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Age Changes in Prosocial Responding and Moral Reasoning in Adolescence and Early Adulthood

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Abstract

Age changes' measures of prosocial responding and reasoning were examined. Participants' reports of helping, empathy-related responding, and prosocial moral reasoning were obtained in adolescence (from age 15–16 years) and into adulthood (to age 25–26 years). Perspective taking and approval/interpersonal oriented/stereotypic prosocial moral reasoning increased from adolescence into adulthood, whereas personal distress declined. Helping declined and then increased (a cubic trend). Prosocial moral judgment composite scores (and self-reflective empathic reasoning) generally increased from late adolescence into the early 20s (age 17–18 to 21–22) but either leveled off or declined slightly thereafter (i.e., showed linear and cubic trends); rudimentary needs-oriented reasoning showed the reverse pattern of change. The increase in self-reflective empathic moral reasoning was for females only. Thus, perspective taking and some aspects of prosocial moral reasoning—capacities with a strong sociocognitive basis—showed the clearest increases with age, whereas simple prosocial proclivities (i.e., helping, sympathy) did not increase with age.

PROSOCIAL DEVELOPMENT IN EARLY ADULTHOOD: A LONGITUDINAL STUDY

Prosocial responding, including helpful or caring behaviors and related values and cognitions, are valued in most cultures, probably because of their contributions to harmonious human relationships. Thus, for many years, psychologists have debated and examined whether prosocial tendencies are stable across time and situations (Gergen, Gergen, & Meter, 1972; Piliavin, Dovidio, Gaertner, & Clark, 1981). Recent findings are consistent with the argument that there is at least modest rank-order consistency in prosocial responding over time and contexts, both in childhood and adulthood (as reflected in correlations across time or contexts; e.g., Eisenberg, Guthrie, Cumberland, Murphy, Shepard, Zhou, & Carlo, 2002; Penner, Fritzsche, Craiger, & Freifeld, 1995). However, even if there is consistency in the rank ordering of individuals, there likely are changes with age in prosocial responding. The purpose of the present study was to examine age-related changes in prosocial dispositions from mid-adolescence into early adulthood, including changes inmeasures of self-reported helping, perspective taking, sympathy and personal distress, and prosocial moral reasoning.

To our knowledge, there is little research on changes in prosocial behavior or orientations in mid- to late-adolescence or early adulthood. Nonetheless, there are several conceptual reasons to expect prosocial tendencies to become stronger with age. First, investigators have found that Canadian adolescents tend to view mean and harmful behavior as immature (Galambos, Barrer,

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& Tilton-Weaver, 2003), and that about 75% of young adults in diverse American ethnic groups (age 18–29) believe that one criterion for the transition to adulthood is becoming less self-oriented and developing greater consideration for others (Arnett, 2003). Similar findings were obtained in Israel, where both adolescents (with amean age of 16 years) and young adults (with a mean age of 26 years) rated these same capabilities as part of the emotional maturity that is a marker of adulthood (Mayseless & Scharf, 2003). Thus, a prosocial orientation appears to be a marker of attaining adult maturity that is accepted by both adolescents and young adults.

Second, both other-oriented moral judgment and prosocial behaviors such as helping, sharing, and comforting have been linked conceptually and empirically with perspective-taking skills (Eisenberg, 1986; Kohlberg, 1981, 1984), which continue across adolescence. Selman (1975) noted that in adolescence, individuals may become aware that in taking another's perspective, "the mutuality of perspectives includes a view of both self and other as complex psychological systems of values, beliefs, attitudes, etc. [and the] further awareness that the mutuality of understanding of each other's point of view can take place at different qualitative levels—for example, persons can "know" each other as acquaintances, friends, closest friends, lovers, etc. (1975, p. 40)." Selman (1980) found a linear increase in social perspective taking from childhood to adulthood, including advances for many individuals from adolescence into adulthood (Selman, 1980; see also Shantz, 1983). Similarly, Davis and Franzoi (1991) found that the tendency to take others' perspectives increased in mid-adolescence. Given the conceptual importance of understanding others' perspectives for the development of caring feelings, cognitions, and behavior (including sympathy and helping; e.g., Batson, 1991; Hoffman, 2000), advances in perspective-taking skills during adolescence would be expected to enhance prosocial development during the same age period (Colby, Kohlberg, Gibbs, & Lieberman, 1983; Eisenberg, 1986; Kohlberg, 1981).

Similarly, the advances in social problem-solving skills and interpersonal negotiation skills that appear to occur during adolescence (e.g., Berg, 1989; Brion-Meisels & Selman, 1984) probably contribute to the development of other-oriented social interactions, as would advances in prosocial conceptions of friendship and relationships (Brown & Gilligan, 1992; Selman, 1980). In addition, changes in conceptions of the self from childhood into adolescence likely are associated with moral and prosocial development. By late adolescence, the self is defined in terms of social and psychological aspects of the self, with the consequence that morality is sometimes a major regulator of social interactions, and belief systems are central to characterizing the psychological self (see Damon & Hart, 1988; Harter, 1999).

As already noted, advances in perspective taking are believed to contribute to the ability to experience sympathy and to higher level moral reasoning. In turn, changes in the quality of moral reasoning and in the likelihood of sympathetic responding during adolescence have been conceptually linked to the development of altruistic tendencies (e.g., Eisenberg & Fabes, 1998; Eisenberg, Zhou, & Koller, 2001; Underwood & Moore, 1982). For example, Hoffman (2000) suggested that the ability to sympathize with the distress of others who are abstract (i.e., are not in the immediate situation) and with the chronic distress of others (including disadvantaged groups) develops in late childhood or early adolescence, based on early adolescents' newfound ability to view others as having continuing personal identities and life experiences beyond the immediate situation. If sympathy continues to develop in mid- to late-adolescence, adolescents would be expected to be increasingly willing to assist a wide range of individuals, including those who are only known abstractly or have very different needs from their own.

When considering developmental change in prosocial responding, it is important to consider the individual's motivation. Prosocial behaviors are usually defined as voluntary behaviors that are intended to benefit another. The motivation for such behavior is often unclear and can

include the desire for self-gain or approval or an attempt to live up to internalized moral values. In addition, as already noted, numerous theorists have suggested that empathy (i.e., feeling an emotion similar to another's emotion or to that expected in the other's situation) and sympathy (i.e., feelings of concern for another based on the comprehension of the other's emotional state or condition) are important factors motivating prosocial behavior (Batson, 1991; Hoffman, 2000; Staub, 1979). In contrast, personal distress—an aversive, self-focused emotional reaction to the apprehension or comprehension of another's emotional state or condition—is believed to undermine other-oriented prosocial behavior.

