism. *Am. Behav. Sci.* 45:846–86
- Osguthorpe RT, Scruggs TE. 1986. Special education students as tutors: a review and analysis. *Remed. Spec. Educ.* 7:15–25
- Penner LA. 2002. The causes of sustained volunteerism: an interactionist perspective. *J. Soc. Issues* 58:447–67
- Penner LA, Brannick MT, Webb S, Connell P. 2004. The effects of the September 11, 2001 attacks on volunteering: an archival analysis. *J. Appl. Soc. Psychol.* In press
- Penner LA, Finkelstein MA. 1998. Dispositional and structural determinants of volunteerism. *J. Personal. Soc. Psychol.* 74:525–37
- Penner LA, Fritzsche BA, Craiger JP, Freifeld TR. 1995. Measuring the prosocial personality. In *Advances in Personality Assessment. Volume 10*, ed. J Butcher, CD Spielberger, pp. 147–63. Hillsdale, NJ: LEA
- Perlow L, Weeks J. 2002. Who's helping whom? Layers of culture and workplace behavior. *J. Organ. Behav.* 23:345–61
- Piliavin JA. 2004a. Feeling good by doing good. In *Processes of Community Change and Social Action*, ed. AM Omoto. Mahwah, NJ: Erlbaum. In press
- Piliavin JA. 2004b. I get more than I give: volunteering, well-being and health. Presented at annu. meet. East. Sociol. Soc., New York, Feb. 21, 2004
- Piliavin JA, Callero PL. 1991. *Giving Blood: The Development of an Altruistic Identity*. Baltimore, MD: Johns Hopkins Univ. Press
- Piliavin JA, Charng HW. 1990. Altruism: a review of recent theory and research. *Annu. Rev. Sociol.* 16:27–65
- Piliavin JA, Dovidio JF, Gaertner SL, Clark RD III. 1981. *Emergency Intervention*. New York: Academic
- Piliavin JA, Grube JA, Callero PL. 2002. Role as a resource for action in public service. *J. Soc. Issues* 58:469–85
- Preston SD, de Waal FB. 2002. Empathy: its ultimate and proximate bases. *Behav. Brain Sci.* 25:1–72
- Rachlin H. 2002. Altruism and selfishness. *Behav. Brain Sci.* 25:239–96

- Reed P, Selbee L. 2000. *Distinguishing Characteristics of Volunteers in Canada*. Ottawa: Statistics Canada
- Riedel E. 2002. The impact of high school community service programs on students' feelings of civic obligation. *Am. Pol. Res.* 30:499-527
- Rioux S, Penner LA. 2001. The causes of organizational citizenship behavior: a motivational analysis. *J. Appl. Psychol.* 86:1306-14
- Ripley JS, Worthington EL Jr. 2002. Hope-focused and forgiveness-based group interventions to promote marital enrichment. *J. Couns. Dev.* 80:452-63
- Rodin J, Langer E. 1977. Long-term effects of a control-relevant intervention with the institutionalized aged. *J. Personal. Soc. Psychol.* 35:897-902
- Rosen S, Mickler SE, Collins JE II. 1987. Reactions of would-be helpers whose offer of help is spurned. *J. Personal. Soc. Psychol.* 53:288-97
- Schroeder DA, Penner LA, Dovidio JF, Piliavin JA. 1995. *The Psychology of Helping and Altruism*. New York: McGraw-Hill
- Schroeder DA, Steel JE, Woodell AJ, Bembenek AF. 2003. Justice within social dilemmas. *Personal. Soc. Psychol. Rev.* 7:374-87
- Schwartz SH, Howard JA. 1982. Helping and cooperation: a self-based motivational model. In *Cooperation and Helping Behavior: Theories and Research*, ed. VJ Derlega, J Grzelak, pp. 327-53. New York: Academic
- Snyder M, Clary EG, Stukas AA. 2000. The functional approach to volunteerism. In *Why We Evaluate: Functions of Attitudes*, ed. GR Maio, JM Olson, pp. 365-93. Mahwah, NJ: Erlbaum
- Sober E, Wilson DS. 1999. *Unto Others: The Evolution and Psychology of Unselfish Behavior*. Cambridge, MA: Harvard Univ. Press
- Staub E. 2002. Emergency helping, genocidal violence, and the evolution of responsibility and altruism in children. In *Visions of Compassion: Western Scientists and Tibetan Buddhists Examine Human Nature*, ed. RJ Davidson, A Harrington, pp. 165-81. London: Oxford Univ. Press
- Sturmer S, Snyder M, Omoto AM. 2004. Prosocial emotions and helping: the moderating role of group membership. *J. Personal. Soc. Psychol.* In press
- Sundeen R, Raskoff S. 1995. Teenage volunteers and their values. *Nonprofit Volunt. Sect. Q.* 24:337-57
- Thoits PA, Hewitt LN. 2001. Volunteer work and well-being. *J. Heal. Soc. Behav.* 42:115-31
- Trivers R. 1971. The evolution of reciprocal altruism. *Q. Rev. Biol.* 46:35-57
- Turner JC, Hogg MA, Oakes PJ, Reicher SD, Wetherell MS. 1987. *Rediscovering the Social Group: A Self-Categorization Theory*. Oxford: Blackwell Sci.
- Tyler TR, Blader SL. 2003. The Group Engagement Model: procedural justice, social identity, and cooperative behavior. *Personal. Soc. Psychol. Rev.* 7:349-61
- U.S. Department of Labor. 2002. *Volunteering in the United States*. www.bls.gov/vol.pdf. Accessed Dec. 18, 2002
- Uggen C, Janikula J. 1999. Volunteerism and arrest in the transition to adulthood. *Soc. Forces* 78:331-62
- Unger LS, Thumhuri LK. 1997. Trait empathy and continuous helping: the case of voluntarism. *J. Soc. Behav. Personal.* 12:785-800
- Uslaner E. 2002. Religious and civic engagement in Canada and the United States. *J. Sci. Stud. Relig.* 41:239-54
- Vaes J, Paladino M-P, Leyens J-P. 2002. The lost e-mail: prosocial reactions induced by uniquely human emotions. *Br. J. Psychol.* 41:521-34
- van Baaren RB, Holland RW, Kawakami K, van Knippenberg A. 2004. Mimicry and prosocial behavior. *Psychol. Sci.* 15:71-74
- Van Lange PAM, De Bruin EMN, Otten W, Joireman JA. 1997. Development of prosocial, individualistic, and competitive orientations: theory and preliminary evidence. *J. Personal. Soc. Psychol.* 73:733-46
- Van Vugt M, Biel A, Snyder M, Tyler T. 2000. Perspectives on cooperation in modern society: helping the self, the community, and society. In *Cooperation in Modern*

