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The Development of Prosocial Moral Reasoning and a Prosocial Orientation in Young Adulthood: Concurrent and Longitudinal Correlates

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We examined stability and change in prosocial moral reasoning (PRM) assessed longitudinally at ages 20/21, 22/23, 24/25, 26/27, and 31/32 years ($N = 32$; 16 female) using a pencil-and-paper measure of moral reasoning and examined relations of PRM and prosocial behavior with one another and with empathy, sympathy measured with self- and friend reports in adulthood, self- and mother reports of prosocial tendencies in adolescence, and observed prosocial behavior in preschool. Proportions of different types of PRM (hedonistic, approval, stereotypic, internalized) exhibited high mean-level stability across early adulthood, although stereotypic PMR increased with age and hedonistic PRM (a less sophisticated type of PRM) declined over time for males. More sophisticated PMR was positively related to friends' reports of a prosocial orientation concurrently and at age 24/25, as well as self-reports of sympathy in adolescence. Specific modes of PMR related to spontaneous or compliant sharing in preschool. Women used more sophisticated PMR than men across the entire study period. Self-reported and friend-reported prosociality at age 27/28 and 31/32 (combined) was related to numerous prior measures of a prosocial orientation, including spontaneous, relatively costly prosocial behavior in preschool (for self-reports and friend-reported sympathy/consideration for others). Donating/volunteering at T13/T14 was related to concurrent self- and friend-reported prosociality and to self-reported prosocial orientation in earlier adulthood and mother-reported helping in adolescence.

Keywords: prosocial moral reasoning, prosocial behavior, empathy, sympathy, young adulthood

For many years, psychologists have debated whether there are stable individual differences in the degree to which people behave in helpful, generous, and caring ways and consider the rights and welfare of others—what has been labeled as an altruistic or prosocial personality. Piliavin, Dovidio, Gaertner, and Clark (1981) asserted that the search for an altruistic personality was futile because prosocial behavior varies primarily as a function of context (e.g., cost of helping, the recipient of help, social demands in a context). Others (e.g., Eisenberg et al., 2002; Penner & Finkelstein, 1998) have argued that there are relatively enduring differences in prosocial tendencies. The altruistic personality generally is seen as including other-oriented values and cognitions, as well as sympathy and sometimes empathy, and cognitive perspective taking, all of which can motivate other-oriented prosocial behavior.

Numerous researchers believe that individual differences in moral judgment contribute to stable tendencies to behave proso-

cially (Eisenberg, 1986; Hoffman, 2000). Until the 1970s, most research on moral reasoning was grounded in Kohlberg's (1984) theory and interview methods, which involved a primary focus on principles of justice and moral conflicts in which rules, laws, authorities' dictates, and formal obligations are central. Researchers less frequently have examined reasoning regarding prosocial or care-related concerns (see Midlarsky, Kahana, Corley, Nemeroff, & Schonbar, 1999; Skoe, 2010), even though one might expect moral reasoning about conflicts involving the choice between prosocial behavior and self-interested behavior to be more related to prosocial behavior than are moral judgments about prohibitions or wrong doing (e.g., Kohlberg, 1984). Reasoning about prosocial situations has been viewed as reflecting moral values and their hierarchy in helping contexts and, thus, would be expected to contribute to the consolidation of prosocial personality characteristics, especially with age (Eisenberg, 1986; Hardy, 2006).

The purpose of the present study was threefold: (a) to examine mean-level change during early adulthood in prosocial moral reasoning (PMR)—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, 1986); (b) to examine concurrent interrelations among aspects of prosocial functioning, including diverse measures of a prosocial orientation and PMR; and (c) to examine whether prosocial functioning from ages 27/28 to 31/32 years was predicted by diverse indices of a prosocial orientation from ages 19/20 to 25/26, in late childhood and adolescence, and in preschool.

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The Development of Prosocial Moral Reasoning

Eisenberg and colleagues (Eisenberg, Carlo, Murphy, & Van Court, 1995; Eisenberg, Cumberland, Guthrie, Murphy, & Shepard, 2005; Eisenberg, Miller, Shell, McNalley, & Shea, 1991; Eisenberg et al., 1987) examined the course of PMR from childhood to age 25/26 using an interview measure of PMR. They found that young children tend to use primarily hedonistic PMR, as well as some needs-oriented PMR (i.e., reasoning that simply refers to others' needs, viewed as rudimentary empathic PMR). In elementary school, children's needs-oriented PMR increased, hedonistic PMR decreased, and some children began to express concern with approval, enhancing interpersonal relationships, and behaving in stereotypically "good" ways. In late elementary school or thereafter, some youths began to use PMR reflecting abstract principles, internalized affective reactions (e.g., guilt or positive affect about the consequences of one's behavior for others or about living up to internalized principles), and self-reflective sympathy or perspective taking (e.g., explicitly acknowledging feelings of concern or perspective taking), although such reasoning seldom was the dominant mode. Reasoning concerning role taking, internalized norms/rules/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. Hedonistic reasoning decreased dramatically across childhood but exhibited a modest increase in adolescence (Eisenberg et al., 1995). From mid adolescence until about the mid-20s, hedonistic reasoning and more abstract, internalized PMR did not change with age (Eisenberg et al., 2005). Needs-oriented was stable from ages 15/16 to 17/18, decreased sharply from ages 17/18 to 21/22, and then leveled off. Self-reflective, empathic/sympathetic PMR (explicitly referring to perspective taking/sympathy) increased to age 21 for women, and then dropped slightly. Unexpectedly, stereotypic/approval-oriented PMR increased with age. Consistent with the latter finding, Carlo, McGinley, Roesch, and Kaminski (2008) found that adolescents' and college students' stereotypic and internalized types of reasoning tended to load on the same factor and argued that both can involve fairly sophisticated sociocognitive capacities.

Because the development of moral reasoning tapping justice-related issues continues in adulthood (Kohlberg, 1984) and advances in logical and sociocognitive capabilities occur during late adolescence and early adulthood (Kuhn, Amsel, & O'Loughlin, 1988), there is some reason to expect further normative developmental change in PMR in the 20s. The college experience is expected to foster the growth of moral reasoning because of opportunities for engaging in complex, abstract thinking and perspective taking (Rest & Narvaez, 1991), but it is unclear if PMR stabilizes thereafter. The period of emerging adulthood (from the late teens to late 20s) is often viewed as a time of continuing growth toward maturity (Arnett, 2000). It is also possible that dealing with the pragmatic issues of earning a living and starting a family has an effect on moral judgment. Others' approval and concerns with what is considered stereotypically appropriate behavior (and internalization of those norms/values) may be more important in the work place or in marital relations than in college. In addition, as adults engage in the work force, they may become less idealistic and more practical and self-focused than during college. If so, one might predict leveling off of higher level PMR

in the mid-20s to early 30s or even a modest decline in moral judgment. This pattern might be especially likely for measures of moral judgment such as PMR 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).

With the exception of Eisenberg et al.'s (2002, 2005) longitudinal data, there are few data on the development of PMR in the 20s or early 30s. In a cross-sectional study of undergraduate and graduate students aged 19 to 35, but with a mean age of about 22, age was not related to a pencil-and-paper measure of PMR very similar to that used in the present study (Hardy, 2006). In a cross-sectional study, Skoe (2010) found that age was positively related to care-related moral judgment in a sample aged 20 to 40 ($M = 23$). Longitudinal data are needed to examine the change in PMR during the 20s and into the 30s.

Relations of Moral Reasoning to Prosocial Behavior, Affect, and Values

Empathy is frequently defined as an emotional reaction elicited by, and highly similar to, another's emotional state or condition (Eisenberg, Fabes, & Spinrad, 2006). Empathy involves the mirroring of another's emotion (or expected emotion) but is believed to sometimes lead to sympathy (i.e., concern for another based on the apprehension of the other's emotional state or condition), which in turn motivates other-oriented prosocial behavior (Batson, 1991; Eisenberg, 1986). Moreover, cognitive perspective taking (i.e., cognitively taking the role of the other or accessing information from memory to assist in understanding another's emotion/situation) has been hypothesized to promote sympathy (Batson, 1991; Hoffman, 2000). Thus, perspective taking, empathy, and especially sympathy can be considered measures of a prosocial disposition expected to motivate other-oriented prosocial behavior (Penner & Finkelstein, 1998).