Specifically, Batson (1991) hypothesized that sympathy (called empathy by Batson) involves other-oriented motivation and, hence, motivates helping, even if one can easily avoid contact with the other person. In contrast, personal distress involves the egoistic motive of alleviating one's own aversive negative emotional state and results in helping only when that is the easiest way to make oneself feel better. Consistent with such theorizing, sympathy has generally been positively related to prosocial behavior, especially behavior likely to be based on other-oriented emotions and values, whereas personal distress tends to be negatively related or unrelated to altruistic behavior (i.e., prosocial behavior motivated by sympathy or moral values; Batson, 1991; Eisenberg & Fabes, 1998).

Although reasoning regarding moral decisions is also believed to contribute to the quality of moral functioning (Eisenberg, 1986; Kohlberg & Candee, 1984), including prosocial behavior, until the 1970s, nearly all of the research on moral judgment was based on Kohlberg's (1981) influential work, which is focused primarily on principles of justice (e.g., moral conflicts in which rules, laws, authorities' dictates, and formal obligations are central). Researchers have examined reasoning about positive morality less frequently; however, there is a growing body of work on care-related concerns in moral conflicts and on prosocial moral reasoning—reasoning about moral dilemmas in which one person's needs or desires conflict with those of others in a context in which the role of prohibitions, authorities' dictates, and formal obligations is minimal (Eisenberg-Berg, 1979; Eisenberg, Carlo, Murphy, & Van Court, 1995; see Jaffee & Hyde, 2000). There is also limited evidence that prosocial moral reasoning (Eisenberg, 1986; Eisenberg et al., 1995; Janssens & Dekovic, 1997), as well as justice-oriented reasoning (Blasi, 1980; Kohlberg & Candee, 1984), are related to prosocial behavior, especially costly prosocial actions.

Despite theoretical assumptions that are consistent with an increase in prosocial tendencies in adolescence and early adulthood, the evidence is mixed and most studies involving adolescents and young adults are not longitudinal in their design. In a meta-analysis, Eisenberg and Fabes (1998) found that prosocial behavior increases in frequency across childhood into adolescence, with adolescents tending to be higher in prosocial behavior than children aged 7–12, but only on measures of sharing/donating, not instrumental helping or comforting. Although adolescents and children differed on observed prosocial behavior and others' reports thereof, they did not differ in their self-reported prosocial behavior. Overall differences between adolescents and children held for comparisons involving either early adolescents (age 13–15) or older adolescents (age 16–18) (Fabes, Carlo, Kupanoff, & Laible, 1999). In contrast, there was mixed evidence of an increase in prosocial responding across adolescence (from age 12 to 17 or 18 years): Prosocial behavior increased in adolescence in experimental/structured studies (but not in naturalistic/correlational studies), and when the recipient of aid was a child rather than an adult (Eisenberg & Fabes, 1998). Thus, although adolescents exhibited more prosocial behavior than did younger children, a change in adolescence was noted only for particular recipients or types of studies. However, the number of studies that compared older and younger adolescents was small (11), and the samples and measures varied considerably across these studies (which could have contributed to the age-related trends or the lack thereof). Thus, the pattern of findings must be viewed as being merely suggestive.

Data on age-related change in sympathy and personal distress in adolescence and early adulthood are even more limited in quantity than are data on prosocial behavior. Eisenberg and Fabes (1998) reported an age-related increase in empathy-related responding (empathy/sympathy) across childhood and adolescence; however, they did not specifically examine change across adolescence. In the only longitudinal study we know (besides the present study) conducted with adolescents (9th and 10th graders), Davis and Franzoi (1991) found an increase in sympathy and a decline in personal distress over 2 years. In contrast, in a more recent crosssectional study of 8th and 11th graders, Karniol, Gabay, Ochion, and Harari (1998) found no change in similar self-reported measures of sympathy or personal distress. In another cross-sectional study of 6th to 12th graders, Olweus and Endresen (1998) found an increase in females' empathic distress (which likely reflected primarily personal distress), whereas males' empathic distress did not change. In the same study, females' sympathetic concern toward males and females increased with age, as did males' sympathy with females; however, males' sympathy toward same-sex targets declined somewhat with age, particularly between grades 8 and 9. In general, then, there seems to be modest support for an increase in sympathy with age in adolescence, whereas the few findings for personal distress have been inconsistent. However, only one of the relevant studies was longitudinal, and none assessed change across adolescence into early adulthood. Thus, at this time, it is unclear whether sympathy increases with age in late adolescence. Nonetheless, increases in sympathy might be expected during this age period because of either changes in social or family roles and experiences involving intimacy (Erikson, 1950) or continuing changes in adults' sociocognitive development (e.g., Kuhn, Amsel, & O'Loughlin, 1988).

Unlike for sympathy, there is considerable evidence that moral reasoning—prosocial or justice-oriented—becomes more mature with age in childhood and adolescence (e.g., Colby et al., 1983; Eisenberg & Fabes, 1998; Rest, 1979, 1983). Kohlberg (1984) argued that moral reasoning increases or remains stable in its level rather than decreases with age because of age-related structural changes in reasoning (i.e., the development of qualitatively new ways of thinking). In his view, as people mature, moral judgment is reorganized (and becomes more advanced) as a consequence of advances in perspective-taking abilities. Whereas investigators have found that justice-related moral reasoning continues to develop in late adolescence and into adulthood (Colby et al., 1983; Rest, 1979), age-related changes in prosocial moral reasoning have seldom been studied in the late teens and beyond.

Using cross-sectional and longitudinal data from children and adolescents (primarily in Western, industrialized cultures), Eisenberg and her collaborators charted age-related changes in prosocial moral judgment in childhood to late adolescence (Eisenberg, 1986; Eisenberg, Shell, Pasternack, Lennon, Beller, & Mathy, 1987; Eisenberg, Miller, Shell, McNalley, & Shea, 1991; Eisenberg et al., 1995; Eisenberg-Berg, 1979). Consistent with work on justice-oriented reasoning, they found that young children tend to use primarily hedonistic reasoning, as well as some needs-oriented (primitive empathic) prosocial reasoning. In elementary school, needs-oriented reasoning increases, hedonistic reasoning decreases (although it slightly increases again in late adolescence), and some children begin to express concern with approval, enhancing interpersonal relationships, and behaving in stereotypically "good" ways. Beginning in late elementary school or thereafter, some children begin to verbalize reasoning reflecting abstract principles, internalized affective reactions (e.g., guilt or positive affect about the consequences of one's behavior for others or living up to internalized principles), and self-reflective sympathy or perspective taking, although such reasoning is not the dominant mode of reasoning for most early to mid-adolescents. In later adolescence, stereotypic reasoning drops off slightly (but is still higher than in early adolescence). Reasoning concerning role taking, internalized norm/rule/values, internalized affective reactions based on concern about the consequences of one's behavior on others, and positive affect related to values and living up to those values increased with age into late adolescence in the longitudinal study.