14.28 PENNER ET AL.

- Society: Promoting the Welfare of Communities, States and Organizations*, ed. M Van Vugt, M Snyder, T Tyler, A Biel, pp. 3–24. London: Routledge
- Van Vugt M, Hart CM. 2004. Social identity as social glue: the origins of group loyalty. *J. Personal. Soc. Psychol.* 86:585–98
- Vecina ML. 2001. Psychosocial factors that influence the duration of volunteering. Unpubl. dissert., Univ. Complutense de Madrid
- Volunteering Australia 2003. *Volunteering in Australia: Facts and Figures*. <http://www.volunteeringaustralia.org>
- Waldzus S, Mummendey A, Wenzel M, Weber U. 2003. Towards tolerance: representations of superordinate categories and perceived in-group prototypicality. *J. Exp. Soc. Psychol.* 39:31–47
- Wang XT. 2002. Kith and kin rationality in risky choices. In *Risky Transactions: Trust, Kinship, and Ethnicity*, ed. FK Salter, pp. 47–70. New York: Berghahn
- Weber JM, Kopelman S, Messick DM. 2004. A conceptual review of decision making in social dilemmas: applying a logic of appropriateness. *Personal. Soc. Psychol. Rev.* In press
- Webster G. 2003. Prosocial behavior in families: moderators of resource sharing. *J. Exp. Soc. Psychol.* 39:653–60
- Wedekind C, Braithwaite V. 2002. The long-term effects of human generosity in indirect reciprocity. *Curr. Biol.* 11:1012–15
- Wiedenfeld SA, O’Leary A, Bandura A, Brown S. 1990. Impact of perceived self-efficacy in coping with stressors on components of the immune system. *J. Personal. Soc. Psychol.* 59:1082–94
- Wilson J. 2000. Volunteering. *Annu. Rev. Sociol.* 26:215–40
- Wilson J, Musick M. 1997a. Who cares? Toward an integrated theory of volunteer work. *Am. Sociol. Rev.* 62:694–713
- Wilson J, Musick M. 1997b. Work and volunteering: the long arm of the job. *Soc. Forces* 76:251–72
- Yamagishi T, Kiyonari T. 2000. The group as the container of generalized reciprocity. *Soc. Psychol. Q.* 63:116–32
- Yates M, Youniss J. 1996. A developmental perspective on community service in adolescence. *Soc. Dev.* 5:85–111
- Yogev A, Ronen R. 1982. Cross-age tutoring: effects on tutors’ attributes. *J. Educ. Res.* 75: 261–68
- Youniss J, Yates M, Su Y. 1997. Social integration into peer and adult society: community service and marijuana use in high school seniors. *J. Adolesc. Res.* 12:245–62
- Zhou Q, Eisenberg N, Losoya SH, Fabes RA, Reiser M, et al. 2002. The relations of parental warmth and positive expressiveness to children’s empathy-related responding and social functioning: a longitudinal study. *Child Dev.* 73:893–915