Leo Montada
Hans Werner Bierhoff (Editors)

Altruism in Social Systems

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Prosocial Commitments in the Family: Situational, Personality, and Systemic Factors

Leo Montada, Manfred Schmitt, and Claudia Dalbert

Introduction

People spend most of their time in social systems: in families, with friends, in educational and work settings, in clubs, and so forth. Therefore, most of their behaviors, including prosocial activities, occur in social contexts that differ with regard to specific traditions, expectations, norms, possibilities, resources, problems, and restrictions.

Research on helping behavior in long-term social relationships is scarce. Even though the evidence from experimental research is impressive (Bierhoff, 1990; Staub, 1980), many questions remain open. The research reported in the present chapter focused on two of these questions: (1) Little is known about whether the variables affecting prosocial behavior in experimental settings are equally important in long-term social systems. For instance, does the phenomenon of diffusing among bystanders the responsibility for helping an anonymous victim hold in situations in which the person in need and the potential helpers know each other well? It is quite possible that the meaning and the significance of experimental factors change if the interacting individuals are friends or kin. (2) Experimental research on help toward a stranger does not tell us whether or not additional variables are important factors in help among members of a social group. Various characteristics of a social system and its individuals may affect the likelihood of help being provided in case of needs, for example, formal and informal norms, the quality of the relationship among the members of a system, mutual expectations, the status of the individuals involved, and so forth. Variables of this kind can hardly be manipulated in experimental studies.

Hence, two important goals of the present research were to investigate which of the variables that had been identified in experimental research as important factors of prosocial behavior could be generalized to long-term social systems, and which other predictor variables - if any - would be needed in addition. We chose the family as an example of social systems since intra-family solidarity and help are widespread phenomena (Bengtson, Olander, & Haddad, 1976; Coward, 1987). Specifically, we studied the phenomenon that aging parents will receive help mainly from their grown up children even if reasonable public services to support the elderly are available (e.g., Maeda, 1983; Piotrowski, 1977; Rosenmayr & Rosenmayr, 1978; Schütze, 1989; Thomas, 1987).

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Several questionnaire and interview studies had been conducted in the past to investigate the kind and amount of help given by adult children to their aging parents. Most of this research was primarily sociological and focused on demographic variables of the child as a potential helper [sex, age, marital status, occupational status, residence (rural versus urban), number of children and siblings] and on characteristics of the aged parent such as marital status, health, or the distance between residences (for reviews see, e.g., Lee, 1980; Rosenmayr & Rosenmayr, 1978; Schmitt & Gehle, Streib & Beck, 1980; 1983; Troll, 1971; Troll, Miller, & Atchley, 1979).

In addition to sociological variables, some studies have included psychological variables such as perceptions of filial responsibility from the children's (e.g., Schütze, 1989) and the parents' perspectives (e.g., Kivett & Atkinson, 1984; Seelbach & Sauer, 1977); family cohesion, quality of the relationship, or mutual love and affection between aging parents and their adult children (e.g., Bromberg, 1983; Cicerelli, 1986; Johnson, 1978); consensus among parents and children with regard to interests and values (e.g., Bengston et al., 1976; Hess & Waring, 1978); or mutual dependence and reciprocity (e.g., Braun, 1983; Shanas, 1967; Sussman, 1976; Thompson & Walker, 1964).

Specific prosocial acts are the focus of interest in basic experimental research. In contrast, correlational research on intergenerational help has focused on the explanation of more general and habitual behaviors. The causal structures of both types of helping behavior may differ. Possibly, however, findings from one kind of research can be generalized to the other. It is unfortunate, therefore, that evidence from basic experimental research on helping has largely been ignored by the scholars who have developed theoretical models for the explanation of filial support.

Our own approach tried to overcome this deficiency by integrating concepts from both research traditions into a multivariate framework. In the present research, amount of help was not measured in a global sense - as was the case in most of traditional family research - but by regarding the specific needs of the parents that were urgent at the time of assessment (meaning within a specified period of a few weeks). This made it possible to study both the intentions and the actual activities with respect to specific needs as well as to more generalized prosocial orientations.