Because the development of moral reasoning tapping justice-related issues continues in adulthood (Colby et al., 1983) and advances in logical and sociocognitive capabilities occur during late adolescence and early adulthood (Kuhn et al., 1988; Selman, 1980), there is reason to expect further normative developmental change in prosocial moral reasoning in the early 20s. In addition, college is expected to foster the growth of moral reasoning because of the opportunities for engaging in complex, abstract thinking and perspective taking in that setting (see Mason & Gibbs, 1993; Rest&Narvaez, 1991). Thus, an increase in higher level other-oriented and internalized reasoning was predicted in the early 20s. It is also possible, however, that dealing with the pragmatics of earning a living after (or instead of) college has a dampening effect on moral judgment. For example, others' approval and concerns with what is considered appropriate behavior may be more important in the work place or in marital relations than in the college environment. Moreover, it is possible that young adults, who are entering the work force and carving out careers for themselves, become less idealistic and more practical and self-focused than when in school (especially during college). If this were true, one might expect leveling off of growth in higher level reasoning in the mid-20s, or even a slight decline in moral judgment. This would be especially true for measures of moral reasoning such as prosocial moral reasoning that are believed to assess the range of moral reasoning used by individuals (i.e., their performance) rather than their highest level of moral competence (which Kohlberg, 1984 attempted to assess; see Eisenberg, 1986). A stabilizing with regard to prosocial behavior in early adulthood might also occur for everyday types of helping behaviors that do not require high levels of morality or perspective taking.

The primary goal of the present study was to assess change in aspects of sociocognitive functioning expected to contribute to prosocial responding (i.e., perspective taking and prosocial moral reasoning), as well as in prosocial feelings (i.e., sympathy) and behavior (e.g., helping) from mid-adolescence in early adulthood. The sample size in this study is small, but because the design involves repeated longitudinal measures, the sample size has proved adequate for delineating significant developmental trends in moral reasoning in the past (e.g., Eisenberg et al., 1995). Indeed, longitudinal data provide considerable statistical power for testing for change in mean levels of variables over time and the primary focus in the present paper is to examine such changes. Although Eisenberg et al. (2002) demonstrated rank-order consistency within and across time for the various measures of prosocial responding used in this study, they did not examine change in mean levels of responding from adolescence into adulthood. Because there is little theoretical discussion and so few data on age-related changes in helping behavior, empathy-related responding, and prosocial moral reasoning in late adolescence and early adulthood (except with regard to justice-oriented moral reasoning), we tested for, and reported, linear, quadratic, and cubic age trends. We believe that this approach is particularly appropriate for developmental research in areas largely without guiding theory or empirical research because empirical findings might foster the emergence of cogent theory.

SEX AND LEVEL OF PROSOCIAL FUNCTIONING

Although gender differences were not the primary focus of this paper (in part because of the small sample size), gender differences in various measures of prosocial functioning and in the patterns of age-related change in these variables were examined. Even though prosocial traits are associated with the feminine role (Gilligan, 1982; Spence & Helmreich, 1978), research on sex differences in prosocial behavior is not very consistent. In childhood and adolescence, females generally have been found to be more prosocial than males (Eisenberg & Fabes, 1998). In contrast, Eagly and Crowley (1986) found that men generally helped in specific experimental or naturalistic contexts more than women. However, many of the studies reviewed by Eagly and Crowley assessed helping that required instrumental skills (e.g., knowing how to change a tire), a willingness to deal with the risk of danger (e.g., when dealing with a stranger in a place that might not be safe), or other variables besides caring for others.

With regard to sympathy, females tend to report more sympathy and to score higher on some observed measures in childhood/adolescence, but generally do not score higher in physiological or facial measures of sympathy/empathy (Eisenberg & Fabes, 1998; Eisenberg & Lennon, 1983). Moreover, although the findings are somewhat mixed, in a recent meta-analysis, Jaffee and Hyde (2000) found that females tended to use somewhat more caring, prosocial moral reasoning than do males. In the longitudinal sample used in the present study, by mid-adolescence, girls scored higher in overall moral reasoning and expressed more of some other-oriented types of reasoning, than did boys (Eisenberg et al., 1991; Eisenberg, 1995). Thus, in the present study, females were expected to use somewhat higher level prosocial moral reasoning and especially more other-oriented reasoning, and change with age in these types of reasoning was expected to be greater for females than for males. Moreover, based on prior research, they were expected to be higher in self-reported sympathy and perhaps helping.

METHOD

Study Participants

The sample included 16 females and 16 males (all Euro-American, except two of Hispanic origin) who have been interviewed 12 times since preschool (henceforth referred to as T1–T12). The data in this paper were taken from the assessments in mid-adolescence to adulthood (T7–T12), which occurred at 15–16, 17–18, 19–20, 21–22, 23–24, and 25–26 years of age (see Eisenberg et al., 1987, 1991, 1995, 2002). The mean age of the participants at T12 was 25.42 years (SD in months-4.02). No participants were lost from T3 to T10 (although interviews could not be obtained for some participants at T9 and T10); one refused any participation at T11 (so $n = 31$ at T11) but not at T12 ($n = 32$); and five additional children were lost when they were young (the original n was 37). The mean years of maternal and paternal education for this sample (as reported at T8) were 16.0 and 17.0, respectively (range = 12–20 years for both). At T12, two participants reported advanced degrees (a law degree or MA) and one was in law school; 16 more had graduated from college (one had some MA training); eight were still earning a BA/BS; two had quit college or had a 2-year degree; and three had only a high school education. Occupations of those who had not finished 4 years of college included retail sales, data entry, homemaker, and flight attendant. Occupations for college graduates were diverse and included jobs such as a music teacher, a lawyer, associate investment banker, sales representative, account managers, and a police officer. One person was unemployed.