Consistent with the view that moral reasoning affects moral behavior, PMR generally has been found to be modestly related to prosocial behaviors, especially costly ones. Children's and adolescents' prosocial behavior frequently has been positively related to needs-oriented PRM, negatively related to hedonistic PRM, and sometimes positively related to a composite measure of adolescents' or young adults' overall level of PMR (e.g., Carlo, Mestre, Samper, Tur, & Armenta, 2011; Eisenberg, 1986), especially (for composite measures) after midadolescence (Eisenberg et al., 1995; Midlarsky, Jones, & Corley, 2005). Moreover, Eisenberg et al. (2002) found that level of PMR in the early to mid-20s was generally positively related to self-reported prosocial and empathic/sympathetic tendencies in adolescence and early adulthood, and friend-reported prosocial tendencies from ages 19 to 26. The relation between moral judgment and behavior is expected to increase with maturity because higher level reasoning is associated with the "progressive stripping away of bases for justifying behavior that are extrinsic to principle" (p. 104, Rhoads & Bailey, 1983), resulting in stronger motivation to maintain consistency between one's attitudes and behaviors at higher levels of moral development (Kohlberg & Candee, 1984). Thus, prosocial tendencies in the mid-20s to early 30s were predicted to be positively related to concurrent overall PMR level, as well as with a prosocial

orientation at younger ages. We were unsure if this pattern would be stronger in the 30s than in the 20s.

Hoffman (2000) suggested that empathy/sympathy, which involves perspective taking, stimulates the development of internalized moral reasoning involving concern for others' welfare, bonds with moral principles, and thereby provides the motivational force to act on those principles. In addition, Eisenberg (1986) argued that sympathy primes the use of pre-existing other-oriented moral cognitions. Consistent with such arguments, level and/or type of PMR—especially greater other-oriented, less self-oriented, and/or higher level PMR—often has been related to dispositional perspective taking (or similar measures such as emotion understanding) and sympathy in childhood and adolescence (Carlo, Eisenberg, & Knight, 1992; Eisenberg et al., 1987, 1991, 1995, 2002), as well as in early (Eisenberg et al., 2002; Skoe, 2010) and older (Midlarsky et al., 2005) adulthood. Given that sympathy and perspective taking are believed to contribute to PMR and have been related within and across-time to PMR in adolescence and very early adulthood (Eisenberg et al., 1999, 2002), we expected PMR in the late 20s and early 30s to be predicted by contemporaneous and perhaps prior indices of prosociality, especially sympathy. However, to our knowledge, no one has examined predictors of PMR at this age.

Concurrent and Longitudinal Relations Among Indices of Prosocial Behavior, Prosocial Value Orientation, and Empathy-Related Responding

To study dispositional differences in prosocial tendencies (the prosocial personality), investigators have often examined relations among concurrent indices of prosocial responding or, less frequently, assessed consistency across time in a given measure of prosociality or across different measures of prosociality. In addition, because empathy, sympathy, and perspective taking have been hypothesized to influence prosocial values and behavior, they have been examined as predictors of prosocial functioning.

There are multiple reasons to expect consistency in prosocial proclivities across time. First, theorists have argued that both prosocial behavior and empathy-related responding have a genetic basis (e.g., Hoffman, 2000), and there is empirical support for such assertions (see Knafo & Israel, 2010). Thus, differences in heredity could partly account for stable differences in prosocial/sympathetic proclivities. Moreover, twin studies indicate that environmental factors also contribute to dispositional differences in prosocial tendencies (e.g., Deater-Deckard et al., 2001). Parental child-rearing practices, which differ across families, have been associated with the development of prosocial behavior and sympathy (see Eisenberg et al., 2006) so consistency in prosocial behavior during childhood could be partly due to consistency in socialization experiences. Nonetheless, given that most adults in their late-20s to 30s are not living in their home of origin and are exposed to many new socializing influences, it is possible that the consistency between prosocial responding in early adulthood and childhood based on socialization is diluted as one moves through adulthood.

Empirical evidence regarding the consistency in prosocial tendencies across concurrent measures, contexts, and reporters is mixed. Although one finds considerable consistency across various measures of self-reported prosocial responding (e.g., Eisenberg et al., 2002; Midlarsky et al., 2005), cross-situational consistency is

often obtained but is modest (see Eisenberg et al., 2006). This is not surprising given that prosocial actions in different contexts often reflect different motives. In comparison with data pertaining to cross-situational consistency, there is more evidence for consistency in ratings of prosocial responding across different reporters (e.g., Eisenberg et al., 1995, 2002), perhaps because such measures tap the broader constellation of characteristics involved in a prosocial disposition. Yet studies of prosocial tendencies involving multiple reporters are rare.

Consistent with theory, sympathy, and to a lesser degree, empathy—both of which can be viewed as components of a prosocial personality—also generally have been positively related to prosocial behavior, especially prosocial acts likely to be motivated by other-oriented emotions and values (Batson, 1991; Davis, 1994; Eisenberg et al., 2006). Similarly, cognitive perspective taking has been empirically linked to prosocial behavior (Davis, 1994; see Eisenberg et al., 2002, 2006), albeit mostly in studies with concurrent data.

Research examining consistency of prosocial proclivities across time is relatively rare. A number of researchers have, however, found some consistency in behavioral measures of prosocial behavior or sympathy—over months or up to several years—in childhood (Eisenberg et al., 1987) and adolescence (e.g., Eisenberg et al., 1991). Moreover, there is evidence of consistency in raters' perceptions of children's or adolescents' prosocial behavior over a year or more (e.g., Eisenberg et al., 1991, 1995; see Eisenberg et al., 2006) and in self-reported sympathy (Davis & Franzoi, 1991). Eisenberg et al. (1995, 1999, 2002) found evidence of consistency in self-reported empathy and sympathy in childhood and adolescence for up to 8 years and consistency from early to midadolescence into the early to mid-20s. Moreover, friends' reports of elements of a prosocial disposition (e.g., prosocial behavior, values, and empathy-related responding) in the early 20s related to one another and to similar measures of youths' prosocial tendencies years prior (Eisenberg et al., 2002).

When examining relations between a prosocial personality (or PMR) and specific prosocial behaviors, it is important to consider the motivational significance of the given prosocial behavior. Eisenberg-Berg and Hand (1979) hypothesized that preschoolers' spontaneous *sharing* behaviors, which involve a cost to the child (e.g., giving up a possession) and are performed without a request, are more other-oriented than everyday helping or sharing behaviors that generally entail little cost or either helping or sharing behaviors that are enacted to comply with peers' requests. Consistent with this prediction, they found that spontaneous sharing, but not spontaneous helping or compliant sharing or helping, was related to needs-oriented PMR (Eisenberg-Berg & Hand, 1979). Moreover, spontaneous prosocial behavior in preschool, but not compliant prosocial behavior, has been correlated with sympathy in young children (Eisenberg, McCreath, & Ahn, 1988) and consistently positively related to prosocial tendencies, including prosocial behavior, values, sympathy, and sometimes perspective taking, in adolescence and early adulthood (up to the mid-20s; Eisenberg et al., 1999, 2002). Although mode of prosocial behavior has not always been related to other measures of prosociality (e.g., sympathy) in a predictable manner (e.g., Carlo, Knight, McGinley, & Hayes, 2011), based on the bulk of the literature, we expected measures of a prosocial personality in adulthood to relate to earlier

prosocial measures reflecting an other-orientation (e.g., sympathy) or somewhat costly, spontaneous prosocial action.

The Present Study

In the present study, we examined the development of PMR from ages 21/22 to 31/32, as well as concurrent and longitudinal relations among measures of PMR and a prosocial orientation (including sympathy, prosocial behavior, and other-oriented values), using self-report data and reports from friends (in early adulthood) and mothers (in adolescence) of prosociality, as well as observations of prosocial behavior in preschool. Unlike in most of Eisenberg et al.'s (2002, 2005) prior research on the development of PMR in late adolescence and early adulthood using interview methods, PRM was assessed with a paper-and-pencil measure that has been related to the scores on the PMR interview in late adolescence and early adulthood (Eisenberg et al., 1995, 2002). Although PMR has been found to change in some ways until the mid-20s (Eisenberg et al., 2005), we were unsure if it would continue to change in systematic ways across the 20s into the 30s (e.g., if stereotypic reasoning would continue to increase), and we expected mean-level change to be less evident than at younger ages.

Of particular interest were the relations of measures of PMR and a prosocial personality at ages 27/28 to 31/32 with prosocial and empathy-related responding at younger ages. It currently is unclear whether there is discontinuity in individual differences in prosocial functioning as people move into relatively stable adult roles and relationships after a period of transition into adulthood. Adults' prosocial tendencies were expected to be related to sympathy at younger ages, as well as with prosocial behavior. However, these relations were expected to be somewhat more consistent for adulthood prosocial behavior/values than for PMR because PMR undergoes considerable change from childhood to early adulthood.

Unlike in prior articles from this sample, more formal charitable activities were reported (donating to, and volunteering for, charitable/nonprofit organizations). Such behaviors are common methods of helping others in adulthood and have been related to adults' sympathy and perspective taking (e.g., Paterson, Reniers, & Völlm, 2009). However, Einolf (2008) found that sympathy was more weakly related to decisions to help others who were not immediately present, such as in some volunteering and for charitable donations, than to informal helping. We expected donating/volunteering of this sort to relate to other concurrent measures of prosocial orientation and PMR but, based on Einolf's work, were unsure if it would be predicted by sympathy and prosocial behavior, especially the former, at younger ages.

