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Helping Behavior, Dispositional Empathic Concern, and the Principle of Care

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Abstract

This research investigates the relative strength of dispositional empathic concern and a moral principle to care about others as correlates of helping behavior. The empathy–helping and care–helping relationships are investigated using data from the General Social Survey, a nationally representative random sample of the U.S. adult population. Ten helping behaviors are investigated. The results show that the care–helping relationship is stronger than the empathy–helping relationship for most helping behaviors, and that a major part of the empathy–helping relationship is mediated by the principle of care. This pattern of results is especially striking when the help involves planned, long-term helping – charitable giving, volunteering, and blood donation. We discuss the theoretical and practical implications of the results in light of the prominent position the empathy–helping relationship holds in the literature.

Keywords: helping behavior, empathic concern, principle of care

Helping Behavior, Dispositional Empathic Concern, and the Principle of Care

Some people have a tendency to be empathically aroused upon observing the needs of another, and sometimes their compassionate reaction leads them to help the other. Sometimes people are not necessarily empathically aroused when observing the other's needs but help nonetheless because they have internalized a moral principle to care about the welfare of others – a principle embodied in a statement like "people should be willing to help others who are less fortunate."

The present research investigates the relative strength of dispositional empathic concern and the principle of care as correlates of helping behavior. The innovations in our investigation are that we (a) investigate dispositional empathic concern and the principle of care as separate correlates of helping behavior; (b) examine the consistency of the empathy–helping and principle of care–helping relationships across many different types of helping behavior; and (c) provide evidence based on a nationally representative random sample.

Empathy and the Principle of Care

Empathy and the principle of care are often identified as important determinants of helping behavior. Eisenberg & Miller (1987), Batson (1991, 1998), and Davis (1994) have reviewed the large body of research showing that empathy – defined to be an emotional reaction of concern, sympathy, or compassion in response to the needs of others – leads people to help others in need. Help given to others may also flow from an internalized value of "concern with others' welfare" (Staub 1978). Following Batson (1994) and Hoffman (2000), we call this internalized value the "principle of care."

Empathy and the principle of care are explicitly connected in Hoffman's (2000) theory of moral development and Eisenberg's (1982, 1986) stage theory of prosocial moral reasoning. Hoffman's moral development theory is that (i) empathy develops in five stages from the reactive crying of infants to truly empathic distress (parallel feelings in response to another's immediate situation) to more abstract empathizing with others (e.g., the poor) "beyond the [immediate] situation;" (ii) empathic distress leads to sympathetic distress – caring about the other (possible only after self-other differentiation is achieved); (iii) and finally, caring may be internalized into a moral principle of care. Hoffman writes (p. 225): "[the principle of] caring seems like a natural extension of empathic distress in specific situations to the general idea that one should always help people in need." In this way empathy and the principle of care work together to produce helping behavior.

In Eisenberg's theory, prosocial moral reasoning becomes more sophisticated as children age, reaching an empathic orientation stage in which children often express sympathetic concern for the other. In some children empathic orientation develops further into the internalized value orientation stage defined as an "orientation to an internalized responsibility, duty, or need to uphold the laws and accepted norms or values, for example, 'She has a duty to help needy others;'" Eisenberg (1982 p. 233). This description of an internalized value orientation is clearly akin to Hoffman's principle of care.

Empirical research has produced abundant evidence that dispositional empathy and helping behavior are related; see the review by Eisenberg & Miller (1987, Table 2).[1] Since the Eisenberg and Miller review further evidence has come from experimental studies (Batson, Bolen, Cross, & Neuringer-Benefiel 1986; Davis 1983a; Eisenberg, Miller, Schaller, Fabes, Fultz, Shell, & Shea

1989) and from analyses of self-report survey data (Davis 1983b; Staub 2003, Chapter 9; Penner & Finkelstein 1998; Bekkers 2005, 2006). Davis found that dispositional empathy was correlated with donations to the Muscular Dystrophy Telethon. Staub analyzed responses to a *Psychology Today* "Values and Goals" survey and concluded that empathy was correlated with helping, although a "prosocial orientation index" and helping were more strongly correlated. Penner & Finkelstein surveyed a sample of volunteers from a Tampa organization that serves those with HIV/AIDS and found correlations between "other-oriented empathy" and volunteering intensity – length of service, time spent volunteering, and the frequency of contact with HIV-positive clients; however, the correlations were small and even then mostly restricted to male volunteers. Bekkers studied a nationally representative Dutch sample and found that empathy was associated with volunteering and charitable giving, though not with blood donation; the associations persisted in multiple regression models even with statistical controls for a wide range of socio-economic characteristics and the "Big Five" (Costa & McCrae 1992) personality characteristics.

There is also evidence, albeit less abundant, that the principle of care is related to helping behavior. The moral dilemmas pitting self-interest against others' interests used in the literature to assess children's prosocial moral reasoning tap the principle of care about the welfare of others. Hence, Eisenberg & Mussen's (1989 p. 129) conclusion that the literature has found significant, though not large, correlations between children's prosocial moral reasoning and helping behavior is indirect evidence of a care–helping relationship. The correlation between adults' prosocial moral reasoning and helping behavior might be stronger: in a sample of Detroit elderly adults Midlarsky, Kahana, Corley, Nemeroff, & Schonbar (1999) found a strong correlation between internalized value orientation and helping behavior.[2] However other research with adults (Dyck,

Batson, Oden, & Weeks' experiment, discussed by Batson 1991, pp. 192-199) concluded that the relationship between a caring perspective and helping is positive, though weak.

Findings in the literature on the role identity model also suggest a role for the principle of care in giving blood, money and time. The model was developed for blood donation (Piliavin & Callero 1991) but subsequently generalized to other forms of planned helping behavior (Grube & Piliavin 2000; Piliavin, Callero & Grube 2002). The role identity model includes one's role identity (as a blood donor, charitable giver, volunteer), as a predictor of intentions to engage in planned helping behavior. Role identity depends on personal norms, defined as "feelings of moral obligation to perform or refrain from specific action" (Schwartz & Howard 1984). Personal norms and role identity are specific constructs that may explain specific actions. We surmise that a moral principle of care is a generalization of personal norms. The Principle of Care may underlie several different specific role identities. Those who endorse a moral principle of care are more likely to integrate their helping role in their sense of self.

Perhaps the strongest evidence that the principle of care is related to helping behavior comes from the functional approach to volunteering in the work of Clary, Snyder and their associates (e.g., Clary et al. 1998). One of the six functions that volunteering can serve is to express a value of "concern for others." Tapping this concern for others with three items such as "I feel it is important to help others" and "I feel compassion toward people in need," and using a nationally representative survey, Clary, Snyder, & Stukas (1996) find a significant relationship between the value scale built with these items and whether a person does any volunteering. Notice, however, that although one of the items ("I feel it is important to help others") taps what we mean by the principle of care, the other item ("I feel compassion toward people in need") focuses on a feeling

of “compassion” and is very close to an item from a standard empathic concern scale: “I often have tender, concerned feelings for people less fortunate than me” (from the Interpersonal Reactivity Index; Davis 1994). Because the value scale combines empathic concern and principle of care constructs, the relative strength of the empathy–helping and care–helping relationships cannot be deduced from evidence about the value–helping relationship.