Measures

Self-report measures of prosocial responding, empathy-related responding, and prosocial moral reasoning were administered at each assessment. Questionnaire measures at T9 were not used either because they were not administered (for the helping measure) or because they were rated on a 7-point rather than a 5-point scale as in other assessments (i.e., for the empathy-related scales). Measures at T9 differed in these ways because of the attempt to change some scales as the participants entered adulthood and the accidental change in the rating scale as a consequence of modifications in the measures.

Helping—At T7 and T8, participants filled out a 23-item slightly adapted version of Rushton, Chrisjohn, and Fekken's (1981) self-report helping scale (a couple of words were simplified and an item concerning giving someone a lift in the car was not used). Adolescents indicated on a 5-point scale (ranging from *never* to *very often*) how frequently they engaged in behaviors such as giving money to charity or volunteer work (see Eisenberg et al., 1991, 1995). At T10–T12, participants filled out a 14-item adapted version of Rushton et al.'s (1981) self-report altruism scale taken from Penner et al. (1995) using the same response scale (αs = .85, 67, and .78 at T10, T11, and T12). This measure overlaps in items with the longer 23-item version of the measure completed by participants at T6–T8. For the longitudinal analyses in this paper

using this measure, the 14 items that were used at all these assessments were averaged into the self-reported helping scale (αs = .84, .81, .85, .68, and .78). This measure of helping behavior has sometimes been related to mothers' reports of prosocial behavior and/or behavioral measures of prosocial behavior (e.g., Eisenberg et al., 1991, 1995).

Empathy-related responding (sympathy, perspective taking, and personal distress)—To assess empathy-related responding, participants rated items on three 7-item subscales of Davis' (1983, 1994) Interpersonal Reactivity Index (IRI; αs for T7, T8, T10, T11, and T12 are in parentheses): sympathy (the tendency to experience feelings of warmth and concern for others; e.g., "I have tender, concerned feelings for people less fortunate than me," αs = .83, .71 .81, .83, and .82, respectively), perspective taking (the tendency to adopt the point of view of others; e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective," αs = .73, .79, .82, .80, and .87); and personal distress (e.g., "Being in an emotional situation scares me"; as at T7, T8, T10, T11, and T12 = .74, .71, .76, .66, and .84). Items were rated from *1 = strongly disagree* to *5 = strongly agree* and were averaged for each scale (after reversing items if appropriate). As already noted, because these scales were rated on a 7-point instead of 5-point scale at T9, they were not used in the analyses in this paper.

The sympathy and perspective-taking scales in this study have often been significantly related to an earlier measure of real-life prosocial behavior, as well as measures of prosocial behavior (e.g., mother- or self-reported; Eisenberg et al., 1991, 1995, 2002); they have also been relatively consistent over time (Eisenberg et al., 2002). Personal distress, in contrast, has tended not to be consistently related to other measures of prosocial responding (Eisenberg et al., 1991, 1995, 2002).

Prosocial moral reasoning—At T7, T8, T9, T10, and T12, participants who were available (*n*s = 32, 32, 28, 28 at T10 and 32 at T12) were interviewed with five moral reasoning stories (see Eisenberg et al., 1987, 1991, 1995). Participants were not interviewed at T11 because many were living in different states and we did not expect much change in moral reasoning over a 2-year period in early adulthood. A typical story was one in which the story protagonist had to choose between practicing swimming for a competition in which he or she would win a prize or using that time to teach disabled children to swim. Story protagonists in four of the stories were specified as the same sex as the participants; sex was unspecified in one story because the protagonists were a group. Participants were presented with the stories in random order and were asked what the story protagonist should do and why. Standard probes were used to encourage participants to elaborate on their reasoning.

Responses were first rated in terms of the extent to which the reasoning reflected each of the categories outlined by Eisenberg et al. (1987, 1991). Those used with any frequency were as follows:

Hedonistic reasoning: (a) Hedonistic gain to the self (orientation to gain for oneself; e.g., "She wouldn't help because she wouldn't want to be hungry"), (b) direct reciprocity (orientation to personal gain because of direct reciprocity or lack of reciprocity from the recipient of an act; "He'd share some food with the people in the other village so they would share with her if she needed food another time"), and (c) affectional relationship (orientation to the individual's identification or relationship with another or liking for the other; e.g., She'd help because they might be friends");

Pragmatic (orientation to practical concerns that are unrelated to selfish considerations; e.g., "She'd help because she is strong");

Needs oriented (orientation to the physical, material, or psychological needs of the other person; e.g., "He needs blood," or "He's sad");

Stereotypes of a good or bad person (orientation to stereotyped images of a good or bad person; e.g., one would help because it is "good" or "nice");

Approval and interpersonal orientation (orientation to others' approval and acceptance in deciding what is the correct behavior; e.g., "His parents would be proud of him if he helped");

Self-reflective empathic orientation: (a) sympathetic orientation (expression of sympathetic concern and caring for others; e.g., "He would feel sorry for them"); (b) role taking (the individual explicitly takes the perspective of the other or has the story protagonist do so; e.g., "He'd try to put himself in their shoes"); (c) internalized positive affect related to consequences (orientation to internal positive affect as a result of a particular course of action because of the consequences of one's act for the other person; e.g., "She'd help because she'd feel good knowing the children could walk better"); and (d) internalized negative affect related to consequences (the same as (c) but for negative affect; e.g., "She would feel guilty if she didn't help because the child could be hurt");

Internalized affect because of gain (loss) of self-respect because of *living up (not living up) to one's values*: (a) positive (orientation to feeling good, often about oneself, as a consequence of living up to internalized values, e.g., "She'd feel good about herself if she did what she thinks is the moral behavior"), and (b) negative (concern with feeling bad as a consequence of not living up to internalized values, e.g., "He'd think badly of himself if he didn't do what he knew was right");

Internalized law, norm, and value orientation (orientation to an internalized responsibility, duty, or need to uphold the laws and accepted norms or values; e.g., "I feel that I have a duty to assist others who are in need"); and

Other abstract and/or internalized types of reasoning: (a) *generalized reciprocity* (orientation to indirect reciprocity in a society, that is, exchange that is not one to one but eventually benefits all or a larger group, e.g., "If everyone helps one another, we'd all be better off"); (b) *concern with the condition of society* (orientation to improving the society or community as a whole; e.g., "If everyone helps, communities would be better off"); (c) *concern with individual rights and justice* (orientation to protecting individual rights and preventing injustices that violate another's rights; "She'd help because the girl's right to play without being harmed was being violated"); and (d) *equality of people* (orientation to the principle of the equal value of all people, e.g., "he'd share food with the other town because all people are equal in their worth").