For three reasons, the study reported in this chapter was restricted to mother-daughter dyads: (1) We assumed that women would be more able and willing than men to take part in a time-consuming longitudinal survey project lasting more than two years. (2) Past studies found that most intergenerational support occurs within the mother-daughter dyad (e.g., Brody, 1977; Houser, Berkman, & Bardsley, 1985; Sliwa, 1980). (3) Ensuring enough statistical power for testing possible (and likely) interactions between sex of child and sex of parent with the many independent variables of our theoretical model would have required a sample size that would have exceeded our resources by far.

We did not want to restrict our investigation to helping in a narrow sense - like material support or care. Rather, we started out from a broad concept of prosocial behavior of an adult daughter, that is, a daughter who was trying to meet the needs and desires she believed a mother might address to her - including, for instance, the need for contact via phone or mail, the desire to spend holidays and vacations together, the desire for mutual visits, the need for advice in difficult life situations, the need for support in case of a conflict with neighbors or kin, the desire for respecting one's own religious values and political attitudes, the need for comfort when a beloved one died, the need for having the daughter accept monetary help and advice, and so forth.

**Method**

**Research Strategy**

We were interested to learn whether prosocial activities concerning these kinds of recurrent needs depend more on characteristics of the situation as seems to be the case when help was given in a unique emergency (e.g., Latané & Darley, 1968, 1976), or whether characteristics of the individuals involved and their biographies as parts of a social system would play an important role.

The study reported here was designed to find out whether prosocial behavior in the family can be interpreted as being a decision based on the appraisal of those situational variables that are known from experimental studies to be relevant factors of helping, or whether personality traits, characteristics of the family, and habitual behavior are needed instead or in addition for the explanation of intrafamily help.

This question made it necessary to consider simultaneously a large number of potential - and possibly correlated - predictors from different classes of variables. Since such a simultaneous investigation can hardly be accomplished experimentally, we chose a multivariate correlational approach. All variables were assessed by questionnaires.

The predictor variables can be classified into six categories: (1) demographic characteristics; (2) psychological characteristics of the daughter-mother-relationship; (3) generalized dispositions of the daughter; (4) habitual prosocial behavior of the daughter toward her mother; (5) prosocial attitudes and personal prosocial norms; and (6) appraisals supposed to be relevant in decision making. The first three classes contain typical variables from family research. The last three categories represent factors of prosocial behavior that have been identified in basic experimental research on helping. These variables were related to specific needs, desires, and requests that a mother might address to an adult daughter.

Subjects were adult daughters. From a total of 34 needs and desires, they had to select those 5 they felt to be most urgent to their mothers at the time. The questionnaire items for measuring the predictor variables from Categories 4, 5, and 6 were related partly to all 34 needs/desires and partly to the 5 needs/desires that were selected individually. The two criterion variables (a) intention to act according to the needs and desires of the mother and (b) actual prosocial activity were related to the 5 selected needs or desires alone.
Variables, Measurements, and Hypotheses

List of Variables assessed

(1) Demographic Characteristics of the Daughter

(2) Psychological Characteristics of the Daughter-Mother Relationship
   (2a) Family Cohesion (in parent family)
   (2b) Control Exerted in (parent) Family
   (2c) Quality of Relationship (between mother and daughter)

(3) Generalized Dispositions of the Daughter
   (3a) Empathy
   (3b) Denial of Responsibility for the Elderly
   (3c) General Obligations Toward One's Own Parents

(4) Daughter's Dispositions Related to Specific Needs and Desires
   of Their Mothers
   (4a) Habitual Prosocial Behavior of Daughter Toward Her Mother
   (4b) General Attitudes to Prosocial Behavior of Daughters Toward
        Their Mothers' Needs and Desires
   (4c) Personal Norms of Complying With Specific Needs and Desires