Indeed, one reason that the evidence in the previous literature of a care–helping relationship appears less abundant may be that previous methods often combine the principle of care with other constructs. For example, Penner & Finkelstein’s (1998) “other-oriented empathy” construct combines the empathic concern scale from the Interpersonal Reactivity Index with items that tap into the principle of care (e.g., “My decisions are usually based on my concern for other people”); again the relative strength of the empathy–helping and care–helping relationships cannot be deduced from evidence about the combination. Similarly, although Oliner & Oliner (1988) concluded from their interviews with rescuers of Jews from the Nazis that empathy aroused more rescuers to act than did principles (p. 221), they also documented that large percentages of rescuers talked about learning principles of care from their parents. Once again, it is not clear how to deduce the relative strength of empathy and the principle of care from this evidence. Along the same lines, Staub’s (2003, Chapter 9) “prosocial orientation index” contains items that tap into the principle of care (e.g., “I am concerned about the welfare of human beings everywhere in the world ”), but these items are combined with items measuring other constructs, such as the ascription of responsibility (Schwartz 1968) and social responsibility (Berkowitz & Lutterman 1968), making it impossible to deduce the strength of the care–helping relationship apart from these other constructs.

However, there are three pieces of evidence that when combined suggest that modeling empathy and care as co-determinants may affect the estimated empathy–helping and care–helping relationships. The first two pieces of evidence (already discussed) are that (i) dispositional empathy is correlated with helping behavior and (ii) the principle of care is correlated with helping behavior (here the evidence is indirect: the principle of care is tapped by assessments of prosocial moral reasoning and prosocial moral reasoning is, in turn, correlated with helping behavior). The third piece of evidence is Eisenberg, Guthrie, Cumberland, Murphy, Shepard, Zhou, & Carlo's (2002) finding that dispositional empathy and prosocial moral reasoning are moderately-to-strongly correlated – again, this indirectly suggests that empathy and the principle of care are correlated (because prosocial moral reasoning taps the principle of care). When combined, the evidence of empathy–helping, care–helping, and empathy–care correlations suggests that estimates of the empathy–helping relationship may be affected by controlling for the care–helping relationship. Likewise the estimated care–helping relationship may be affected by controlling for the empathy–helping relationship.

In short, Hoffman's (2000) and Eisenberg's (1982, 1986) developmental theories clearly suggest that empathy and the principle of care be modeled as separate determinants of helping behavior, and there is evidence suggesting separate modeling may affect our understanding of the empathy–helping and care–helping relationships. Therefore the present research investigates the relative strength of dispositional empathic concern and the principle of care as separate correlates of helping behavior.

The Present Research

To investigate the relative strength of dispositional empathic concern and the principle of care as correlates of helping behavior we use data from the General Social Survey (GSS; Davis & Smith 1992, 2003). The GSS is fielded biennially by the National Opinion Research Center at the University of Chicago, and the core questions yield high-quality attitudinal and socio-economic data from a nationally representative random sample of the U.S. adult population. In addition to the core questions the 2002 survey contained items that measure empathic concern, the principle of care, and helping behaviors.

We use these items to evaluate several hypotheses drawn from the developmental theories discussed above. The first hypothesis is simply that dispositional empathic concern and the principle of care are each positively related to many types of helping behavior. This hypothesis is drawn from Hoffman's and Eisenberg's theories that empathic concern and the principle of care are separate, albeit connected, constructs in the development of moral reasoning. We examine many different types of helping behavior because theory posits that empathic concern and the principle of care become enduring personality traits, and positive relationships with many types of helping behavior (rather than with just one or two types) would indicate that empathic concern and the principle of care are indeed traits.

The second hypothesis is that the principle of care mediates the empathic concern–helping relationship, in other words that care is a mechanism that explains in part why empathy has an effect on helping. The mediating hypothesis is drawn from two arguments in the theory.
First, in both Hoffman's and Eisenberg's theories empathy develops into a principle of care among people reaching the internalized value stage of moral development. To the extent that the principle of care replaces empathy as an explanation of the helping behavior of these people, the

principle explains part of the empathy–helping relationship. Second, Hoffman argues that empathy and the principle of care work together to produce helping behavior, suggesting that empathic emotion is responsible for evoking adherence to the principle of care as an ultimate motive. In this argument care is not "replacing" empathy so much as empathy produces helping behavior in part by working through care.

The third hypothesis is that the principle of care mediates the empathic concern–helping relationship more strongly for planned, long-term types of helping behavior involving abstract contact with the other in need (e.g., giving money to a charity) but not as much for spontaneous, short-term types of helping behavior involving close contact with the other in need (e.g., allowing a stranger to cut ahead in line). The distinction between planned, long-term help and spontaneous, short-term help is fundamental (see Dovidio et al. 2006). Our hypothesis that the principle of care is a stronger mediator of the empathic concern–helping relationship for planned, long-term help is drawn from the theoretical suggestion that people reaching the empathic orientation stage will be motivated to help when they are in close contact with the other in need; their further development toward the principle of care/internalized value orientation is not necessary. In contrast, when the help involves planning, perhaps making a long-term commitment to another in need known only in the abstract, the decision to help requires the development of empathy "beyond the situation," that is to say, further development toward the principle of care/internalized value orientation.

Indeed, being able to recognize the need of another known only in the abstract is more cognitively-demanding than recognizing the obvious need of another in one's close, visual presence. For this reason – and because emotions likely play a smaller role in planned, long-term helping situations – Dovidio et al. (2006, p. 177) conclude that "because planned prosocial

behavior often takes more time to formulate and execute, emotional reactions play less of a role than in situations, such as emergencies, requiring immediate assistance."

The third hypothesis that care is a stronger mediator for the empathy–helping relationship when the help is more abstract also arises from the theory that in-group/out-group membership moderates the empathy–helping relationship (Stürmer, Snyder, and Omoto 2005; Stürmer, Snyder, Kropp, and Siem 2006). The theory is that empathy is a stronger force to evoke helping an in-group member because the helper feels stronger attachment to (or identification with) the in-group member. Less attachment is felt with out-group members, and consequently empathy is a weaker force to evoke helping out-group members. Stürmer et al. (2006, p. 954) point out that other forces such as normative considerations may evoke "help [to] outgroup members despite a lack of empathic motivation to do so." The principle of care is one such normative consideration. Therefore, we hypothesize that empathy will not be mediated by care as much when the helping behavior involves close contact with the recipient, because the helper can judge whether the potential recipient is an in-group member and base the decision to help (at least in-part) on in-group membership—in this situation empathy is a stronger force to evoke help. We hypothesize that empathy will be more strongly mediated by care when the helping behavior involves distant, more abstract contact with the recipient, because the helper is less able to judge whether the potential recipient is an in-group or out-group member and therefore less able to condition the help on group membership. In this situation where the helper realizes that any help offered will likely help out-group members, the principle of care becomes a stronger force to evoke help and, once care is controlled for, empathy will be weakly associated with help.