Participants were assigned scores reflecting the frequency with which they used each of the various types of reasoning when discussing both the pros and cons of helping the needy other in the story dilemma (1 = no use of category; 2 = vague, questionable use; 3 = clear use of a mode of reasoning; 4 = a major type of reasoning used, a clearly salient type of reasoning). Scores for various categories were not mutually exclusive. Usually, only one or two types of reasoning were assigned a score of 4 for each story, and sometimes none received a score of 4 (if no one type of reasoning was used more than once *and* seemed to be strongly espoused). Then, the scores for each category were summed across the stories. At T10 and T12, a team of two individuals jointly coded all the data for reliability. Inter-rater reliabilities for T1–T9 are presented in previous papers (e.g., Eisenberg et al., 1987, 1991, 1995). For all time periods, the primary coder was the same person, whereas eleven persons had served as reliability coders over the 12 time periods. To prevent bias in scoring, the primary coder, as well as reliability coders at T10 and T12, were blind to the identity of the children. Coders also had no information regarding participants' scores on the other measures. Inter-rater reliabilities at T10 (Pearson's

product–moment correlations) computed for each reasoning category ranged from .68 to .98, with all except pragmatic reasoning being above .72. At T12, all reliabilities were .80 or above, except that the reliability of concern for individual rights and justice was .73.[1]

The categories of reasoning are viewed as reflecting developmental levels of prosocial moral reasoning; these levels were derived from the results of cross-sectional research (see Eisenberg, 1986; Eisenberg-Berg, 1979). Briefly, the levels are as follows: Level 1, hedonistic, self-focused orientation; Level 2, needs of others' orientation; Level 3, approval and interpersonal orientation/stereotyped orientation; Level 4, self-reflective, empathic orientation; and Level 5, strongly internalized orientation. The proportion of reasoning at each level (computed by combining across all types of reasoning at a given level) was computed. Then, as at earlier follow-ups, a composite index representing the level of moral judgment was computed for each participant by weighting the proportion of reasoning at each level (e.g., 1 for hedonistic, direct reciprocity, or affectional relationship reasoning; 2 for needs-oriented reasoning; 3 for stereotypic or approval/interpersonal reasoning; and 4 for higher level reasoning; see Eisenberg et al., 1983, Eisenberg et al., 1987 for more details). Because it is debatable whether Level 5 is more moral than Level 4 and because scores for these two levels were weighted equally in prior assessments, scores for levels 4 and 5 were weighted equally in the analyses presented (although the results did not change much if Level 5 was weighted higher).

Procedures

At T10, T11, and T12, participants were initially contacted by phone if possible; then, a packet of questionnaires was sent to the participants to fill out and return (the order of the questionnaires was counterbalanced).At T8 and earlier, all measures were completed in the laboratory. At T10 and T12, participants (*n*s = 28 at T10 and 32 at T12) were subsequently individually interviewed on their prosocial moral reasoning, usually at the university, by a woman who had not been involved in follow-ups at T9 or earlier. At T10–T12, participants were paid for completing both the questionnaires ($25 or $30) and the interview ($25); they were paid $25 at T7 and T8.

RESULTS

The means and standard deviations for the major variables (at the times used) are presented in Table 1 (means for variables from earlier periods are in Eisenberg et al., 1991,1995,2002).We computed MANOVAs to examine whether there were changes with age from T7 (age 15–16) to T12 (age 25– 26) in the mean levels of measures of helping, sympathy, personal distress, perspective taking, and moral reasoning. Linear, quadratic, and cubic trends were tested.

Helping

Self-reported helping was assessed five times (from T7 to T12, omitting T9). In the repeated measures 2 (sex) ×5 (assessment) MANOVA, the cubic trend was significant, *F*'s(1, 29) = 6.70, $p<.02$. Self-reported helping increased with age from T7 to T8, and then dropped somewhat and stabilized at T10 and T11, and increased somewhat again at T12, albeit not to the T8 level (*M*s = 3.10, 3.23, 3.02, 3.01, and 3.17). The main effect of sex was not significant.[2]

[1]The primary coder for the moral reasoning protocols was the same person who had scored the data at all previous follow-ups; this procedure was used to prevent differences across different coders at different times being interpreted as age-related changes in reasoning. To determine whether there was any change in the primary coder's scoring over the years (and to prevent the primary coder from knowing the age of the participants being coded), two protocols from each of the T4 to T9 follow-ups were mixed together with the various protocols from T10 or T12 and were re-scored by the primary coder to determine whether there was a change in her scoring over the years. Scores for data from earlier sessions at both T10 and T12 were highly similar to the original scores for the same data (agreement on codes within one point was 84% or higher on all categories; correlations were .80 and higher).

Sympathy, Perspective Taking, and Personal Distress

Because the same measures of sympathy, perspective taking, and personal distress were available at T7–T12, we examined the changes in these variables from age 15–16 to age 25–26. The IRI scales for these two variables were rated on 5-point scales at all times except T9 (when a 7-point scale was used). The findings were similar when adjusted T9 measures were used in the analyses or not; thus, analyses without T9 data are reported (and the polynomial for the trend analysis reflected the 4-year gap between T8 and T10).

For the five assessments of sympathy from T7 to T12 (omitting T9), only the main effect of sex was significant, $F(1, 28) = 23.24$, $p<.01$ (*M*s for women and men were 4.37 and 3.62, respectively). The lack of a linear or quadratic trend for sympathy was because of multiple changes in the level of sympathy over time (*M*s = 3.94, 3.98, 3.87, 4.06, and 3.99).

In a similar repeated measures MANOVA for the five assessments of perspective taking between T7 and T12, the linear trend for time was significant, $F(1, 28) = 14.18$, $p<.01$. Perspective taking generally increased with age from late adolescence into early adulthood (*M*s at T7, T8, T10, T11, and T12 = 3.39, 3.33, 3.62, 3.69, and 3.74). In addition, women ($M = 3.77$) scored marginally higher than men ($M = 3.37$) on PT, $F(1, 28) = 3.95$, $p<.06$. In contrast, a negative linear trend was found for personal distress when assessed at T7, T8, T10, T11, and T12 (*M*s = 2.57, 2.35, 2.28, 2.25, and 2.15), $F(1, 19) = 6.22$, $p<.019$.