(5) Cognitive Appraisals With Respect to Specific Needs and Desires
   (5a) Intensity of Need or Desire
   (5b) Mother's Impairment in Case of not Complying With Her
        Needs and Desires
   (5c) Legitimacy of Need or Desire
   (5d) Self-Infliction of Need
   (5e) Costs (in time, money, freedom, etc.) of Helping
   (5f) Ability and Opportunity to Provide Help
   (5g) Anticipated Guilt in Case of not Acting Prosocially
   (5h) Anticipated Disappointment of the Mother in Case of not
        Providing Help
   (5i) Anticipated Criticism From Friends in Case of not Providing Help

(6) Criterion Variables
   (6a) Intention to Act Prosocially
   (6b) Actual Prosocial Activities

(7) Evaluation of Own Behavior and Coping Variables

The findings presented in this chapter relate to the 21 variables listed in sections 2 to 6. Demographic variables (Category 1) and those of Category 7 will not be dealt with here. In the following section, the meaning of the variables listed above will be described in more detail. In addition, examples will be given of the exact wording of items used to measure them. Also, the sequence of measurement will be given and explained.

Wording of Questionnaire Items, Internal Consistencies, and Reasons for Including the Variables in the Study

All but the following three questionnaires were developed by the authors: Family Cohesion (2a), Control Exerted in Family (2b), and Quality of Relationship (2c). The first two were adopted from Engler, Schnee, and Hindere (1977), the third from Kreuzer and Montada (1983). Except for the empathy scale, which was found to be two-dimensional, all scales are homogeneous, and most of their internal consistency reliabilities exceed .80 (see Schmitt, Dalbert, & Montada, 1983).

Personality and Family System Characteristics (not assessed need-specifically)

(1) Demographic Characteristics of the daughter such as place of residence (urban vs. rural), age, education, occupation, marital status, number of children, number of siblings, income, distance between daughter's and mother's home, and so forth.

Demographic variables are usually assessed in sociological research on the family. Quite a few variables have been found to have direct or indirect effects on prosocial behavior (Atkinson, Kivett, & Campbell, 1986; Brody & Schoonover, 1986; Hanson, Sauer, & Seelbach, 1983; Lang & Brody, 1983; Matran, 1985; Stoller, 1983). Nevertheless, demographic variables will not be considered here because they explained only a small proportion of variance in helping behavior over and above the psychological constructs considered. Also, no substantial interactions between demographic and psychological variables were found in the present study. Yet, if psychological variables were not taken into account, some demographic variables had small but significant effects. In a multiple regression from prosocial behavior on all demographic variables, distance to mother's home, mother's age, daughter's age (which is correlated with mother's age), and daughter not having a job yielded significant positive effects (Conrad, 1985).

(2) Psychological Characteristics of the Daughter-Mother Relationship
   (2a) Family Cohesion (FamCoh) (Alpha = .88)

   Examples of items: (1) "We were all getting along very well with each other."
   (2) "In our family everybody had the same rights when decisions had to be
       made." [6-point rating scale with the poles perfectly true (1) and totally wrong
       (6)]
Family cohesion may be considered a systemic variable favoring prosocial behavior. There is research evidence, for instance, that more help is exchanged among members of the same social group than among members of different groups (Hornstein, 1976). High family cohesion may indicate the existence of an exclusive in-group. Support covaries with exclusiveness of an in-group (Gerard & Hoyt, 1974). Furthermore, high family cohesion provides favorable conditions for socializing prosocial behavior, since family cohesion develops on the basis of mutual support and positive emotional relations (Eron & Huesmann, 1984; Staub, 1980).

(2b) Control Exerted in Family (Control) (Alpha = .81)

Examples of items: (1) "As soon as a rule was laid down in our family, no exceptions were tolerated." (2) Keyed negatively: "There were only very few rules in our family that everybody had to obey." [6-point rating scale with the poles perfectly true (1) and totally wrong (6).]

A high amount of control indicates a climate of socialization that emphasizes rules and duties. Daughters who grew up under such conditions should behave according to the rules that were established in the parent family - if for no other reason than to avoid social disapproval.