Our investigation of these hypotheses offers several innovations. First, to our knowledge this is the first investigation to consider dispositional empathic concern and the principle of care as separate correlates of helping behavior, following the suggestion of development theory. Second, we investigate the consistency of the empathy–helping and care–helping relationships across many different types of helping behavior, again following the theory that empathic concern and the principle of care are enduring personality traits. Third, (again to our knowledge) this is the first investigation of empathic concern, the principle of care, and helping behavior to use data from a representative random sample of the U.S. adult population. Lastly, we subject our results to extensive sensitivity checks, including the use of advanced estimation techniques as well as the use of statistical controls for more numerous stable and situational determinants of helping behavior than are usually controlled for in correlational studies. This mitigates the chance that these stable and situational determinants reveal their relationships to helping behavior erroneously through our measures of dispositional empathic concern and the principle of care.

Method

Overview

We use the GSS data to estimate multiple regression models in which the main independent variables are dispositional empathic concern and the principle of care, and the dependent variables are different types of helping behavior. Each dependent variable is a binary indicator of whether any of that type of helping behavior was done in the past year. Separate models for each type of helping behavior are estimated, and we estimate models treating the several types of helping behavior as measurements of underlying latent helping variables.

Study Participants and Data Collection Procedures

The core questions in the GSS are designed to track social, political, and religious attitudes over time; this is an advantage for our research because respondents have agreed to participate in a general survey and have not self-selected into a study they think is primarily about helping behavior. Indeed, the majority of survey years have not contained questions about helping behavior, but the 2002 survey included an Altruism Topical Module (Smith 2003) containing the items central to our research.

The GSS uses a multi-stage area probability sample with quotas at the block level (the quotas are to ensure adequate inclusion of men under age 35 and employed women). Quota targets are set using Census tract data, and households are selected until the quota targets are met. Each selected household receives multiple callbacks to increase the percentage of selected households that complete interviews. In each household a respondent is selected randomly from the adults age 18 or older. Respondents are interviewed in English. The GSS data are thus representative of the English-speaking U.S. adult population who live in households (though somewhat less representative of young adults between 18 and 24 because of those living in residential colleges or in the military and older adults because of those living in nursing homes). The 2002 response rate was 70.1 percent. Data are gathered from respondents using computer-assisted personal interviewing, and the median interview time is 1.5 hours. See Davis & Smith (1992, 2003) for additional details.

The 2002 GSS sample size is 2,765, but because the GSS uses different questionnaire versions for different halves of its sample, only 1,372 were asked the Altruism Topical Module. Just over

half (52.6 percent) of the 1,372 respondents are women, 81.6 percent are white, and 6.6 percent are Hispanic. The percentage age distribution is: 18 to 34 (30.4 percent), 35 to 49 (29.1 percent), 50 to 64 (22.2 percent), and 65 and over (18.3 percent). The education distribution is: less than high school (14.8 percent), high school degree (53.3 percent), associate's degree (6.6 percent), bachelor's degree (16.3 percent), and graduate degree (8.7 percent). Median family income is just under $39,000.

Dispositional Empathic Concern and Principle of Care

We define "dispositional empathic concern" to be the tendency to experience concerned, sympathetic, or compassionate reactive outcomes in response to the needs of others. The definition follows Davis (1994), and we use the seven-item empathic concern sub-scale from Davis's (1994) Interpersonal Reactivity Index to measure dispositional empathic concern. The seven items solicit a respondent's agreement on a 5-point scale (*does not describe me very well* to *describes me very well*) with descriptions of their tendency to experience concern for those less fortunate (sample item: "I often have tender, concerned feelings for people less fortunate than me") and general feelings of warmth (sample item: "I would describe myself as a pretty soft-hearted person"). The items are averaged (after reverse-coding items when necessary).

The empathic concern scale has been widely used as a measure of dispositional empathic concern (Batson et al. 1986; Davis 1983a,b; Penner & Finkelstein 1998; Bekkers 2005, 2006) and, equivalently, dispositional sympathy (Eisenberg et al. 1989, 2002; Eisenberg 1991 discusses the equivalence). There is evidence that the scale is tapping a personality trait: the scale has high internal and test-retest reliabilities (Davis 1994 p. 57; also 1983c), and Eisenberg et al. (2002)

reported that empathic concern measured at age 15-18 is strongly correlated with a prosociality composite index measured at ages 21-26. In the GSS sample, the empathic concern α is .75.

We define the "principle of care" to be the moral principle that one should help those in need, and measure a respondent's adherence to the principle by the strength of his/her agreement on a 5-point scale (*strongly disagree* to *strongly agree*) with three items from the Altruism Module: "people should be willing to help others who are less fortunate;" "personally assisting people in trouble is very important to me;" and "these days people need to look after themselves and not overly worry about others" (reverse-coded). The first two items were developed by Webb, Green & Brashear (2000) and the third by Nickell (1998). We did not use a fourth GSS item ("those in need have to learn to take care of themselves and not depend on others") because unlike the other three items the fourth item (a) refers to a principle (self-reliance) held by a potential help-receiver rather than a potential help-giver; (b) makes reference to the recipient becoming dependent on the helper; and (c) lowers α. The three-item principle of care α is .56.

Items similar, though not identical, to the principle of care were used by Eisenberg et al. (2002) in their "care orientation" construct (sample item: "My decisions are usually based on my concern for other people"); the care orientation items were originally developed by Penner, Fritzsche, Craiger, & Freifeld (1995; therein called the "other-oriented" scale). The principle of care items differ somewhat from the care orientation items in that the principle of care items make explicit reference to a less fortunate other and they do not explicitly refer to the respondent making a decision. Nevertheless, the principle of care items are similar to responses to prosocial moral dilemmas that indicate an internalized value orientation (Eisenberg et al. 2002; sample response: "All citizens of a society have a responsibility to help others when they need

assistance"). In other words, the principle of care items likely tap the tendency to use high-level prosocial moral reasoning.

Raw scores for empathic concern and the principle of care are calculated by adding the respective items and dividing by the number of items; hence, each score ranges from 1 to 5. Table 1 shows the average empathic concern score is 3.97 (s.d. = .72) and the average principle of care score is 3.78 (s.d. = .66). The correlation between scores is .51. We standardize the raw scores to have zero mean and unit standard deviation for use in the regression analysis.

Helping Behaviors

We analyze empathic concern and the principle of care relationships with ten types of helping behaviors. The helping behaviors are items (sometimes with minor modifications) from Rushton, Chrisjohn, & Fekken's (1981) Self-Report Altruism scale. A respondent was asked how often during the past 12 months he/she had:

1. returned change to a cashier after getting too much change,
2. allowed a stranger to go ahead in line,
3. offered a seat on a bus or in a public place to a stranger who was standing,
4. carried a stranger's belongings, like groceries, a suitcase, or shopping bag,
5. given food or money to a homeless person,
6. looked after a person's plants, mail, or pets while they were away,
7. let someone you didn't know well borrow an item of some value like dishes or tools,
8. given money to a charity,
9. done volunteer work for a charity, and
10. donated blood.

Most of the items are about help given to recipients who are "strangers" (ahead in line, offered a seat, carried belongings, gave food or money to a homeless person, gave money to a charity, volunteered, donated blood) or not well-known to the respondent (lent an item, returned change). Strangers and recipients not well-known can include both in-group and out-group members.