In the analyses in this study, we examined relations for the entire sample with and without controlling for sex differences. Sex differences favoring females have been found in caring prosocial moral judgment (Jaffee & Hyde, 2000), especially after early adolescence (Eisenberg et al., 1991, 1995, 2005; contrast with Skoe, 2010), and age trends in PMR occasionally have been somewhat different for the two sexes (e.g., Eisenberg et al., 1991, 2005). Thus, women were expected to be higher in PRM. Moreover, women in their mid-20s to early 30s could be dealing with or contemplating parenthood, which might heighten a feminine emphasis on the welfare of others; thus, we speculated that change in

PMR in regard to other-oriented types of reasoning might be greater for women than for men.

Although girls tend to be more prosocial than boys (Eisenberg et al., 2006), Eagly and Crowley (1986) found that men generally helped in experimental or naturalistic contexts more than did women. However, many of the studies they used operationalized prosocial behavior as involving instrumental skills (e.g., changing a tire) or willingness to deal with the risk of danger (helping a stranger)—behaviors that might have been consistent with the masculine gender role. Because our measures more explicitly assessed other-oriented prosocial tendencies (albeit not solely such tendencies), which are clearly consistent with the feminine gender role (Spence & Helmreich, 1978), we expected women to score higher on prosocial behavior, other-oriented values, and empathy/sympathy. We did not have strong reasons to expect gender differences in the relations among prosocial variables and did not examine them due to the small sample size. We did, however, examine whether patterns of findings were maintained when controlling for sex.

Method

The sample consisted of 16 females and 16 males (all Euro-American, non-Hispanic except for two of Hispanic ethnicity) who have been studied 14 times from preschool to adulthood (henceforth referred to as T1 to T14) at ages 4/5, 5.5/6.5, 7/8, 9/10, 11/12, 13/14, 15/16, 17/18, 19/20, 21/22, 23/24, 25/26, 27/28, and 31/32 (see Eisenberg et al., 1987, 1991, 1995, 2002). Data from the last two follow-ups at ages 27/28 and 31/32 are the primary focus of this article (T13 and T14), although variables at T13/T14 are examined in relation to data from prior assessments. The mean age of the participants at T10 was 21.5 years (range = 20.6–22.3); at T11 to T14, mean age in years was 23.40, 25.38, 27.30, and 30.41; *SDs* = .37, .34, .60, and .63. The original sample was 37 participants; at least partial data were available for the 32 participants from T3 to T10 and at T12. One person refused any participation at T11 ($N = 31$). At T13 and T14, 30 and 29 people, respectively, participated (with different people missing at the two times, so N for T13 and T14 combined = 32), although one person participating at T13 had incomplete data for PMR (so $n = 29$ for PMR). Mean years of maternal and paternal education (reported at T8) were 16.0 and 17.0 (range = 12 to 20 years).

At T13 or T14 (using T14 data if available), six participants were still in school, and mean years of post-high-school education were 4.0 (range = 0 to 10; all finished high school). Eight had post-graduate education. Occupations included teacher, lawyer, banker, sales, nail technician, firefighter, environmental ranger, 911 dispatcher, construction, nurse, chemist, and homemaker.

Measures

Prosocial moral reasoning. PMR was assessed at T10 to T14 with a revised version of the Objective Measure of Prosocial Moral Reasoning (PROM), a pencil-and-paper measure (Carlo et al., 1992). The original PROM was modified by adding one story (for a total of seven) and three more sophisticated response options (for a total of nine responses per story) to make it age-appropriate (see Eisenberg et al., 2002); this version was used at T10 to T14.

The PROM was modeled on Rest's (1979) Defining Issues Test (DIT). Participants read moral dilemmas and then rated (1 = *not*

at all to 7 = greatly) the importance of the nine reasons why the same-sex protagonist (or a group) should or should not help the needy other in a given dilemma. Each story included two hedonistic items, which pertained to hedonistic or direct reciprocity (in one case) reasoning (e.g., “It depends how much fun Mary expects the party to be, and what sorts of things are happening at the party”); one needs-oriented item (e.g., “It depends whether the girl really needs help or not”); two approval-oriented items (e.g., “It depends whether Mary’s parents and friends will think she did the right or she did the wrong thing”); one stereotypic item (e.g., “It depends if Mary thinks it’s the decent thing to do or not); and two items involving higher level reasoning (i.e., sympathetic, perspective taking, internalized affect, or abstract internalized reasoning, e.g., “It depends how Mary would feel about herself if she helped or not”; “It depends if Ann would feel guilty if the girl is hurt because she did not help”). The ninth reason was a lie/nonsense item which sounded abstract but did not make sense (e.g., “It depends whether Mary believes in people’s values of metacognition or not”); these items were used to eliminate subjects who scored high on this subscale (none was eliminated because the results were highly similar with and without doing so). Alphas for the scales ranged from .78 to .97, except for needs-oriented reasoning at T10 and T11 (.70 and .68).

As was done previously with the same or similar measures (e.g., Carlo et al., 1992) and at T9 (Eisenberg et al., 1995), scores on each of the PROM subscales (using multiple items when per story when appropriate) were averaged across stories and then transformed to proportion scores by dividing each of the PROM subscale scores (for the five types of reasoning) by the sum of the five PROM subscale scores. Then a composite score on the PROM was computed for use in the analyses. Based on the means in this study and the findings in Carlo et al. (1992) and Eisenberg et al. (1995), a weighted score was computed in which proportion of internalized reasoning was multiplied by 3; proportion of needs-oriented and stereotypic reasoning was multiplied by 2; and proportions of hedonistic and approval-oriented reasoning were multiplied by 1. These weighted values were then summed (see Table 1 for descriptive statistics). Although approval-oriented reasoning is considered of moderate level in studies of moral reasoning involving the interview method and not pre-designated choices (e.g., Eisenberg et al., 1991), approval-oriented items on the PROM, a preference measure of moral judgment requiring merely the endorsement or rejection of options, clearly reflected relatively low-level moral reasoning. High school students and young adults tended to reject the blatantly worded approval-oriented items (Eisenberg et

al., 1995), and use of these items decreases with age (Carlo et al., 1992) and is quite low in young adults (Eisenberg et al., 1995).

Prosocial Behavior and Orientation

Self-reports. At T6 to T8, children filled out a 23-item adapted version of Rushton, Chrisjohn, and Fekken’s (1981) self-report altruism scale. Children indicated on a 5-point scale (from *never* to *very often*) how frequently they engaged in 23 behaviors such as giving money to charity or volunteer work (α s were .86 to .90). At T10 to T14, participants filled out a 14-item adapted version of this scale (Penner & Finkelstein, 1998; α s ranged from .66 to .85).

At T13 and T14, participants reported “How many hours per week do you volunteer at a nonprofit organization?” (coded 1 = 0 hr to 7 = 26+ hr), “How many hours per year do you donate time to a nonprofit organization?” (coded on the same scale), “How much money per year do you donate to charity” (coded from 1 = 0 to 7 = more than \$300), and “How many charities do you regularly donate to?” (coded 1 = 0 to 5 = 5 or more). At T13, scores on these four questions were standardized and averaged (α = .71); at T14, scores for all but the first item were standardized and averaged (the α rose from .55 to .65 when the first item was dropped).

At T9 to T12, self-reported consideration of others (“I often go out of my way to do things for other people”; α s = .78–.84) and suppression of aggression (“I lose my temper and ‘let people have it’ when I’m angry”; α s = .76–.87) were rated on a 5-point scale, with two seven-item subscales from Weinberger’s Adjustment Inventory (WAI; Weinberger, 1997). At T10 to T14, additional measures of social responsibility and of a care-orientation were taken from Penner and Finkelstein’s (1998) instrument. Specifically, a subset of 15 items from Schwartz’s (1968) Ascription of Responsibility to the Self scale (henceforth called social responsibility) was included (e.g., “If a good friend of mine wanted to injure an enemy of his/hers, it would be my duty to try to stop him/her”; rated 1 = *strongly disagree* to 5 = *strongly agree*; α s = .65 to .81, except .57 at T14), with three items dropped at T13 and T14 due to their not loading on the scale. Moreover, four items reflecting a care orientation were rated on the same response scale (e.g., “My decisions are usually based on my concern for other people”; α s at T10 to T14 = .68 to .88).