(2c) Quality of Relationship (QualRel) (Alpha = .93)

Examples of items: (1) "I really love my mother." (2) Keyed negatively: "I have the impression that my mother rather dislikes me." [6-point rating scale with the poles perfectly true (1) and totally wrong (6).]

While family cohesion (FamCoh) refers to (past) conditions of the parent family, this scale addresses the present relationship between daughter and mother. Presumably, the quality of the relationship between two individuals is a powerful condition for their willingness to help each other. In experimental research, quality of the relationship has been operationalized in terms of how attractive or similar in attitudes and values the person in need of help is to the possible helper (see Bierhoff, 1990). In research on helping within families, quality of relationship has proved to be an important factor (Cicirelli, 1983, and in this volume; Kreuzer & Montada, 1983).

(3) Generalized Dispositions of the Daughter

(3a) Empathy (Alpha = .70)

Examples of items: (1) "I believe that I try harder than most everyone to understand the emotions of other people." (2) Keyed negatively: "I rarely feel affected by the problems and experiences of others." [6-point rating scale with the poles perfectly true (1) and totally wrong (6).]

It has been argued that empathy plays an important role in prosocial behavior (Eisenberg & Miller, 1987; Hoffman, 1979, 1982). In experimental research, empathy has been induced in various ways: by making subjects believe that they are similar in attitudes and values to the person in need of help (Krebs, 1975), by role playing (Staub, 1971), or by asking the subject to imagine the emotions of the needy (Sotland, 1969). In several studies, these procedures increased the willingness to help. The items of our empathy scale were adopted from existing empathy scales. Their selection was based on the face validity ratings of experts (Schmitt, 1982).

(3b) Denial of Responsibility for the Elderly (DenResp) (Alpha = .81).

Examples of items: (1) "Old people make their own fate, too." (2) "There is really no reason why children should take care of their aged parents since public institutions are much better at doing this." [6-point rating scale with the poles perfectly true (1) and totally wrong (6).]

Each of the above sample items represents one of two subscales that were suggested by factor analyses: (1) denial of needs and perception of needs as being self-inflicted, and (2) attribution of responsibility to institutions and society. The analyses reported in the present chapter only used scores that were aggregated across both subscales.

In the literature on prosocial behavior, the disposition to accept responsibility has been conceptualized in two different ways: as a norm of social responsibility (e.g., Berkowitz & Daniels, 1963) and as the tendency to deny responsibility (Schwartz, 1968). Denial of responsibility has been found to predict - negatively - prosocial behavior in experimental situations (Schwartz, 1977; Schwartz & Clausen, 1970; Zuckerman & Reis, 1978). The present scales are based on Schwartz's concept yet unlike his nonspecific scale, denial of responsibility specifically relates to needs of the elderly in our scales.

(3c) General Obligations Toward One's Own Parents (GenOh) (Alpha = .87)

Examples of items: (1) "I go a long way to assure a good relationship with my mother." (2) "A lot of what I am doing for my mother today is done out of gratitude." [6-point rating scale with the poles perfectly true (1) and totally wrong (6).]

Prosocial activities may follow a norm of social responsibility. However, they may also indicate a norm of reciprocity (Gouldner, 1960; Greenberg, 1976), and they may serve utilitarian goals like ensuring a legacy. Factor analyses suggest two homogeneous subscales: (1) one subscale to measure obligations like gratitude and reciprocity, a norm that was found in previous experimental research to predict altruistic behavior (Berkowitz & Daniels, 1964; Goranson & Berkowitz, 1966); (2) a
second subscale to measure utilitarian orientations, that is, the degree to which egotistical goals are pursued. The sample items belong to the first scale.

Variables That Relate Specifically to the Needs or Desires of the Mother

The items to measure the following variables were formulated alike for all needs or desires. The examples chosen (and italicized) illustrate the kind of needs included in the entire list of 34 needs. Remember that from this list, each subject selected those five needs or desires of her mother that she considered to be most urgent at the time. Hence, each of the following variables was measured by five "parallel" items. Again, items had to be answered on 6-point rating scales.