Furthermore, items 1-7 refer to spontaneous helping behaviors that involve close, less abstract contact with the stranger in need, but items 8-10 refer to planned helping behaviors benefiting more distant others. Such helping behaviors involve more cognitively-demanding, abstract contact with the stranger. We therefore predict that the principle of care will mediate the empathy–helping relationship more strongly for help items 8-10 based on the two arguments developed in the discussion of our third hypothesis. First, because items 8-10 involve more abstract contact with the stranger in need, these types of help require the development of empathy beyond the immediate situation toward the principle of care. Second, items 8-10 refer to situations in which the respondent is less able to condition the help offered on whether the stranger in need is an in-group or out-group member. In such situations where the respondent-helper realizes that any help offered will likely help out-group members we hypothesize that the principle of care is a normative consideration that is a stronger force than empathy to evoke help.

Although the respondents' answers describe the frequency each helping behavior is performed, our first analysis treats each helping behavior as a binary variable with outcomes either *not performed* or *performed once or more in the past year* (coded as 0 and 1). The 0/1 specification of helping behavior leads to easily interpretable results, and we check the results by estimating more complicated models of the frequency each helping behavior is performed (see footnote 3 below) and by estimating models for planned helping and spontaneous types of helping. Our first analysis also considers the helping behaviors separately, again because separate consideration leads to easily interpretable results. Table 1 shows the fractions of the respondents that performed each of the helping behaviors at least once during the past year. Nearly all

respondents allowed a stranger to go ahead in line (86 percent), but many fewer donated blood (15 percent).

Our second analysis considers the helping behaviors all together by modeling them as measurements of a single underlying latent helping variable. We created a latent helping variable using the frequencies each helping behavior is performed as the measurements (rather than the 0/1 specifications).

Regression Analyses

Our first set of analyses considers the relationship of empathic concern and the principle of care with each of the helping behaviors in the linear probability model – a least-squares regression where the dependent variable is 0/1 (Wooldridge 2003). The advantages of the linear probability model are that it produces unbiased estimates (under the usual least-squares assumptions), the *B* estimates are easy to interpret (*B* is the effect of a one standard deviation change in empathic concern or the principle of care on the probability of performing the helping behavior), and if there is only one independent variable the square-root of the regression R^2 is the Pearson product-moment correlation. Because standard errors in any linear probability model are heteroskedastic, we perform significance tests with heteroskedastic-consistent calculations of the standard errors.

We check the results by using more advanced estimation techniques that address several disadvantages of the linear probability model (linear probability estimation does not constrain predicted probabilities of helping behavior to lie between 0 and 1; linear probability estimates do

not account for correlations among the helping behaviors that potentially remain even after the independent variables are partialled out; and the linear probability model does not make use of the frequency each helping behavior is performed). The results from the more advanced techniques are very close to those from the linear probability model, so we present only the latter, more easily interpretable results.[3]

Our second set of analyses considers the helping behaviors jointly as indicators of a helping behavior composite. For each helping behavior we create a variable coded 0-3 representing the frequency help is performed (the categories are *not in the past year*, *once in the past year*, *at least 2 or 3 times in the past year*, *once a month or more*), and then add up the frequencies of all ten helping behaviors. A single latent helping variable is supported by factor analysis: the eigenvalue of the first factor is 1.59 and the second is only .38; the α is for a scale of all items is .65.

Although factor analysis supports the use of a single latent helping variable, evaluating our third hypothesis (that the principle of care mediates the empathic concern–helping relationship especially for planned helping behaviors) requires splitting the helping behaviors into two sets – one set for relatively close, more spontaneous, less abstract help (items 1-7) and the second set for planned, relatively distant, cognitively-demanding, more abstract help (items 8-10) – and estimating two separate models treating the sets of helping behaviors as measurements of latent planned and spontaneous help. The α for items 1-7 is .61, but the α for items 8-10 is only .44. While the latter α can be raised to .54 by excluding blood donation, we retain the blood donation item because theoretically blood donation is a form of planned helping and the model estimates are very close whether blood donation is included or not.

Controls

An advantage of the GSS is that it includes a wide range of data describing the respondent's characteristics that likely affect helping behavior and may be correlated with empathic concern and the principle of care. It is important to check the sensitivity of the empathy and care estimates to the presence of these stable and situational controls. We included controls that were identified in literature reviews as correlates of helping behavior (Schroeder, Penner, Dovidio & Piliavin, 1995) and volunteering (Wilson, 2000). We have not included controls representing choices that are made simultaneously with the dependent variables, like church attendance and working hours. Unbiased estimates of the relationships of these variables with helping behavior would require a system of equations, which goes beyond the scope of the present paper. The specific controls describe the respondent's gender, race, ethnicity, age, religious identity (Protestant, Catholic, other), that identity interacted with the respondent's strength of identity, whether the respondent's denomination is fundamentalist or liberal (if the respondent is Protestant), the respondent's retrospective report of the religious identity in which he/she was raised, the respondent's identification as a Democrat or Republican, that political identification interacted with the respondent's strength of identification, the number of children in the household, whether the respondent is married, whether the respondent is a single parent, whether the respondent lives in the south, the population of the respondent's place of residence, the square of that population, income of the respondent's family and whether the income level is getting better or worse, the respondent's education, the prestige score of the respondent's father's occupation, the education of the respondent's father and mother, personal efficacy and competence (item: "do you prefer to

solve problems on your own or do you like to talk to other people to get advice"); subjective well-being (item: "taken all together . . . would you say that you are very happy, pretty happy, or not too happy"); locus of control (item: "which do you think is most important for people to get ahead: their own hard work or lucky breaks/help from other people?"); adherence to a principle of government-generated economic equality (item: "on a scale of one to seven what comes closest to the way you feel: the government should do something to reduce income differences between rich and poor . . . to . . . the government should not concern itself with income differences"); and religious worldview (item: "on a scale of one to seven rate the world [as] basically filled with evil and sin . . . to . . . there is much goodness in the world which hints at God's goodness"). A more detailed description of the control variables is available upon request.

We estimate four specifications of each helping behavior: empathic concern is the only independent variable (specification "e"); the principle of care is the only independent variable ("pc"); empathic concern and the principle of care are the only independent variables ("epc"); and empathic concern and the principle of care plus the additional controls for other stable and situational characteristics are included ("all"). Because of occasional missing data in the additional controls, the sample size used to estimate the "all" specification is about three percent smaller.

Some of these controls (efficacy, subjective well-being, locus of control, attitudes towards equality and religious world view) are not included in our main analysis because the questions necessary to construct the controls were posed to only a portion of the GSS sample, and therefore using these controls cuts the sample size by one-third.

Results

Overview

The results show that although empathic concern is associated with many of the helping behaviors, the principle of care is more consistently associated with helping. Considering empathy and care each in isolation from the other, both empathy and care are associated with large percentage increases (ten percent or higher) in baseline probabilities of performing many helping behaviors. However, for many helping behaviors, the empathy–helping association disappears after the principle of care is partialled out. In contrast, most care–helping associations do not weaken much even after empathic concern is partialled out.