Prosocial Moral Judgment

To examine age changes in moral reasoning as assessed in interviews from adolescence into adulthood, similar repeated measures Time × Sex multivariate and univariate trend analyses were computed. If the moral judgment interview data from T9 had been used, only 24 individuals could have been included in the analyses because four different people were not interviewed at T9 and at T10 (for a total of eight missing subjects). However, 28 people could be included in analyses if data from only T7 (age 15–16), T8 (age 17–18), T10 (age 21–22), and T12 (age 25–26) were used in the analyses (recall that there was no interview at T11). Analyses of the changes in reasoning across childhood (up until T8) can be found in Eisenberg et al. (1991, 1995).

Repeated measures MANOVAs were computed for two types of data: (a) the five levels of moral reasoning and (b) the composites scores. Composite scores and those for levels 1 and 5 were skewed and were transformed for analyses. Because transforming these data had no effect on the pattern of results, data from the MANOVA using the untransformed data are reported for ease of interpretation.

Levels of moral reasoning—In the analysis of the T7, T8, T10, and T12 levels of moral reasoning (in which the spacing of years was taken into consideration in the polynomial specification), the multivariate *F*'s were significant or marginally significant for the linear and cubic effects of time and for sex and the Sex × Linear interaction, $F(5, 22) = 12.58$, 3.70, 5.11, and 2.56, *p*s<.01, 02, .01, and .06. Hedonistic reasoning (Level 1) did not change with age (although there were slight ups and downs in mean levels over time; see Table 1), nor did Level 5 reasoning.[3] In contrast, both the linear and cubic trends were significant for Levels 2 and 4. Level 2 (rudimentary needs-oriented) reasoning was level from 15–16 to 17–18 years, decreased sharply with age from age 17–18 to 21–22 years, and then leveled off (proportions of Level 2 reasoning at T7, T8, T10, and T12 = .43, .43, .24, and .23), whereas Level 4 (self-

[2]There was a strong linear trend when T6 (age 13–4) was included in the analysis. Helping ($M = 2.63$ at T6) rose considerably from T6 to T8.

[3]Level 5moral reasoning did increase in a linear manner with age when T6 was included in the analyses, $F(1, 26) = 5.83$, $p<.03$. Thus, there is evidence that this type of reasoning increases with age from early adolescence to early adulthood.

reflective, empathic orientation) reasoning increased with age from T7 to T10—with a sharp rise at age 17–18 to 21–22 years—and then dropped by a modest amount at T12 (*M*s = .19, .15, .31, and .27, respectively); *F*s(1, 26) for the linear trends at Levels 2 and 4 = 43.29 and 18.64, *p*s<.01, and *F*s(1, 26) for the cubic trends 7.98 and 19.05, *p*s<.01, respectively. However, the strength of the linear trend for Level 4 varied with sex, $F(1, 26) = 7.38$, $p<.02$, and the linear trend was significant only for females (*M*s = .20, .15, .40, and .35) and not males (*M*s = .19, .15, .23, and .21), *F*s(1, 26) = 23.09 and 1.38, *p*s<.01 and *NS*. In addition, Level 3 reasoning increased linearly with age, $F(1, 26) = 5.42$, $p<.03$ (*M*s = .15, 17, 21, 23).

With regard to sex differences, across the four assessments, females, compared with males, scored lower on proportion of Level 1 (self-focused orientation) reasoning (*M*s for males and females were .08 and .21, respectively) and marginally higher on Level 4 (self-reflective, empathic orientation) reasoning (*M*s = .26 and .19), *F*s(1, 26) = 16.64 and 3.32, *p*s<.01 and .08.

In an additional analysis, we covaried scores on perspective taking when looking at the age trends in prosocial moral reasoning. Only the linear age trend for stereotypic reasoning was reduced to non-significance.

Composite scores—In the repeated measures 2 (sex) × 4 (time) MANOVA for composite proportion scores, there were significant effects for sex and the linear and cubic trends, *F*s(1, 26) = 8.19, 19.73, and 11.73, *p*'s<.01. Females (*M* = 2.86) scored higher than males (*M* = 2.57). The linear increase in overall prosocial moral reasoning was strong; the somewhat weaker (but substantial) cubic trend indicated that prosocial moral reasoning scores were fairly stable in mid-adolescence, increased from T8 (age 17–18 years) to T10 (age 21–22 years), and then stabilized (and declined very slightly) at T12 (age 25–26 years) (*M*s = 2.54, 2.49, 2.92, 2.87).

DISCUSSION

In the present study, we examined age-related changes in prosocial functioning from mid-adolescence (age 15–16) to early adulthood (age 25–26). We found an interesting pattern: some aspects of prosocial functioning increased in maturity from adolescence into adulthood, whereas others did not. Sympathy did not show a specific pattern of change with age, whereas personal distress decreased with age. Thus, the tendency to experience sympathy may not increase in a systematic manner after mid-adolescence (and the pattern of change in adolescence is not highly consistent; Davis & Franzoi, 1991; Karniol, et al., 1998; Olweus & Endresen, 1998). In addition, although self-reported helping increased from early adolescence into adulthood (see Footnote 2), it had a cubic trend from age 15–16 years into the 20s. Helping increased from age 15–16 to age 17–18 years, dropped off in the early 20s, and increased again at age 25–26 years. These findings are consistent with the lack of a consistent increase in instrumental helping from childhood to adolescence (Eisenberg & Fabes, 1998); indeed, there was a decline in helping in late adolescence into the early 20s (followed by an increase in adulthood). Thus, although individual differences in both helping and sympathy were quite consistent over time (Eisenberg et al., 2002), neither increased systematically with age from mid-adolescence to adulthood.

Why did helping and sympathy not increase with age? The types of helping behavior assessed in this study (or in most studies) generally did not require sophisticated perspective taking; similarly, the measure of sympathy probably assessed the tendency to experience sympathy rather than the ability to sympathize in developmentally sophisticated ways (i.e., in ways that require high-level perspective taking). Thus, age-related changes in perspective taking may have been relatively unlikely to influence either participants' helping or sympathy. It is also possible that the sociocognitive skills underlying sympathy are fairly developed by mid-

adolescence: Hoffman's (2000) highest level of empathy is achieved by late childhood or early adolescence. After that age, individual difference in sympathy may have more to do with emotional characteristics such as the susceptibility to feel others' emotions (i.e., empathize) and experiencing concern for another than with an understanding of others' emotions or state. Thus, in adolescence, dispositional differences in characteristics such as emotionality and the ability to modulate empathic emotion so that it does overwhelm the individual (and turn into personal distress; Eisenberg, Fabes, Murphy, Karbon, Maszk, Smith, O'Boyle, & Suh, 1994) may be more predictive of sympathy than age. Moreover, the contributions of factors such as parental socialization to prosocial behavior and sympathy (Eisenberg & Fabes, 1998) may be evident primarily at younger ages or may be constant over time, such that they contribute to individual differences in adolescents' and adults' prosocial tendencies, but not to systematic age-related change in these capacities.