To assess empathy-related responding at T7 to T14, participants rated (1 = *strongly disagree* to 5 = *strongly agree*) two seven-item subscales of Davis’s (1994) Interpersonal Reactivity Index:

Table 1
Descriptive Statistics for Prosocial Moral Judgment in Adulthood

Variable	T10		T11		T12		T13		T14	
	M	SD	M	SD	M	SD	M	SD	M	SD
Moral reasoning										
Hedonistic	0.18	0.05	0.18	0.04	0.18	0.04	0.18	0.04	0.17	0.03
Approval	0.12	0.05	0.11	0.03	0.12	0.04	0.12	0.04	0.12	0.04
Needs	0.22	0.05	0.24	0.05	0.23	0.07	0.24	0.06	0.22	0.03
Stereotypical	0.21	0.04	0.23	0.04	0.22	0.05	0.22	0.05	0.23	0.04
Internalized	0.26	0.05	0.25	0.05	0.24	0.05	0.25	0.05	0.25	0.04
Composite	1.95	0.11	1.97	0.09	1.94	0.09	1.95	0.10	1.96	0.08

empathic concern (henceforth called 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"; α s = .70 to .83) and perspective taking (the tendency to cognitively 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"; α s = .73 to .91). Children also completed Bryant's (1982) 22-item scale at T4 to T6 to assess empathy (the tendency to experience or react to others' emotional states rather than concern (e.g., "It makes me sad to see a girl who can't find anyone to play with"; α s = .60–.78).

Mothers' reports. Mothers rated children's prosocial behavior using a slightly adapted 23-item version of the Rushton et al. (1981) scale at T6, T7, and T8 and the same 5-point response scale as for self-reports. Alphas could not be computed because mothers frequently used the additional option of "don't know" (Eisenberg et al., 1991, 1995). Items were averaged.

Friends' reports. At T9 to T14, participants were requested to provide the names of two (at T9) or three (T10 to T14) friends who might be willing to fill out short questionnaires about the participants. At T9, reports from at least one friend were obtained for 25 participants; reports from two friends were available for 11 people. At T10, reports from at least one friend were obtained for 28 participants; reports for two and three friends were obtained for 20 and 11 participants, respectively (for a total of 59 friends). Analogous numbers were 24, 18, and six (total = 48) at T11; 23, 21, and 10 (for a total of 54 friends) at T12 (see Eisenberg et al., 1995, 2002, for more detail); 19, six, and five at T13 (total = 35); and 26, 25, and 12 at T14 (total = 63). If reports from more than one friend were obtained, they were averaged across each item on each questionnaire. As is discussed below, friends' reports on measures at T13 and T14 were averaged, resulting in friend data for 27 participants. At T13 and T14, friends reported knowing the participant an average of over 9 years and nearly 9.5 years, respectively (range = 1.25 year to 15.5 years at T13 and 1 to 29 years at T14). Frequency of contact, rated from 1 to 8, was 7.03 and 6.19 at T13 and T14, respectively.

At T9 to T14, friends responded to items from the short form of Weinberger's (1997) WAI, which contains three items per scale. Items on these subscales were similar to those used in the participant-report measures pertaining to consideration of others (α s = .77–.89) and suppression of aggression (α s = .61 to .85 except .49 at T14). At T10 to T14, friends also reported on participants' social responsibility using 10 of the same items filled out by participants (with slight changes in wording; α s = .64 to .85).

At T9 to T14, friends rated participants' sympathy using the seven IRI sympathy items plus one additional item ("My friend has a tendency to feel concern for others' misfortunes even when he/she doesn't know those people personally"; α s = .76–.94) and six of the seven perspective taking items (modified slightly to create an other-report format; α s = .80 to .93).

Observed prosocial behavior in preschool. Children were observed in random order by at least two observers in the preschool class for a minimum of 70 2-min intervals (a maximum of 113) over 6 to 11 weeks. Six observers coded each instance of three prosocial behaviors: (a) sharing—the child gives away or allows another temporary use of a material object previously in the child's possession (but not as part of a game, e.g., sharing of a tea

pot when playing tea was not coded as sharing); (b) helping—the child attempts to address another's nonemotional needs; for example, assists another by giving information, helping with a task, or offering an object not previously in the giver's possession (behaviors were not coded as helping if they occurred as part of cooperative play *and* involved the completion of a mutual goal); and (c) offers comfort—the child attempts to address the emotional needs of a peer, for example, tries to make another feel better when in distress. Each behavior was coded as having occurred either spontaneously or in response to a verbal or nonverbal request from a peer (compliant behavior), or, alternatively, if it could not be ascertained whether the prosocial action was spontaneous or not. Comforting was very infrequent and was combined with helping. The resultant categories of prosocial behavior used were spontaneous sharing, compliant sharing, spontaneous helping, and compliant helping. Mean interrater reliabilities ranged from 75% to 86% exact agreement (computed only during 2-min intervals in which at least one observer viewed a prosocial behavior; see Eisenberg-Berg & Hand, 1979).

Data reduction. Composites were constructed to reduce the number of measures, increase reliability, and maximize the number of participants in the analyses.

Self-report data in adulthood. At T9, a prosocial composite score was constructed by standardizing and averaging scales pertaining to consideration of others, suppression of aggression, perspective taking, and sympathy (see Eisenberg et al., 1995). At T10 to T12, the prosocial composite contained the standardized and averaged measures of sympathy, perspective taking, self-reported helping behavior, social responsibility, consideration for others, suppression of aggression, and care-orientation. At all three times, all these measures grouped on the same factor in a principle components factor analysis with a varimax rotation; loadings ranged from .57–.88 at T10, from .53–.88 at T11, and from .55 to .85 at T12 (see Eisenberg et al., 2002). These composites were highly related across T9 to T12 (r s ranged from .69 to .86) and were averaged.

At T13 and T14, the components of the prosocial composite considered were sympathy, perspective taking, self-reported helping behavior, social responsibility, and care-orientation. At T13, helping on the Rushton et al. (1981) scale was not significantly related to perspective taking, empathy, or care orientation (r s [27] ranged from .43 to .74 among the other variables), and at T14, the helping measure was not even marginally significantly related to any of the other four variables (care orientation and perspective taking were not significantly related but the remaining correlations were at least near significant; r s[27] ranged from .32 to .60). Thus, the Rushton et al. helping measure was dropped at both T13 and T14 to be comparable at these two assessments. At both times, the remaining four variables loaded on a single factor, with loadings from .80 to .94 at T13 and from .69 to .84 at T14. Thus, scores for care orientation, social responsibility, sympathy, and perspective taking were standardized and averaged to form a composite prosocial orientation index at each age. These T13 and T14 composites were highly correlated, $r(24) = .73$, $p < .001$, and were averaged.

Reports of volunteering/donating were kept separate from this composite because we were interested in how this measure of formal prosocial behavior related to other indices in the study (moreover, a similar measure was not in earlier assessments). T13 and T14 donating/volunteering were correlated, $r(25) = .39$, $p <$

.042, and were standardized and averaged across time (so 31 children had scores).

Self-report data in childhood/adolescence. As already discussed, measures of prosocial behavior and empathy-related responding were available at multiple times in childhood and adolescence. Empathy was assessed at T4, T5, and T6; $r_s(30)$ ranged from .32 to .48, $ps = .08$ to .006; sympathy and perspective taking were assessed at T7 and T8, $r(30) = .54$, $p < .002$, for sympathy, and $r(29) = .62$, $p < .001$ (at T6, these indices were obtained for only half the sample so T6 was dropped); and self-reports of helping were obtained at T6, T7, and T8 (r_s ranged from .43 to .59, $ps < .01$). Scores for each of these constructs were standardized and averaged to form composites of empathy, sympathy, or helping across childhood/adolescence.

Mothers' reports. Mothers' reports of adolescents' helping were obtained at T6 to T8 (r_s ranged from .52 to .65, $ps < .003$). They were averaged across time for a mother-report score.

Friends' reports. At T9, a friend composite measure was computed including sympathy, perspective taking, consideration for others, and suppression of aggression (see Eisenberg et al., 1995). The friend measures at T10 to T14 (consideration of others, suppression of aggression, social responsibility, perspective taking, and sympathy) grouped on a single factor in a principle components factor analysis (loadings ranged from .67 to .85 at T10, .83 to .89 at T11; .64 to .91 at T12; .83 to .89 at T13; and .80 to .95 at T14). All five measures were significantly correlated at T13 (r_s ranged from .64 to .82) and at T14 (r_s ranged from .55 to .92; see Eisenberg et al., 2002, for more information on measures at T10–T12). Therefore, these measures were standardized and averaged at each time period to form composite measures of friend-rated prosocial orientation.

The composites from T9 to T12 were significantly correlated (r_s ranged from .41 to .61), except for between T9 and T11. To reduce the data, T9 to T11 were averaged. T12, the most recent past assessment prior to the two target assessments in this article, was kept separate because it tended to relate differently to other variables than did earlier friend reports. As for the self-report data, friend-reported aggregates at T13 and T14 were related, $r(16) = .69$, $p < .001$, and were averaged to compute a composite for the new assessments (with data for 27 friends).