Separate Types of Helping Behavior

For each of the ten helping behavior models Table 2 presents four rows. Each row contains *B* coefficients indicating how unit standard deviation increases in empathic concern and the principle of care are associated with increases in the probability of performing the helping behavior at least once during the past year. Thirteen of the 20 *B*s in the (e) and (pc) rows indicate probability increases in the .05 – .11 range. The largest increases are for volunteering (care *B* = .11), giving to a homeless person (empathy *B* = .09, care *B* = .08), allowing a stranger ahead in line (empathy *B* = .07), and carrying a stranger's belongings (care *B* = .07).

Whether the .05 – .11 probability increases are seen as "large" or "small" depends upon the increase relative to the baseline probabilities of performing the corresponding helping behavior (from Table 1). For example, a one standard deviation increase in care is associated with a 24

percent increase in the probability of volunteering (.11/.45 = 24 percent); this is a very large increase, especially given that a one standard deviation increase in care represents only a 17 percent increase in care (.66/3.78 from Table 1) – that is to say, the 17 percent increase in care is associated with a larger than 17 percent increase in volunteering. For most (all but three) of the 13 *B*s indicating probability increases in the .05 – .11 range, the percentage increase in the baseline probability of performing the corresponding helping behavior is ten percent or higher – not as large as the care-volunteering association but still large. And one of the *B*s outside the .05 – .11 range – the .02 care–blood donation association – represents a large percentage increase (.02/.15 = 13 percent) in the probability of donation.

The *B* coefficients in the (e) and (pc) rows also indicate that both empathic concern and the principle of care are significantly associated with almost all of the helping behaviors. All but two of the 20 *B*s are statistically significant with most of the *p*s < .01. Both of the insignificant *B*s are empathy–helping associations (offered a seat and donated blood).

The *B* coefficients in the (epc) rows indicate that the empathy–helping association falls in every one of the ten behaviors once the principle of care is partialled out. The principle of care–helping behavior association falls too (empathic concern having been partialled out), but only for five of the ten behaviors and for only one behavior (allowing a stranger ahead in line) does the principle of care association fall more than the empathic concern association. Empathic concern remains significant in only three behaviors (ahead in line, carrying a stranger's belongings, and giving to a homeless person) once the principle of care is partialled out, but the principle of care remains significant in all ten of the behaviors even after empathic concern is partialled out.

There is no qualitative change in the *B* coefficients when controls for all the other stable and situational characteristics are added to the regressions in the (all) rows. The largest changes to note are for carrying a stranger's belongings (empathy *B* rises from .03 to .06), returning change, and looking after a person's plants etc. while they were away (both care *B*s fall from .04 to .02). In the regressions with all the controls four empathic concern *B*s are significant with three of the four at *B* = .06 (for these three the percentage increases in baseline probabilities of performing the corresponding helping behavior range from seven to 14 percent), and eight principle of care coefficients are significant with six of the eight *B*s in the range .05 – .08 (for these six the percentage increases in baseline probabilities of performing the corresponding helping behavior range from six to 18 percent).

Planned and spontaneous help

Table 3 presents *B* coefficients from three regression analyses of the composite scores of all help (items 1-10), spontaneous help (items 1-7), and planned help (items 8-10). Included in the models are empathic concern, the principle of care, and the control variables that are available for all respondents. The results of analyses using factor scores - though less pronounced - strongly resemble the results reported in Table 3 and are available upon request. Correlations between the composite scores and the factor scores are .837, .786 and .835 for all helping items, planned and spontaneous helping behaviors, respectively.

Table 3 row 1 shows a positive relationship between empathic concern and all help; the empathic concern coefficient dropped from .48 (not shown in the table) in a model with empathic

concern as the sole predictor. The care–helping coefficient in row 1 is almost three times larger, .68, having dropped much more modestly from .86 (again, not shown) upon adding empathic concern and the controls. The standardized beta coefficient for empathic concern is .090; for the principle of care it is .220.

The model for less abstract help in row 2 has a significantly positive direct empathy–helping coefficient (beta: .129), but once more the care coefficient is much larger (beta: .187). The model for planned help in row 3 indicates a direct empathy–helping coefficient that is no longer positive, but the principle of care coefficient is positive and large (beta: .178).

Control variables

Relationships of control variables with the helping composites are largely consistent with previous research. Protestants (except those with a fundamentalist orientation) and those with an other religion are more active in helping behavior than the non-religious. Controlling for current religious affiliation, we find no relationship between a Catholic or Protestant upbringing and helping behavior. Those raised in another religious group are less active in less abstract helping behavior than those raised without religion. Respondents with a political orientation (either Democrat or Republican) are more active in helping behavior than those without a partisan orientation. Higher income is associated with higher activity in abstract helping behavior, but not with less abstract helping behavior. Higher education is associated with higher activity in helping behavior. The pattern is less pronounced for less abstract helping behavior than for abstract helping behavior. Interestingly, higher occupational status and education of the father is not associated with higher activity in helping behavior, but higher education of the mother is

associated with higher activity in helping behavior. Persons over 65 are less active in less abstract helping behavior. Married respondents are no different from singles. Respondents with children are more active in abstract helping behavior. In contrast with popular images, females are less active in less abstract helping behavior, but more active in abstract helping behavior. White respondents are more active in less abstract helping behavior than Blacks, but no such difference emerges for abstract helping behavior. Hispanics are not different from Caucasians. The relationship of town size with less abstract helping behavior is curvilinear: residents of mid-sized towns are most active.

The results do not change when we include controls for personal efficacy and competence, subjective well-being, locus of control, adherence to a principle of government-established economic equality, or religious worldview.

Discussion

The results support the hypothesis that the principle of care is related to many types of helping behavior. Even in models with extensive controls for other stable and situational characteristics of respondents, the principle of care retains a significant relationship with eight of the ten helping behaviors examined. The largest principle of care relationship in absolute terms (in the regressions with all the controls) is the .08 increase in the probability of volunteering associated with a unit standard deviation increase in care; this represents an 18 percent increase in the baseline probability of volunteering. The largest relationship in terms of baseline probabilities is for blood

donation: the .03 increase in the probability of donating associated with a unit standard deviation increase in care is relative to a very small baseline donation probability of .15 – hence, a 20 percent increase in the baseline probability of blood donation. Although the sizes of the principle of care relationships with volunteering and blood donation are of special interest because these two helping behaviors have been frequently studied in previous research, the overall finding is the consistency of the principle of care in its relationships with many types of helping behavior. We think this is a striking finding given the moderate reliability of the GSS items available to measure the principle of care.

The results also support the hypothesis that dispositional empathic concern is related to helping behavior, but the relationship is weaker. Although there are eight (out of ten) significant *B*s in the simple regressions of helping behavior on empathic concern, five of those *B*s drop in magnitude and lose significance when the principle of care is partialled out. This suggests the principle of care mediates the dispositional empathy–helping relationship.

Finally, the results provide support for the hypothesis that the principle of care mediates the empathy–helping relationship especially for planned types of helping behavior. Once the principle of care is partialled out, empathy is not significantly related to any helping behavior involving distant, cognitively-demanding, abstract contact with the other in need (giving to charity, doing volunteer work for a charity, donating blood). Empathy maintains its relationship only with helping behaviors involving close, spontaneous, less abstract contact with the other in need (allowing a stranger ahead in line, carrying a stranger's belongings, and giving to a homeless person).