The aspects of functioning that most obviously involved social cognition (perspective taking and moral reasoning) increased with age. Specifically, perspective taking increased from adolescence into the 20s. Moreover, we found a linear increase in overall (composite) prosocial moral reasoning and Level 4 (self-reflective, empathic) reasoning, as well as a decline in rudimentary needs-oriented moral reasoning from adolescence into early adulthood. The pattern of results for prosocial moral reasoning is somewhat consistent with that for perspective taking, which is believed to foster higher level moral reasoning (Colby & Kohlberg, 1987; Eisenberg, 1986). Indeed, it is possible that changes in perspective-taking abilities contribute to changes in prosocial moral reasoning; higher level moral reasoning is viewed as based on social perspective-taking skills (Colby et al., 1983). Moreover, Eisenberg et al. (2001) found that the measure of perspective taking used in this study was linked to moral reasoning and helping (the latter through sympathy) in early adolescence. However, our analyses demonstrated that the index of perspective taking in this study did not account to a substantial degree for the changes in overall prosocial moral reasoning or in Level 2 (needs-oriented) or 4 (self-reflective, empathic) reasoning. Unfortunately, we did not have a measure of perspective taking that tapped sophisticated sociocognitive skills (rather than the propensity to take another's perspective), so we could not determine whether change in the ability (rather than tendency) to perspective taking could account for the age-related changes in prosocial moral reasoning that were found.

In addition to linear trends, there were cubic trends for the composite moral reasoning score and for Level 2 (needs-oriented) and 4 (self-reflective, empathic) prosocial moral reasoning. In general, these types of reasoning changed relatively little from age 15–16 to 17–18 years, exhibited more dramatic change from17–18 to 21–22 years, and leveled off from age 21–22 to age 25–26 years. For example, the overall interview prosocial moral judgment was fairly stable in mid-adolescence, increased from age 17–18 to age 21–22 years, and was fairly stable from age 21–22 to 25–25 years. Further, Level 3 reasoning (related to stereotypic and approval-oriented concerns) increased with age, although at a relatively slow pace.

Thus, it appeared that there was considerable change in some aspects of prosocial moral reasoning from late adolescence into the early 20s, with little change from the early 20s to the mid-20s. Indeed, in auxiliary analyses of age trends in moral reasoning from T10 (age 21–22 years) to T12 (age 25–26 years), there were no significant age trends, nor was there an increase in perspective taking from T10 to T12 (although the quadratic tend was marginally significant, $p<.055$). As adults move out of higher education into family and work roles, their level of perspective taking, as well as their prosocial moral judgment, may no longer develop at the same rate, if at all. In addition, it is likely that changes in the structure of young adults' lives and roles have an influence on the types of prosocial moral reasoning used by adults, even if they are capable of verbalizing higher level moral judgment. Rest (1979) and Eisenberg (1986) have argued that people often use levels of moral reasoning lower than are characteristic

of their moral competence; Eisenberg (1986) further suggested that goals, needs, and values at a given moment affect an individual's level of moral judgment. Moreover, the range of a person's moral reasoning is more likely to be evident if it is coded with a system (such as in this study) that does not minimize the content of reasoning or focus primarily on the highest level of reasoning expressed with any frequency (e.g., through various coding rules used by Kohlberg; Colby & Kohlberg, 1987; see Eisenberg, 1986). Perhaps, the roles that young adults encounter in the mid-20s do not "pull" for the higher level reasoning of which they are capable. It will be important to chart further changes in prosocial moral reasoning as individuals move further from college and establish themselves to a greater degree in their families and work environments, and to link these with changes in adults' everyday concerns.

In contrast to sympathy, personal distress decreased with age from adolescence into adulthood. Feelings of personal distress likely occur when an individual is empathically overaroused and cannot modulate his or her empathic affect (Eisenberg et al., 1994; Eisenberg,Wentzel, &Harris, 1998; Hoffman, 1982). Because regulation seems to continue to develop in adolescence and adulthood (Williams, Ponesse, Schachar, Logan, & Tannock, 1999), people may become less vulnerable with personal distress as they move through adolescence into adulthood. Because personal distress is aversive, it is likely that the measure of this construct tapped the ability to regulate empathic overarousal rather than the mere tendency to experience it. Thus, perhaps even more than sympathy, personal distress is dependent on age-related changes in regulatory skills. Consistent with this view, the relations of regulation to personal distress are somewhat more consistent than analogous relations with sympathy (Eisenberg et al., 1998).

As already noted, stereotypic/approval-oriented reasoning increased with age. In prior analyses of the frequency (rather than proportion) of reasoning, stereotypic reasoning increased from childhood until age 15–16 years and then declined somewhat by age 19–20 years; approval reasoning increased with age from childhood to mid-adolescence (Eisenberg et al., 1995). Such reasoning was expected to stabilize or decline from adolescence into adulthood; however, given that prosocial behavior is viewed as a marker of adulthood (Arnett, 2003), some people may increasingly be oriented to acting in prosocial ways because it is viewed by society (and valued others) as mature and desirable. Indeed, the types of reasoning in our Level 3 are very common in adults' justice-oriented moral reasoning (Colby et al., 1983).

It was surprising that Level 5, strongly internalized reasoning, did not increase with age. Such reasoning did increase from early adolescence into adolescence and adulthood (see Footnote 3), but it was still verbalized infrequently (about 10–12% of the time) in early adulthood. Level 5 types of reasoning generally involved relatively abstract notions (e.g., generalized reciprocity) and reference to living up to one's own values or self-image. It is quite possible that such prosocial reasoning never becomes very frequent, so age trends are difficult to detect.