In addition, because sympathy/concern is more related conceptually to PMR and to some of the measures of prosociality than the other friend measures (although perspective taking, according to Kohlberg, 1984, is fundamental to moral reasoning), and because friend-reported sympathy has been especially related to prosocial functioning at a younger age (Eisenberg et al., 2002), we also computed a T13/T14 composite of sympathy and consideration for others for examining relations of T13/T14 friend-reported functioning with prior prosocial measures.

Procedures

At T10 to T14, participants initially were contacted by phone if possible; then, a packet of questionnaires was sent to them to fill out and return (order of the PROM and questionnaires was counterbalanced). Participants were also asked to supply names and addresses of friends. Friends were sent packets of questionnaires and paid for their participation.

Results

Means and standard deviations for PMR from T10 to T14 (over which time developmental change was examined) and for the major questionnaire variables at T13 and T14 are presented in Tables 1 and 2 (see Eisenberg et al., 1987, 1991, 1995, 2002; Eisenberg, Lennon, & Roth, 1983; Eisenberg-Berg & Hand, 1979, for means at earlier periods), with gender differences favoring women noted in Table 2. None of the variables had excessive skew or kurtosis (Curran, West, & Finch, 1996). For correlations involving friend-reported measures, we used one-tailed tests because the direction was hypothesized and the sample size was smaller than for other analyses. Otherwise, all reported p values are two-tailed to be conservative, although one-tailed ps would be justified because all findings were as predicted.

Moral Reasoning

Change with age in PMR from T10 to T14 was examined, as were the relations of PMR at T13 and T14 to concurrent and prior indices of prosocial orientation (prosociality).

Stability and change with age. Composite scores on the PROM were quite stable across early adulthood, with correlations ranging from .47 (between T11 and T14) to .76 (between T10 and T11). The correlation between T13 and T14 was $r(24) = .67$, $p < .001$.

Multilevel modeling was used to examine the development of PMR from T10–T14. We started with simple intercept-only models and increased model complexity by adding fixed and random effects until model fit could not be improved (Singer & Willett, 2003). The best fitting random effects models (without predictors) indicated that there was significant between-person variability in the slope of hedonistic and approval PMR, but not of needs,

Table 2
Means, Standard Deviations, and Gender Differences for T13 and T14 Self- and Friend-Reported Questionnaire Measures of Prosocial Behavior and Values

Measure	T13		T14	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Self-reported				
Social responsibility	3.83	0.48	3.77	0.38
Care orientation	3.58	0.73	3.58	0.59
Sympathy	3.92*	0.52	3.89	0.44
Perspective taking	3.73	0.61	3.68	0.56
Donating/volunteering ^a	0.01	0.79	0.04	0.86
Friend-reported				
Social responsibility	3.46	0.55	3.50	0.43
Consideration for others	4.04 [†]	0.88	4.24**	0.72
Suppression of aggression	4.44	0.51	4.39	0.57
Sympathy	3.58**	0.78	3.66 [†]	0.82
Perspective taking	3.17*	0.85	3.30	0.66

Note. Helping behavior was dropped at T13 and T14 from the final composites for self-reported social responsibility, care orientation, sympathy, and perspective taking.

^aThe measure of donating/volunteering is an average of standardized measures (only the combined T13/T14 measure was used in the final analyses).

[†] $p < .10$. * $p < .05$. ** $p < .01$ for sex differences favoring women (no means were significantly higher for men).

stereotypic, or internalized PMR or the composite score. Stereotypic PMR increased modestly with age (pseudo $R^2 = 1.3\%$), but no other type of PMR changed with age for the total sample (Table 3).

For the two dependent variables with significant between-person variability in the slope (i.e., hedonistic and approval PMR), we tested sex as a predictor of the intercept and the slope. Men were initially (at T10) higher in hedonistic PMR (see Table 3). However, the slope for men was more negative relative than that for women, so men and women became more similar in hedonistic PMR over time and, by T14, men were only marginally higher in hedonistic moral reasoning. Sex was unrelated to the intercept and slope of approval-oriented PMR.

For models in which we were unable to predict the slope due to a lack of significant between-person variability in the slope, we used sex as a predictor of the intercept. Men were marginally higher in needs-oriented PMR and sex explained 7.2% of its variance. Women were higher in stereotypic PMR, and after accounting for age-related changes, sex explained 14.8% of the variance in stereotypical PMR. Women were higher than men on internalized PMR and sex explained 19.7% of the variance in internalized PMR. Finally, women scored higher on the composite PMR measure and sex explained 20.6% of its variance (see Table 3).

Thus, in general, the interindividual and mean-level stabilities of PMR were high. The only mean-level change over time for the total sample was for stereotypical PMR, and this change was modest. Men, in comparison to women, were higher in hedonistic PMR initially, but this difference decreased with age. Men were lower in stereotypical PMR, internalized PMR, and the composite index of PMR and marginally higher in needs-oriented PMR.

Relations of PMR to measures of prosocial responding. PMR composites at T13 and T14 did not differ in mean level and were averaged to form a composite including all 32 participants. Then the PMR composite at T13/T14, as well as for T13 and T14 separately, were correlated with both concurrent measures of prosocial responding (self- and friend-reported) and with earlier composite measures of prosocial behavior at T9 to T12 and across childhood/adolescence, as well as with observed preschool prosocial behavior. The separate analyses for T13 and T14 were exploratory because they contained fewer subjects, and we did not have

a strong reason to expect relations to vary at age 27/28 and 31/32. Nonetheless, findings at T13 and T14 are noted when they differed from the findings for the composite T13/T14 index so they could be considered for future replication (they are not presented otherwise). Correlations were computed with and without covarying sex; however, it should be noted that doing so reduces the natural variability in prosocial responding among adults.

Concurrent relations. PMR at T13/T14 was not significantly related to concurrent self-reported prosocial tendencies at T13/T14 (combined) or to T13/T14 donating/volunteering, $r_s(30 \text{ and } 29) = .27 \text{ and } -.04$, *ns*. T13/T14 PMR was significantly related to friend-reported prosocial tendencies, and especially to reports of sympathy/other orientation, $r(25) = .57 \text{ and } .64$, $p_s < .002 \text{ and } .001$ (similar findings were obtained for T13 and T14 PMR separately). The aforementioned significant relations were still significant when controlling for sex, $r_s(24) = .49 \text{ and } .55$, $p_s < .011 \text{ and } .003$, respectively. In addition, PMR at T14 (not combined with T13) was related to self-reported prosocial tendencies at T13/T14, $r(27) = .53$, $p < .003$, partial $r(26) = .47$, $p < .012$; however, this finding should be considered exploratory and viewed with caution.

Across-time relations. The T13/T14 PMR composite was not significantly related to prior self-reports of prosocial tendencies at T9 to T12 (see Table 3). However, consistent with the aforementioned findings for T14, T14 PMR was significantly related, $r(27) = .42$, $p < .022$. These relations were nonsignificant when controlling for sex, partial $r(26) = .25$ for the latter.

The T13/T14 PMR composite was significantly related to friend-reported prosocial orientation at T12, even when controlling for sex (see Table 4). A similar pattern was found for the T14 composite, $r_s(20, 19) = .55 \text{ and } .44$, $p_s < .008 \text{ and } .046$ (the zero-order correlation for T13 was near significant).

T13/T14 PMR was not related to self-reported empathy, perspective taking, or helping in childhood/adolescence or to mother-reported helping in adolescence; it was positively related to sympathy, but not when controlling for sex (see Table 4). Of interest but exploratory, T14 PMR (but not T13 PMR) was also positively correlated with both the self-reported prosocial composite score at T9–T12 and T4–T6 empathy, $r_s(27) = .42 \text{ and } .45$, $p_s < .022 \text{ and } .013$ (but dropped to nonsignificance in partial correlations), and the relation of T14 PMR with T7–T8 sympathy was significant in

Table 3
Model Results

Fixed effects	Hedonistic		Approval		Needs		Stereotypical		Internalized		Composite	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Unconditional models												
Intercept	0.184		0.116		0.232		0.216		0.250		1.953	
Linear slope	-0.001	-1.35	0.000	0.32			0.001	2.00*				
Pseudo r^2	0.6%		0.0%		0.0%		1.3%		0.0%		0.0%	
Models including sex as a predictor												
Intercept	0.112		0.120		0.187		0.265		0.311		2.080	
Sex	0.048	3.52**	-0.003	-0.20	0.030	1.85†	-0.033	-2.79**	-0.041	-3.23**	-0.084	-3.58**
Linear slope	0.003	1.61	-0.003	-1.16			0.001	2.01*				
Sex	-0.003	-2.19*	0.002	1.33								
Pseudo r^2	21.2%		2.5%		7.2%		14.8%		19.7%		20.6%	

Table 4
Zero-Order and Partial Correlations Controlling Sex (in Parentheses) of Prosocial Moral Reasoning (Composite Scores) With Indices of Prior Prosocial Functioning

Index of prosociality	PMR T13/14
Self-report composite	
T9–T12	0.28 (0.10)
T4–T6 empathy	0.20 (–0.18)
T7–T8 sympathy	0.37* (0.12)
T7–T8 perspective taking	0.06 (–0.04)
T6–T8 helping	0.20 (0.06)
T6–T8 mother-report helping	0.05 (–0.16)
Friend-report composites ^a	
T12	0.47* (0.36*)
T9–11	0.18 (0.17)
Preschool behavior	
Spontaneous sharing	0.17 (0.11)
Compliant sharing	0.28 (0.29)
Spontaneous help	–0.03 (–0.03)
Compliant help	–0.22 (–0.15)

Note. PMR = prosocial moral reasoning.
^aCorrelations with friend composites are one-tailed. All other *ps* are two-tailed.
 * *p* < .05.

the zero-order and partial correlations, *rs*(27 and 26) .61 and .43, *ps* < .001 and .024.