The results of strong care–helping and weak empathy–helping relationships are striking in light of the prominent position the empathy–helping relationship holds in the literature. But before moving on to a discussion of the theoretical and practical implications of the results we want to be upfront about two qualifications to the present study. First, although the use of a representative random sample of the U.S. adult population to generate the results is an important strength of the study, it is also important to keep in mind that the study uses self-report data, and self-reports may be subject to social presentation and question-order effects. Although there are a few indications that the self-reports are not leading to large social presentation effects, we cannot rule out question-order effects (for example, a person reports a stronger adherence to the principle of care after he/she reported giving a lot of help).[4] Second, although the results are robust to the presence of numerous statistical controls for respondents' stable and situational characteristics, the results may have changed had the data allowed us to control for additional personality characteristics (for example, the tendency to use perspective-taking or to experience personal distress). Of course, further research using experimental methods and longitudinal data can be designed to check these qualifications, and the present results taken at face value have important enough theoretical and practical implications to warrant this further research.

The results have implications for the theoretical analysis of help given to out-group members, the empathy–altruism hypothesis, and how state-empathy and the principle of care work together to produce helping behavior. First, the results imply that help given to out-group members is more strongly related to the principle of care than to empathy. All but one of the helping behaviors (looking after plants, mail, or pets) involves helping strangers, and "strangers" include a mix of both in-group and out-group members. Furthermore, for help items 8-10 it is likely that the mix

contains relatively more out-group members (compared to help items 1-7 where the helper is in close contact with the stranger in need, and can therefore condition the help on group membership), and for these items the empathy–helping relationship is entirely mediated by the principle of care. The strong principle of care–helping relationship across many types of helping behavior involving strangers both close (items 1-7) and distant (items 8-10) may arise because the principle of care taps both benevolence and universalism, and both are likely necessary to produce help directed toward people not in one's own group (Schwartz 1992). Similarly, Oliner & Oliner (1988) argued that in addition to emphasizing the value of care, a difference between rescuers of Jews and non-rescuers was that rescuers spoke of care in universal terms, implying that their care encompassed people not in their own group. The weaker empathy–helping relationship—especially when the helping behavior is a form of planned helping, involving distant, more abstract contact with the stranger in need—is similar to the evidence from Stürmer et al. (2005, 2006) that the empathy–helping relationship is weaker when the help involves out-group members.

Second, the results imply that the empathy–altruism hypothesis may play a relatively small role in many types of important helping behavior (e.g., charitable giving, volunteering, and blood donation). To be sure, the evidence of weak empathy–helping relationships in the present study does not necessarily imply the absence of altruistic motives in helping behavior because while empathy may be sufficient to evoke an altruistic motive (defined to be seeking an increase in the welfare of others as an ultimate goal), empathy may not be necessary.[5] For instance, Eisenberg (1986, p. 117-118) has argued that there are two types of altruism, one type based on values rather than empathy (the other type is, of course, based on empathy). Similarly, Staub (1991) has argued

that valuing others can become the basis of altruism, and if so altruism need no longer be tied to empathy.

At the same time, help flowing from the principle of care does not necessarily imply the presence of altruism because the principle of care could be the foundation of other non-altruistic motives such as principlism and even egoism (Batson 1994, p. 608; also see Staub 1991). Indeed, the likelihood that different people have different motives to help others and the possibility that the principle of care is at the foundation of several of those motives may explain why the principle of care is related to many types of helping behavior in a large random sample of the population. Learning what motives are evoked by the principle of care is therefore a pressing research question.

Finally, the weak relationships between empathy and helping may be due in part to the generally weaker empathy–helping relationship expected with dispositional empathy compared to state-empathy (Davis 1983b). This implies the need to investigate the principle of care in the context of the experimental manipulation of both the principle and state-empathy. Experimental manipulation can investigate whether the present results generalize (Can the principle of care produce help in situations where an empathic state does not?), investigate the motives evoked by the principle of care, and test Hoffman's (2000) theory that the principle of care and state-empathy work together to produce helping behavior.

The results also warrant further theoretical research on the principle of care. The necessary theoretical work includes the development of items to measure the principle of care and the study of the care–helping relationship for additional helping behaviors. The development of care items should consider existing items from the “care orientation” construct (Eisenberg et al. 2002; Penner

et al. 1995), but should also consider the development of new items that explicitly tap universalism in care. The further study of the care–helping relationship for additional helping behaviors should focus on the difference between help given to in-group members and help given to out-group members, again with the goal of understanding the role of universalism.

The practical implications of the results are clear. First, the results suggest that interventions to increase socially important helping behaviors such as charitable giving, volunteering, and blood donation should seek to activate the principle of care more so than empathy. Second, in the development of prosocial behavior, the development of an empathic tendency is not enough if the goal is to increase socially important helping behaviors (again, charitable giving, volunteering, and blood donation). To increase socially important helping behaviors child development must also include the development of the principle of care/internalized value orientation with an emphasis on universalism. Because adolescence is the stage in which principle of care/internalized value orientation develops (or not), adolescence is a crucial time in the development of prosocial behavior.

In summary, the evidence in the present study suggests that the principle of care is related to many types of helping behavior, involving both cognitively-demanding, abstract contact with the other in need as well as close, spontaneous, less abstract contact. Dispositional empathic concern is related to fewer types of helping behavior involving only close, spontaneous, less abstract contact with the other in need, in part because the empathy–helping relationship is mediated by the principle of care.

The idea that helping behavior arises from principles has a long history. Adam Smith (1759) in *The Theory of Moral Sentiments* pointed not to the “soft power of humanity” but instead to

"reason, principle, conscience" as an explanation of self-interest sacrificed for the benefit of others (Volume I, Part III, Chapter III). The evidence in the present study indicates that at least one principle – the principle of care – is related to many types of helping behavior, and suggests the need for more research about what motives are evoked by the principle of care as well as how the principle arises from, and relates to, other prosocial personality characteristics.

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Notes

1. The majority of the empathy–helping research reviewed by Eisenberg & Miller (1987), Batson (1991, 1998), and Davis (1994) is about experiments that manipulate empathy in specific situations. Because the present study is about dispositional empathy (rather than situation-specific empathy) unless otherwise noted "empathy" herein refers to dispositional empathy.

2. For additional discussion of the relationship between prosocial moral reasoning and helping behavior see the reviews by Eisenberg (1986 pp. 154-158) and Eisenberg & Fabes (1998 pp. 731-733).

3. The advanced techniques are single-equation probit (maximum-likelihood estimates that assume the underlying randomness in helping behavior is normal – the estimates then constrain predicted probabilities to lie between 0 and 1), multivariate probit (to estimate a model of ten helping behaviors allowing the underlying randomness in the helping behaviors to be correlated; see Cappellari & Jenkins 2003), and single-equation ordered-probit (to estimate models of the frequency each helping behavior is performed; Wooldridge 2002). The results from these techniques are available upon request.

4. The indications that the self-reports are not leading to large social presentation effects are: (a) social presentation effects would have likely caused the patterns of results to be similar for empathic concern and the principle of care, but the patterns differ; and (b) the existence of social presentation effects also would likely have been revealed when the interviewer's rating of the respondent's cooperativeness was partialled out, but we found no such indication (results available upon request). Further, Eisenberg et al. (2002, p.1002) found that controls for social presentation have little effect on correlations between prosocial moral reasoning and empathic

concern and between prosocial moral reasoning and a prosocial composite index (that includes adaptations of the items from the Self-Report Altruism scale). Similarly, Rushton (1984, p. 281) reported that the correlation between the Self-Report Altruism scale and a social presentation measure was positive, but very small. The implication of this previous research is that the social presentation effects on the present results may be small.