Women, in comparison with men, scored higher in prosocial moral judgment (and were especially low in hedonistic reasoning), were higher in sympathy, and were marginally higher in perspective taking. Women and men did not differ in the measure of self-reported helping, which included numerous items of instrumental helping (giving directions to a stranger, carrying a stranger's belongings, offering a seat to a stranger on a bus), as well as sharing or giving to charity. Thus, the moral reasoning data provide some support for the notion that women attend more to others' needs and less to their own wants than do men (Gilligan & Attanucci, 1988). This finding is consistent with a growing body of work in which females score higher on care-related moral reasoning (see Jaffee & Hyde, 2000) and with the sex difference favoring females in prosocial behavior and in some measures of empathy/sympathy in childhood and adolescence (Eisenberg & Fabes, 1998), if not for instrumental behaviors in adulthood (Eagly & Crowley, 1986). Because of sex differences in socialization and social

roles, it is likely that females learn to focus more than males on others' internal states and needs in their thinking about moral issues. For example, parents discuss some emotions more with girls than boys (Dunn, Bretherton,&Munn, 1987; Kuebli, Butler,&Fivush, 1995) and may encourage girls more than boys to be prosocial (Power & Parke, 1986; Power & Shanks, 1989). Few sex differences in moral reasoning were found until early adolescence in this sample, and Eisenberg and Fabes (1998) found that the gender difference in empathy/sympathy increased across childhood to adolescence. Thus, the pattern of findings suggests that gender differences in prosocial tendencies may increase in adolescence, perhaps because of an increased emphasis on gender-related norms and expectations as many youth begin intimate relationships and start to adopt or internalize stereotypic gender-related adult roles.

The linear trend reflecting an increase in other-oriented, self-reflective (Level 4) reasoning in early adulthood was significant for women but not for men. Adult roles and relationships may stimulate other-oriented modes of reasoning such as role-taking, sympathetic, and positive affect/consequences reasoning, and the impact of these relational experiences may be greater for women than men. Involvement in mature intimate relationships in late adolescence and early adulthood may promote the development or use of self-reflective, other-oriented reasoning more for women, more because of the role of prosocial responding in the expressive, feminine role (e.g., Spence & Helmreich, 1978).Whatever the reason, our findings suggest that women in their teens and early 20s are more caring than men, although they may not always help more when instrumental skills or contact with strangers are required to assist (Eagly & Crowley, 1986). It is likely that young women behave in more prosocial ways, especially when dealing with people whom they know and can sympathize with or when helping in nonthreatening contexts.

In summary, the findings in this study are consistent with the view that there are advances in a variety of aspects of prosocial functioning from adolescence into early adulthood, but that there is relatively little further development in the early to mid-20s. Further research is needed to assess the nature of further developmental change of prosocial functioning in early adulthood, and why it seems to stabilize in the 20s. In addition, we currently have little information on factors that contribute to the developmental changes in prosocial functioning that were noted in adolescence into early adulthood. Whereas increases in perspective-taking ability (or tendencies) during these years likely are an important factor, there are probably other cognitive and social factors that contribute to the age-related changes found in this sample.

A limitation of the current study is the use of self-report measures of prosocial tendencies. Although we had nonself-report indexes, none was used from adolescence into adulthood. However, many of the self-report measures that were used, individually or in composites, have been linked to actual prosocial behavior (as far back as preschool), as well as to mothers' or friends' reports of prosocial tendencies (Eisenberg et al., 1991, 1995, 2002). Moreover, the measures of self-reported helping, sympathy, perspective taking, and personal distress were consistent across individuals over a decade or more, and the measure of moral reasoning was correlated across several years. Thus, our self-report measures appeared to have some validity. Another limitation in the study is that the sample was rather homogenous. Consequently, the results may not generalize to different socioeconomic or racial/ethnic groups. Finally, given the small sample size and the number of analyses, it is possible that some of the findings were because of chance. Thus, it will be important to replicate the findings, especially those that were not consistent with prior research or theory.

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TABLE 1

Means and Standard Deviations of Major Variables in the Analyses

	Time of Assessment and Age of Participants					
Measure	**T7 (15–16)**	**T8 (17–18)**	**T10 (21–22)**	**T11 (23–24)**	**T12 (25–26)**	**Range of Scores**
Self-reported						
Helping[a]	3.10 (.61)	3.23 (.57)	3.02 (.62)	3.01 (.46)	3.17 (.52)	1.85–4.69
Sympathy[b]	3.94 (.77)	3.98 (.69)	3.87 (.69)	4.06 (.58)	3.99 (.61)	1.43–5.00
Perspective taking[b]	3.39 (.70)	3.33 (.74)	3.63 (.70)	3.69 (.65)	3.74 (.72)	1.57–5.00
Personal distress[b]	2.57 (.70)	2.35 (.64)	2.28 (.60)	2.25 (.49)	2.15 (.68)	1.00–4.14
Moral judgment						
Level 1[c]	.15 (.11)	.16 (.14)	.13 (.12)		.14 (.17)	0–.78
Level 2[c]	.43 (.22)	.43 (.17)	.24 (.09)		.23 (.07)	.05–1.00
Level 3[c]	.15 (.12)	.17 (.12)	.21 (.15)		.23 (.16)	0–.75
Level 4[c]	.19 (.16)	.15 (.11)	.31 (.18)		.27 (.16)	0–.65
Level 5[c]	.07 (.12)	.10 (.11)	.12 (.14)		.12 (.12)	0–.55
Composite score[d]	2.54 (.42)	2.60 (.35)	2.92 (.42)		2.87 (.45)	1.00–3.59

Note. Means are based on the participants who had data at all time periods (*n*s = .31 for questionnaires and *n*s = 28 for the prosocial moral interview). No T9 questionnaire scores were used because either the score was missing or rated on a scale that differed from other assessments.

[a] Shortened version of Rushton et al.'s (1981) scale (5-point).

[b] From the IRI (Davis, 1983); scored on a 5-point scale.

[c] The levels are proportion scores.

[d] This score can be multiplied by 100 to obtain scores similar to the summary scores used by Kohlberg and others studying justice-oriented moral reasoning.

TABLE 2

Patterns of Age-Related Change in the Major Prosocial responding Measures

Questionnaires	
Helping[b]	Cubic*
Sympathy[c]	None
Perspective taking[c]	Linear I**
Personal distress[c]	Lin D**
Moral judgment	
Level 1[d]	None
Level 2[d]	Linear D**, cubic**
Level 3[d]	Linear I*
Level 4[d]	Linear I**; cubic**, Sex × Linear*
Level 5[d]	None
Composite score	Linear I**, cubic**

Note. I = linear increase with age; d = linear decrease with age; cubic = cubic trend; none = no significant age trend. See Table 1 and/or text for means to interpret trends.

[a] T7, T8, T10, T11, and T12 were used for helping, sympathy, perspective taking, and personal distress. T7, T8, T10, and T12 were used for all prosocial moral judgment measures.

[b] Shortened version of Rushton et al.'s (1981) scale.

[c] From the IRI (Davis, 1983).

[d] The levels are proportion scores.

** $p < .01$.

* $p < .05$.