The composite score for T13/T14 PMR was not related to observed prosocial behavior in preschool; *rs*(30) for spontaneous sharing and helping and compliant sharing and helping. = .20, –.02, .26, and –.15, *ns*. However, there were interesting relations between preschool prosocial behavior and specific modes of T13/T14 PMR. As in prior assessments, helping, spontaneous or compliant, was unrelated to PMR. In contrast, spontaneous sharing was negatively related to T13/T14 approval-oriented moral reasoning and also positively related to needs-oriented reasoning (near significantly in the zero-order but significantly in the partial correlation; see Table 5). In contrast, compliant sharing was negatively related to needs-oriented and near significantly positively related to stereotypic and internalized reasoning (recall that two-tailed tests are reported, although one-tailed tests are warranted). The pattern was quite similar when controlling for sex (see Table 5).

Relations of Prosocial Orientation in the Mid-20s and Early 30s to Concurrent and Earlier Measures of a Prosocial Orientation

We examined relations of our composite indices of a prosocial orientation at T13/T14 with concurrent and earlier measures of similar constructs.

Concurrent relations. T13/T14 self-reported prosociality was substantially related to friend-reported prosocial orientation or sympathy/consideration at the same age, *rs*(25) = .64 and .67, *ps* < .001 (recall that one-tailed tests are reported for correlations with friend-report data). Moreover, self- and friend-reported prosocial orientation, as well as friend-reported sympathy/consideration, were positively related to T13/T14 donating/volunteering, *rs*(29, 24, and 24) = .42, .48, and .42, *ps* < .02, .007, and .016. These relations were about the same when controlling for sex, partial *rs*(28, 23, 23) = .43, .51, and .42, *ps* < .017, .015, and .009.

Across-time relations. Self-reported prosociality at T13/T14 was highly related to the similar aggregate at T9–T12 (see Table 6). Similarly, although some friend reporters changed over time, friend-reported prosociality and friend-reported sympathy/consideration were quite stable over time, with significant correlations between T13/T14 friend reports and similar reports at T12 or T9–T11. T13/T14 self-reported prosociality was significantly positively related to friend-reported prosociality at T12 but not at T9–T11. Friend-reported prosociality at T13/T14 and friend-reported sympathy/consideration were highly related to earlier self-reports of prosocial behavior at T9–T12. Controlling for sex had little effect on these correlations (see Table 6).

T13/T14 self- and friend-reported prosociality were also examined in relation to childhood/adolescent self-reported empathy, sympathy, perspective taking, and helping; mother-reported helping in adolescence; and preschool prosocial behavior. T13/T14 self-reported prosociality was significantly related to self-reported empathy at T4–T6 (age 9/10 to 13/14); sympathy, perspective taking, or helping, each aggregated across T7–T8 (ages 15/16 to 17/18); and mother-reported helping aggregated at T6–T8 (ages 13/14 to 17/18). In addition, T13/T14 self-reported prosociality was related to spontaneous sharing in preschool but not the other types of prosocial behavior. Controlling for sex did not weaken these relations much (Table 6).

T13/T14 friend-reported prosociality was significantly related to self-reported sympathy and mother-reported helping in adolescence and near significantly related to self-reported perspective taking and self-reported helping in adolescence; it was not related to preschool prosociality (see Table 6). Relations of friend-reported sympathy-consideration with earlier measures of prosociality were stronger; this composite was positively related to spontaneous sharing in preschool; empathy, sympathy, and helping in childhood/adolescence; and mother-reported helping in adolescence. Controlling for sex reduced these correlations, although correlations with spontaneous sharing (for friend-reported sympathy/consideration), sympathy (for both friend measures), and mother-reported helping (for friend-reported sympathy/consideration) were still at least near significant.

Donating/volunteering at T13/T14 was significantly related to self-reported prosociality at T9–T12, even when controlling for sex (see Table 6). However, T13/T14 donating/volunteering was unrelated to earlier friend-reported prosociality. Moreover, T13/T14 donating/volunteering was unrelated to most measures of

Table 5
Relations of Individual Types of Prosocial Moral Reasoning to Preschool Spontaneous Sharing and Compliant Sharing: Zero-Order Correlations, With Partial Correlations (Controlling Sex) in Parentheses

T13/T14 PMR level	Spontaneous sharing	Compliant sharing
Hedonistic	–0.11 (–0.04)	–0.16 (–0.15)
Approval-oriented	–0.37* (–0.34 [†])	–0.15 (–0.14)
Needs-oriented	0.32 [†] (0.40*)	–0.36* (–0.36 [†])
Stereotypic	0.08 (0.01)	0.34 [†] (0.34 [†])
Internalized	–0.04 (–0.14)	0.33 [†] (0.34 [†])

Note. PMR = prosocial moral reasoning.
[†] *p* < .10. * *p* < .05. Two-tailed tests.

Table 6

Zero-Order Correlations, With Partial Correlations (Controlling Sex) in Parentheses, of T13/T14 Prosocial Orientation and Donating/Volunteering to Prior Prosocial Functioning

Index of prior prosociality	T13/T14 Self-reported prosocial orientation	T13/T14 Friend-reported prosocial orientation ^a	T13/T14 Friend-reported sympathy/consideration	T13/T14 Donating/volunteering
Self-reports				
T9–T12 composite	0.82*** (0.81***)	0.70*** (0.64***)	0.69*** (0.61***)	0.35* (0.39*)
T4–T6 empathy	0.47** (0.40*)	0.27† (0.03)	0.34* (0.04)	0.02 (0.02)
T7–T8 sympathy	0.58*** (0.54**)	0.57*** (0.46**)	0.62*** (0.48**)	0.09 (0.12)
T7–T8 perspective taking	0.52** (0.49**)	0.31† (0.25)	0.32* (0.26)	0.12 (0.01)
T6–T8 helping	0.49** (0.44*)	0.27† (0.17)	0.34* (0.23)	0.13 (0.14)
Mother-report helping T6 to T8	0.39* (0.31†)	0.36* (0.26)	0.42* (0.30†)	0.35* (0.38*)
Friend-reports^a				
T12 composite	0.48* (0.42*)	0.69*** (0.64***)	0.69*** (0.63***)	0.11 (0.11)
T9–T11	0.25 (0.24)	0.41* (0.42*)	0.44* (0.47*)	0.26† (0.26†)
Preschool behavior				
Spontaneous sharing	0.30* (0.36*)	0.22 (0.17)	0.37* (0.33†)	0.09 (0.09)
Compliant sharing	0.26 (0.26)	0.16 (0.15)	0.21 (0.23)	–0.19 (–0.20)
Spontaneous help	0.14 (0.15)	–0.10 (–0.11)	–0.16 (–0.23)	–0.08 (–0.08)
Compliant help	0.07 (0.13)	0.12 (0.20)	0.04 (0.19)	0.16 (0.17)

^a Correlations with friend composites at T13/T14 or earlier are one-tailed; all other correlations are two-tailed.

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

prosocial orientation in childhood/adolescence or preschool; the one exception was a positive relation to mother-reported helping in adolescence (in the zero-order and partial correlations).

Discussion

In the present study, we charted the development of PMR across the third decade of life until age 31/32, examined its relations to concurrent and prior measures of prosocial behavior, values, and empathy-related responding, and assessed relations of self- and friend-reported prosociality at ages 27/28 to 31/32 to concurrent and prior measures of a prosocial orientation. In doing so, we assessed stability of prosociality, at both the mean level for PRM and in regard to interindividual stability for both PRM and a prosocial orientation.