5. The evidence that empathy evokes altruistic motivation is well-known (see Batson 1991, 1998; cf. Neuberg, Cialdini, Brown, Luce, & Sagarin 1997 and the articles referenced therein).

Table 1: *Averages for Empathic Concern, the Principle of Care, and the Helping Behaviors*

Variable	Average
Empathic concern (scale 1–5)	3.97 (.72)
Principle of care (scale 1–5)	3.78 (.66)
Helping behavior	
1. Returned change	.47
2. Ahead in line	.86
3. Offered a seat	.42
4. Carried belongings	.44
5. Gave food or money to a homeless person	.63
6. Looked after plants, mail, or pets	.56
7. Lent an item to person not well-known	.39
8. Gave money to a charity	.78
9. Volunteered for a charity	.45
10. Donated blood	.15

Standard deviations in parentheses. The sample size is $n \approx 1{,}350$ (there are negligible differences in the sample size used for each variable depending upon respondents who have missing data for that variable).

Table 2: *Helping Behavior: Linear Probability Model Coefficients for Empathic Concern and the Principle of Care*

Helping behavior	Specification	Empathic Concern *B* (1)	Principle of Care *B* (2)	Model fit R^2 (3)
1. Returned change	(e)	.05 **	–	.010
	(pc)	–	.05 **	.011
	(epc)	.03	.04 *	.014
	(all)	.03 *	.02	.091
2. Ahead in line	(e)	.07 **	–	.043
	(pc)	–	.05 **	.024
	(epc)	.06 **	.02 *	.047
	(all)	.06 **	.02 *	.139
3. Offered a seat	(e)	.02	–	.001
	(pc)	–	.05 **	.011
	(epc)	-.01	.05 **	.011
	(all)	.01	.06 **	.146
4. Carried belongings	(e)	.06 **	–	.014
	(pc)	–	.07 **	.020
	(epc)	.03 *	.05 **	.024
	(all)	.06 **	.05 **	.107

(Table 2 continues)

Table 2 (continued)

Helping behavior	Specification	Empathic Concern *B* (1)	Principle of Care *B* (2)	Model fit R^2 (3)
5. Gave food or money to a homeless person	(e)	.09 **	–	.033
	(pc)	–	.08 **	.029
	(epc)	.06 **	.05 **	.041
	(all)	.06 **	.05 **	.112
6. Looked after plants, mail, or pets	(e)	.03 **	–	.004
	(pc)	–	.04 **	.008
	(epc)	.01	.04 *	.008
	(all)	.01	.02	.121
7. Lent an item to person not well-known	(e)	.03 *	–	.003
	(pc)	–	.06 **	.017
	(epc)	-.01	.07 **	.017
	(all)	.02	.07 **	.126
8. Gave money to a charity	(e)	.03 **	–	.007
	(pc)	–	.06 **	.023
	(epc)	.00	.06 **	.023
	(all)	- .01	.05 **	.225

(Table 2 continues)

Table 2 (continued)

Helping behavior	Specification	Empathic Concern B (1)	Principle of Care B (2)	Model fit R^2 (3)
9. Volunteered for a charity	(e)	.06**	–	.017
	(pc)	–	.11**	.049
	(epc)	.01	.10**	.049
	(all)	.01	.08**	.167
10. Donated blood	(e)	-.01	–	.000
	(pc)	–	.02*	.003
	(epc)	-.02	.03**	.006
	(all)	-.02	.03*	.091

Specification (e): empathic concern only.

(pc): principle of care only.

(epc): empathic concern and principle of care only.

(all): empathic concern, principle of care, and all additional controls.

In columns 1 and 2 the *B* coefficients are the change in probability of performing the helping behavior associated with a one standard deviation increase in the independent variable. Column 3 reports the regression R^2. For specifications (e), (pc), and (epc) $n \approx 1,350$ (there are negligible differences in the sample size depending upon respondents who have missing data). For specification (all) *n*s ≈ 1,300 (the smaller sample size is due to respondents who have missing data for the additional controls).

$^{*}p < .05$. $^{**}p < .01$.

Table 3: *Helping Behavior Composites: Linear Probability Model Coefficients*

	All help		Less abstract help		Abstract help	
Empathic concern	0.233	**	0.266	**	-0.025	
Principle of care	0.681	**	0.461	**	0.213	**
Protestant	0.649	**	0.409	*	0.237	*
Catholic	0.201		0.073		0.139	
Other	1.964	**	1.654	**	0.276	
Strong protestant	0.246		0.087		0.152	*
Strong catholic	0.136		0.037		0.090	
Strong other	-1.136		-0.914	*	-0.173	
Fundamentalist Protestant	-0.410	*	-0.342	*	-0.084	
Liberal Prot.	-0.206		-0.237		0.024	
Fundamentalist missing	-0.247		-0.115		-0.133	
Protestant at 16	-0.205		-0.267		0.081	
Catholic at 16	-0.071		-0.177		0.121	
Other at 16	-1.733	**	-1.799	**	0.045	
Democrat	0.499	**	0.317	*	0.187	**
Republican	0.419	*	0.284	*	0.149	*
Strong Democrat	-0.400		-0.219		-0.167	*
Strong Republican	-0.149		-0.189		0.028	
Income $10,$14K	0.341		0.229		0.089	

Income $15,$19K	-0.161		-0.326		0.154	
Income $20,$24K	0.367		0.143		0.220	
Income $25,$29K	-0.218		-0.374		0.176	
Income $30,$34K	0.335		0.129		0.218	
Income $35,$39K	0.610		0.132		0.488	**
Income $40,$49K	-0.088		-0.354		0.262	*
Income $50,$59K	0.195		-0.080		0.271	*
Income $60,$74K	0.526		0.132		0.393	**
Income $75,$89K	0.432		0.007		0.430	**
Income $90,$109K	0.255		-0.272		0.522	**
Income $110+	0.744	*	0.277		0.475	**
Income refused	-0.002		-0.155		0.155	
Income missing	-0.500		-0.675	*	0.143	
Change in financial situation	0.035		-0.015		0.052	
Less than high school	-0.793	**	-0.516	**	-0.278	**
Associate degree	0.619	**	0.386	*	0.232	**
Bachelor degree	0.381	*	0.113		0.252	**
Graduate	0.295		0.062		0.235	**
Occupational status father	0.000		0.000		0.001	
Father HS or Associate	-0.036		0.026		-0.071	
Father Bach. or Grad.	-0.113		-0.000		-0.127	
Mother HS or Associate	0.334	*	0.219		0.124	*

Mother Bach. or Grad.	0.768	*	0.491	*	0.304	**
OS Father missing	0.138		0.006		0.126	
Degree Father missing	-0.376		-0.195		-0.159	
Degree Mother missing	0.283		0.179		0.107	
Age 35-49	-0.210		-0.164		-0.035	
Age 50-64	-0.188		-0.183		0.007	
Age 65 and over	-0.953	**	-0.908	**	-0.010	
Married	-0.092		-0.040		-0.056	
Children	0.072		0.023		0.054	*
Single with kids	-0.251		-0.095		-0.160	
Female	-0.192		-0.313	**	0.117	*
White	0.314		0.303	*	-0.007	
Hispanic	0.056		0.072		-0.022	
Lives in south	0.146		0.078		0.081	
Size of town	0.001	**	0.001	**	0.000	
Size of town squared	-0.000	**	-0.000	**	-0.000	
Constant	4.277	**	3.710	**	0.536	**
Observations	1276		1276		1308	
Adjusted R-squared	0.216		0.183		0.181	

Coefficients are the change in probability of performing the helping behavior associated with a one standard deviation increase in the independent variable.

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

Appendix Tables

(not intended for publication)

Table A: *Detailed Description and Averages for the Stable and Situational Controls*

Variable	Average
Religious identity	
Protestant identification	.56
Catholic identification	.26
Other religious identification	.04
Protestant identity is strong	.25
Catholic identity is strong	.09
Other religious identity is strong	.02
Protestant belonging to a fundamentalist denomination	.27
Protestant belonging to a liberal denomination	.12
Fundamentalist / liberal indicator missing	.10
Raised Protestant	.57
Raised Catholic	.31
Raised with another religious identity	.04
Political identity	
Democrat	.34
Republican	.26
Strong Democrat	.14
Strong Republican	.10

(Table A continues)

Table A (continued)

Family income	
$10,000 – $14,999	.07
$15,000 – $19,999	.06
$20,000 – $24,999	.07
$25,000 – $29,999	.06
$30,000 – $34,999	.06
$35,000 – $39,999[a]	.05
$40,000 – $49,999	.08
$50,000 – $59,999	.08
$60,000 – $74,999	.07
$75,000 – $89,999	.07
$90,000 – $109,999	.04
$100,000 and over	.08
Refused to answer	.06
Did not know	.04
Financial situation getting worse (0), staying the same (1), getting better (2)	1.18 (.78)
Education	
Less than high school	.15
Associate's degree	.07
Bachelor's degree	.16
Graduate degree	.09

(Table A continues)

Table A (continued)

Socio-economic background	
Father's occupational prestige score (0 to 89)	33.92 (21.04)
Father's occupational prestige score	.22
Father's education	
High school or associate's degree	.33
Bachelor's or graduate degree	.13
Missing	.25
Mother's education	
High school or associate's degree	.49
Bachelor's or graduate degree	.11
Missing	.11
Age	
35 to 49	.29
50 to 64	.22
65 and over	.18
Married	.44
Number of children in the household	.50 (1.00)
Single parent with children	.11
Female	.53
White	.82
Hispanic	.07
Place of residence	.34
In the south	.34
Population (1,000s)	394 (1,314)

Standard deviations in parentheses. Standard deviations not listed for binary (0/1) variables.

[a] Median income among respondents answering the question (excluding the "don't know"s and refusals – ten percent of the sample) is $39,000.

Table B: *Helping Behavior: Probit Coefficients for Empathic Concern and the Principle of Care*

Helping behavior	Type of probit coefficient	Empathic concern *B*	Principle of care *B*
1. Returned change	(s – me)	.04 *	.03
	(s)	.09 *	.07
	(mv)	.13 **	.10
	(o)	.11 **	.05
2. Ahead in line	(s – me)	.05 **	.02 *
	(s)	.28 **	.13 *
	(mv)	.38 **	.22 **
	(o)	.21 **	.09 *
3. Offered a seat	(s – me)	.01	.06 **
	(s)	.04	.16 **
	(mv)	.04	.23 **
	(o)	.05	.17 **
4. Carried belongings	(s – me)	.07 **	.06 **
	(s)	.17 **	.14 **
	(mv)	.23 **	.19 **
	(o)	.18 **	.13 **

(Table B continues)

Table B (continued)

5. Gave food or money to homeless	(s – me)	.06 **	.05 **
	(s)	.17 **	.13 **
	(mv)	.24 **	.20 **
	(o)	.17 **	.15 **
6. Looked after plants, mail, or pets	(s – me)	.02	.03
	(s)	.04	.06
	(mv)	.04	.09
	(o)	.07	.01
7. Lent an item to person not well known	(s – me)	.02	.07 **
	(s)	.05	.20 **
	(mv)	.06	.28 **
	(o)	.06	.17 **
8. Gave money to a charity	(s – me)	-.01	.04 **
	(s)	-.04	.19 **
	(mv)	-.05	.30 **
	(o)	.00	.15 **
9. Volunteered for a charity	(s – me)	.01	.10 **
	(s)	.02	.24 **
	(mv)	.02	.38 **
	(o)	.03	.21 **

(Table B continues)

Table B (continued)

10. Donated blood	(s – me)	-.02	.03 *
	(s)	-.08	.12 *
	(mv)	-.13	.17 *
	(o)	-.08	.11 *

Type of probit coefficient

(s – me): Single-equation, marginal effect (directly comparable to Table 2).

(s): Single-equation probit coefficient (from the same model as coefficients (s – me) but not transformed into marginal effects).

(mv): Multivariate probit coefficient (directly comparable to coefficients (s)).

(o): Ordered probit coefficient (directly comparable to coefficients (s)).

All the specifications include empathic concern, principle of care, and all additional controls (hence, the same as specification (all) in Table 2). The single-equation marginal effect (s – me) coefficients can be compared directly with the linear probability coefficients in Table 2: both the (s – me) and linear probability coefficients are the increase in the probability of performing the helping behavior associated with a unit standard deviation increase in empathic concern or the principle of care.

The (s – me) coefficients are transformations of the single-equation probit (s) coefficients into marginal effects for comparison with Table 2 – both (s) and (s – me) coefficients come from the same probit model. However, the single-equation probit (s) coefficients cannot be interpreted directly as increases in the probability of performing the helping behavior. The single-equation

probit (s) coefficients must first be transformed into the single-equation marginal effect (s – me) coefficients and only the (s – me) coefficients can be interpreted as increases in the probability of performing the helping behavior.

Therefore, the way to use this table is to compare the (s – me) coefficients to Table 2's specification (all) coefficients, realize that the (s – me) and (s) coefficients are from the same single equation probit model, and then compare the (s) coefficients to the multivariate (mv) and ordered (o) probit coefficients to which we now turn.

The multivariate probit coefficients (mv) come from simultaneous estimation of all ten helping behaviors, allowing the error terms between all pairs of helping behaviors to be correlated. The multivariate probit coefficients are directly comparable to the single-equation probit coefficients (s). The ordered probit coefficients (o) come from a model where the dependent variable is coded: *not in the past year*, *once in the past year*, *at least 2 or 3 times in the past year*, *once a month or more*); except for returning change and donating blood where the top category is coded: *performed 2 or 3 times or more*. The ten ordered probit models are estimated separately (not simultaneously). The ordered probit coefficients are directly comparable to the single-equation probit coefficients (s) and the multivariate probit coefficients (mv). Sample sizes are exactly the same as the corresponding model in Table 2 (*n*s ≈ 1,300).

$^{*}p < .05$. $^{**}p < .01$.