Most modes of PRM did not change in mean level from age 21/22 to age 31/32. However, consistent with findings using an interview measure of PMR from adolescence to the mid-20s (Eisenberg et al., 2005), stereotypic reasoning tended to increase at a modest rate across the 20s. This finding is consistent with the argument that young adults are increasingly concerned with acting in ways that reflect with normative notions of appropriate behavior. Such concerns may increase because of adults' increasing engagement with conventional institutions and concerns when they are merged in the worlds of work and parenting. In addition, the findings are consistent with Carlo et al.'s (2008) argument that stereotypic reasoning is a fairly mature type of reasoning in adulthood, as well as with the fact that it is common in adults' prohibition-oriented moral reasoning (Colby et al., 1983). The finding that internalized/self-reflective other-oriented modes of reasoning were stable across the 20s into the early 30s might partly be due to most participants' finishing their education in the early to mid-20s.

In addition, men's use of hedonistic PMR, which was initially higher than women's, declined across the third decade of life to a point that they were only marginally higher than women. Involvement in adult relationships and parenting, as well as increasing

maturity more generally, might contribute to the decline in men's hedonistic PMR in adulthood. Women were generally higher than men in PMR, as well as in some T13 or T14 friend-reported prosocial variables, perhaps because of the salience of other-oriented concerns in the feminine role (Spence & Helmreich, 1978) and in the socialization of girls (Power & Parke, 1986).

Individual differences in PMR at T13/T14 were related to friends' reports of participants' concurrent prosocial orientation, as well as friend-reported prosocial orientation at T12. Thus, there was some evidence that variation among adults in their PMR was related to genuine differences in their current and prior prosocial orientations.

Interestingly, PMR at T14, but not T13, was related to concurrent self-reported prosocial tendencies (averaged across T13 and T14) and was more consistently related to self-reports of both prosociality in earlier adulthood and empathy and sympathy in adolescence. It is not clear if the differences in prediction for T13 and T14 PMR were due to differences in the sample (different people were missing at each time) or if self-reported PMR is simply a more accurate predictor of behavior at age 31 to 32 than 4 years prior. Perhaps individual differences in PMR are somewhat in flux in emerging adulthood and are especially affected by change in context (in contrast to ongoing prosocial tendencies) but solidify into a pattern that is more dispositional in nature as one moves into more stable adult patterns of life. Although the findings for T14 PMR should be interpreted with caution, the aforementioned findings suggest that it might be fruitful to examine if the correlates of PMR differ across early adulthood.

PMR was related to sympathy in adolescence, supporting the importance of other-oriented cognition and emotion in PMR. However, most of these correlations between PRM and self-reported prosociality dropped to nonsignificance when controlling for sex—albeit not sympathy for T14 PRM—suggesting that much of the variance was due to females reporting more prosocial tendencies (which might or might not be accurate) than males across time. In contrast, relations between PMR and

concurrent and T12 friend-reported prosociality were maintained when controlling for sex (although reduced in size), indicating that relations of PMR with reports of prosocial tendencies at younger ages are not merely due to gender differences. It is unclear why friends' reports of prosociality were more consistently related to the composite measure of PMR than self-reports; perhaps the former were less biased.

Although the composite measure of PMR generally provided as much prediction as individual categories of PMR, there was additional meaningful information when correlating adults' PMR with preschool prosocial behavior. As has been found in the past (Eisenberg et al., 2002), preschoolers' low-cost helping, spontaneous or compliant, was unrelated to PMR. However, preschool spontaneous sharing was negatively related to T13/T14 approval-oriented moral reasoning and positively related to needs-oriented reasoning, whereas compliant sharing was negatively related to needs-oriented and near significantly positively related to stereotypic and internalized reasoning. The correlations for compliant sharing are consistent with the finding that T12 PMR (on interviews and the PROM) was positively related to preschool compliant sharing (Eisenberg et al., 2002). Thus, early spontaneous sharing predicted simple other-oriented PMR about 27 years later and low concern with enacting prosocial behavior for approval; in contrast, early compliant sharing seemed to predict the emergence of PMR based on the internalization of norms and values regarding the importance of prosocial behavior rather than an other-orientation and empathy/sympathy. Perhaps people who engaged in prosocial behaviors due to requests were initially motivated by compliance for non-prosocial reasons (recall in preschool that compliant sharing was unrelated to moral reasoning but seemed to be related to low assertiveness; e.g., Eisenberg-Berg, Cameron, Tryon, & Dodez, 1981), but eventually, over decades, developed a self-conception of themselves as prosocial people. Research supports the utility of engaging in prosocial behavior for fostering subsequent prosocial self-conceptions and behavior (Eisenberg et al., 2006). Such self-perceptions may solidify in adulthood when in close relationships or working relationships that provide possibilities for sharing in response to legitimate requests.

The findings for friend- and self-reports of a prosocial orientation at age 27–28 to 31–32 provided evidence of considerable stability in prosocial tendencies from adolescence and the early to mid-20s. These findings were sometimes across reporters (self, friend, mother), as well as across numerous years. In addition, impressively, both self-reported prosociality at T13/T14 and friends' reports of sympathy and consideration at T13/T14 were related to spontaneous sharing in preschool. Spontaneous sharing, which was relatively costly and provided without any sort of request, was the only type of preschool prosocial behavior related to needs-oriented PMR at age 4–5 and has consistently been found to predict later prosocial tendencies and sympathy, from preschool to the mid-20s (Eisenberg et al., 2002, 1999). Although it is not clear how much the consistency in prosocial tendencies across time was due to genetic or environmental factors, these data provide clear evidence of individual differences in a prosocial disposition that emerge by age 4–5 and are evident up to 27 years later. Moreover, the findings for spontaneous sharing suggest that socializers might

wish to model, encourage, and recognize such costly, freely emitted behavior.

Self-reported donating/volunteering at T13/T14—a type of formal prosocial behavior—tended to be associated concurrently with self-reported and friend-reported prosocial orientation. In addition, donating/volunteering was positively related to self-reported prosocial tendencies in earlier adulthood and mothers' reports of helping in adolescence. However, it was not related to self-reported sympathy, empathy, or perspective taking in adolescence, friend-reported prosocial tendencies in earlier adulthood (with the exception of a near significant relation with friend-reported prosociality at T9–T11), or preschool prosocial behavior. The fact that these formal types of prosocial behaviors related positively to concurrent friend reports as well as mothers' reports of helpfulness in adolescence provides some support for the validity of the self-reports of donating/volunteering. The lack of relations with early measures of prosocial functioning may be due to the nature of this type of prosocial behavior. Opportunities for more formal modes of prosocial behavior are probably much greater in adulthood than at younger ages and adults have more resources to donate. Moreover, consistent with the lack of association between PMR and donating/volunteering, these types of behaviors tend to be motivated by diverse factors, including many reasons that are not especially other-oriented (e.g., getting job skills, meeting people; Clary & Snyder, 1999). In addition, variables such as income and time outside of work likely are important factors affecting donating and volunteering, so the degree to which participants engaged in these activities may be affected by their life style as well as their prosociality at younger ages. Such formal helping may also vary in important ways from the everyday helping and sharing behaviors that occur informally in everyday life. All of these factors may account for the lack of relations between friends' reports of prosociality at younger ages and self-reported donating/volunteering at T13/T14.

This study provides some of the strongest evidence in the research literature on the existence of enduring individual differences in prosocial tendencies. Strengths include the use of multiple reporters and behavioral measures of prosocial behavior in early childhood, as well as the longitudinal design. However, there are some clear limitations to the study. First, the sample size in the study was small. However, the findings did not seem, in general, to be due to extreme individuals. In addition, the sample was composed of middle- to upper-middle class, mostly white, non-Hispanic, individuals. Thus, it is not clear whether the findings will replicate in samples from other populations. Replication is needed with a larger, more diverse sample; in addition, the use of a battery of behavioral measures in adulthood would be desirable. Nonetheless, the consistency of the findings across measures and time suggests that the findings are reliable, at least for the type of individuals studied.

References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469–480. doi:10.1037/0003-066X.55.5.469
- Batson, C. D. (1991). *The altruism question*. Hillsdale, NJ: Erlbaum.
- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development*, *53*, 413–425. doi:10.2307/1128984

- Carlo, G., Eisenberg, N., & Knight, G. P. (1992). An objective measure of adolescents' prosocial moral reasoning. *Journal of Research on Adolescence, 2*, 331–349. doi:10.1207/s15327795jra0204_3
- Carlo, G., Knight, G. P., McGinley, M., & Hayes, R. (2011). The roles of parental inductions, moral emotions, and moral cognitions in prosocial tendencies among Mexican American early adolescents. *The Journal of Early Adolescence, 31*, 757–781. doi:10.1177/0272431610373100
- Carlo, G., McGinley, M., Roesch, S. C., & Kaminski, J. W. (2008). Measurement invariance in a measure of prosocial moral reasoning to use with adolescents from the USA and Brazil. *Journal of Moral Education, 37*, 485–502. doi:10.1080/03057240802399368
- Carlo, G., Mestre, M. V., Samper, P., Tur, A., & Armenta, B. E. (2011). The longitudinal relations among dimensions of parenting styles, sympathy, prosocial moral reasoning and prosocial behaviors. *International Journal of Behavioral Development, 35*, 116–124. doi:10.1177/0165025410375921
- Clary, E. G., & Snyder, M. (1999). The motivations to volunteer: Theoretical and practical considerations. *Current Directions in Psychological Science, 8*, 156–159. doi:10.1111/1467-8721.00037
- Colby, A., Kohlberg, L., Gibbs, J., & Lieberman, M. (1983). A longitudinal study of moral judgment. *Monographs of the Society for Research in Child Development, 48*(1–2), 1–124. doi:10.2307/1165935
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods, 1*, 16–29. doi:10.1037/1082-989X.1.1.16
- Davis, M. H. (1994). *Empathy: A social psychological approach*. Madison, WI: Brown & Benchmark.
- Davis, M. H., & Franzoi, S. (1991). Stability and change in adolescent self-consciousness and empathy. *Journal of Research in Personality, 25*, 70–87. doi:10.1016/0092-6566(91)90006-C
- Deater-Deckard, K., Pike, A., Petrill, S. A., Cutting, A. L., Hughes, C., & O'Connor, T. G. (2001). Nonshared environmental processes in social-emotional development: An observational study of identical twin differences in the preschool period. *Developmental Science, 4*, F1–F6. doi:10.1111/1467-7687.00157
- Eagly, A. H., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin, 100*, 283–308. doi:10.1037/0033-2909.100.3.283
- Einolf, C. (2008). Empathic concern and prosocial behaviors: A test of experimental results using survey data. *Social Science Research, 37*, 1267–1279. doi:10.1016/j.ssresearch.2007.06.003
- Eisenberg, N. (1986). *Altruistic emotion, cognition and behavior*. Hillsdale, NJ: Erlbaum.
- Eisenberg, N., Carlo, G., Murphy, B., & Van Court, P. (1995). Prosocial development in late adolescence: A longitudinal study. *Child Development, 66*, 1179–1197. doi:10.2307/1131806
- Eisenberg, N., Cumberland, A., Guthrie, I. K., Murphy, B. C., & Shepard, S. A. (2005). Age changes in prosocial responding and moral reasoning in adolescence and early adulthood. *Journal of Research on Adolescence, 15*, 235–260. doi:10.1111/j.1532-7795.2005.00095.x
- Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial behavior. In N. Eisenberg (Vol. Ed), W. Damon, & R. M. Lerner (Series Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (6th ed., pp. 646–718). New York, NY: Wiley.
- Eisenberg, N., Guthrie, I., Cumberland, A., Murphy, B. C., Shepard, S. A., Zhou, Q., & Carlo, G. (2002). Prosocial development in early adulthood: A longitudinal study. *Journal of Personality and Social Psychology, 82*, 993–1006. doi:10.1037/0022-3514.82.6.993
- Eisenberg, N., Guthrie, I. K., Murphy, B. C., Shepard, S. A., Cumberland, A., & Carlo, G. (1999). Consistency and development of prosocial dispositions: A longitudinal study. *Child Development, 70*, 1360–1372. doi:10.1111/1467-8624.00100
- Eisenberg, N., Lennon, R., & Roth, K. (1983). Prosocial development: A longitudinal study. *Developmental Psychology, 19*, 846–855. doi:10.1037/0012-1649.19.6.846
- Eisenberg, N., McCreath, H., & Ahn, R. (1988). Vicarious emotional responsiveness and prosocial behavior: Their interrelations in young children. *Personality and Social Psychology Bulletin, 14*, 298–311. doi:10.1177/0146167288142008
- Eisenberg, N., Miller, P. A., Shell, R., McNalley, S., & Shea, C. (1991). Prosocial development in adolescence: A longitudinal study. *Developmental Psychology, 27*, 849–857. doi:10.1037/0012-1649.27.5.849
- Eisenberg, N., Shell, R., Pasternack, J., Lennon, R., Beller, R., & Mathy, R. M. (1987). Prosocial development in middle childhood: A longitudinal study. *Developmental Psychology, 23*, 712–718. doi:10.1037/0012-1649.23.5.712
- Eisenberg-Berg, N., Cameron, E., Tryon, K., & Dodez, R. (1981). Socialization of prosocial behavior in the preschool classroom. *Developmental Psychology, 17*, 773–782. doi:10.1037/0012-1649.17.6.773
- Eisenberg-Berg, N., & Hand, M. (1979). The relationship of preschooler's reasoning about prosocial moral conflicts to prosocial behavior. *Child Development, 50*, 356–363. doi:10.2307/1129410
- Hardy, S. A. (2006). Identity, reasoning, and emotion: An empirical comparison of three sources of moral motivation. *Motivation and Emotion, 30*, 207–215. doi:10.1007/s11031-006-9034-9
- Hoffman, M. L. (2000). *Empathy and moral development: Implications for caring and justice*. Cambridge, England: Cambridge University Press. doi:10.1017/CBO9780511805851
- Jaffee, S., & Hyde, J. S. (2000). Gender differences in moral orientation: A meta-analysis. *Psychological Bulletin, 126*, 703–726. doi:10.1037/0033-2909.126.5.703
- Knafo, A., & Israel, S. (2010). Genetic and environmental influences on prosocial behavior. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (pp. 149–167). Washington, DC: American Psychological Association. doi:10.1037/12061-008
- Kohlberg, L. (1984). *Essays on moral development: Vol. II. The psychology of moral development*. San Francisco, CA: Harper and Row.
- Kohlberg, L., & Candee, D. (1984). The relationship of moral judgment to moral action. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development* (pp. 52–73). New York, NY: Wiley.
- Kuhn, D., Amsel, E., & O'Loughlin, M. (1988). *The development of scientific thinking skills*. Orlando, FL: Academic Press.
- Midlarsky, E., Jones, S. F., & Corley, R. P. (2005). Personality correlates of heroic rescue during the holocaust. *Journal of Personality, 73*, 907–934. doi:10.1111/j.1467-6494.2005.00333.x
- Midlarsky, E., Kahana, E., Corley, R., Nemeroff, R., & Schonbar, R. A. (1999). Altruistic moral judgment among older adults. *The International Journal of Aging & Human Development, 49*, 27–41. doi:10.2190/GLN2-G9NF-HHU7-KNJ4
- Paterson, H., Reniers, R., & Völlm, B. (2009). Personality types and mental health experiences of those who volunteer for helplines. *British Journal of Guidance & Counselling, 37*, 459–471. doi:10.1080/03069880903161419
- Penner, L. A., & Finkelstein, M. A. (1998). Dispositional and structural determinants of volunteerism. *Journal of Personality and Social Psychology, 74*, 525–537. doi:10.1037/0022-3514.74.2.525
- Piliavin, J. A., Dovidio, J. F., Gaertner, S. L., & Clark, R. D., III (1981). *Emergency intervention*. New York, NY: Academic Press.
- Power, T. G., & Parke, R. D. (1986). Patterns of early socialization: Mother- and father-infant interaction in the home. *International Journal of Behavioral Development, 9*, 331–341. doi:10.1177/016502548600900305
- Rest, J. R. (1979). *Development in judging moral issues*. Minneapolis, MN: University of Minnesota Press.
- Rest, J., & Narvaez, D. (1991). The college experience and moral devel-

- opment. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development: Vol. 2. Research* (pp. 229–245). Hillsdale, NJ: Erlbaum.
- Rholes, W. S., & Bailey, S. (1983). The effects of level of moral reasoning in consistency between moral attitudes and related behaviors. *Social Cognition, 2*, 32–48. doi:10.1521/soco.1983.2.1.32
- Rushton, J. P., Chrisjohn, R. D., & Fekken, G. C. (1981). The altruistic personality and the self-report altruism scale. *Personality and Individual Differences, 2*, 293–302. doi:10.1016/0191-8869(81)90084-2
- Schwartz, S. H. (1968). Words, deeds, and the perception of consequences and responsibility in social situations. *Journal of Personality and Social Psychology, 10*, 232–242. doi:10.1037/h0026569
- Singer, J. A., & Willett, J. B. (2003). *Applied longitudinal data analysis*. New York, NY: Oxford University Press. doi:10.1093/acprof:oso/9780195152968.001.0001
- Skoe, E. A. (2010). The relationship between empathy-related constructs and care-based moral development in young adulthood. *Journal of Moral Education, 39*, 191–211. doi:10.1080/03057241003754930
- Spence, J. T., & Helmreich, R. L. (1978). *Masculinity and femininity: Their psychological dimensions, correlates, and antecedents*. Austin, TX: University of Texas Press.
- Weinberger, D. A. (1997). Distress and self-restraint as measures of adjustment across the life span: Confirmatory factor analyses in clinical and nonclinical samples. *Psychological Assessment, 9*, 132–135. doi:10.1037/1040-3590.9.2.132

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