(4) Daughters' Dispositions Related to Specific Needs and Desires of Their Mothers

(4a) Habitual Prosocial Behavior of Daughter Toward Her Mother (HabHelp)
Example of items: "In the past - meaning up now - I visited my mother ..." [6-point rating scale with the poles frequently (1) and never (6)].

This variable represents the extent of prosocial activities of the daughter in the past with respect to needs or desires of her mother. Behavioral decisions do not only depend on attitudes, norms, expected consequences of one's own behavior, and the value of these consequences. Given a certain amount of stability in behavior across time, it might be useful to consider previous behavioral decisions in similar situations for the prediction of future behavior as well (Bentler & Specskart, 1979; Harris, 1972). Stability in behavior can be expected from different theoretical perspectives. Uranowitz (1975), for instance, refers to Bem's (1972b) theory of self-perception: People utilize personality traits when they explain their behavior, especially if no external reasons are salient; a self-concept developed on the basis of one's past behavior - to avoid inconsistencies - motivates similarly behavior in the future.

(4b) General Attitudes to Prosocial Behavior of Daughters Toward Their Mothers' Needs and Desires (AttGen)
Example of items: "It is perfectly alright (1) ... totally wrong (6)] for an adult daughter to spend holidays with her mother."

A considerable number of studies have investigated attitudes toward the behavior in question as a predictor of behavioral intentions and behavior (e.g., Ajzen & Fishbein, 1980; Benninghaus, 1976). In the realm of altruism, intentions to act and actual behavior were successfully regressed on attitudes in some studies (Pomazal & Jaccard, 1976; Schwartz & Tessler, 1972; Zuckerman & Reis, 1978) but not in others (Schwartz, 1973).

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(4c) Personal Norms to Act According to the Needs and Desires of One's Own Mother (PerNorm)
Example of items: "On principle, I feel [very much obligated (1) ... not at all obligated (6)] to cut back my private and professional activities to be able to live close to my mother - if that is what she wants."

This variable was adopted from Schwartz (e.g., 1977) who has suggested the term personal norms to denote obligations for a specific commitment. Personal norms may correspond to social norms but not necessarily. The present concept of personal norms differs from the concept of general values and moral principles in that personal norms relate to a specific person in a specific situation of need. There is a huge body of research evidencing that prosocial behavior depends on personal norms in this sense (e.g., Pomazal & Jaccard, 1976; Schwartz & Tessler, 1972; Zuckerman & Reis, 1978; in the family context: Cicirelli, 1983; Schmitt, Dalbert, & Montada, 1986).

(5) Cognitive Appraisals With Respect to Specific Needs and Desires

(5a) Intensity of Needs or Desires (Intens)
Example of items: "The way I see it, my mother's desire that I spend holidays with her is currently ..." [6-point rating scale with the poles very strong (1) and not strong at all (6)].

This variable will be explained together with the following.

(5b) Mother's Impairment in Case of not Complying With Her Needs and Desires (Impair)
Example of items: "How much would your mother suffer if you did not comply with her desire that you get married (instead of just living together with your friend)?" [6-point rating scale with the poles very much (1) and not at all (6)].

There is evidence from experimental research indicating that the willingness to help depends on how negative the consequences are that people anticipate in case of nonhelp (see Bierhoff, 1990). Presumably, potential helpers compare their own costs when granting help to the costs of the needy person if no help is provided (Clark, 1976; Piliavin, Piliavin, & Rodin, 1975). We do not only anticipate linear relations between the anticipated costs of the needy and the help granted to him or her, there may also be curvilinear ones: With growing intensity of a need or the impairment in case of no help, the willingness to help may decrease for several reasons: (1) Strong empathic distress (Batson would speak of personal distress in contrast to empathic concern; see Batson, Shaw, & Slingsby, in this volume) may interfere with competent helping, or it may motivate the witness to leave the situation in order to recover from distress.
The cost of helping is known to be one of the most important predictors of prosocial behavior (for an overview see Bierhoff, 1990). Specifically, costs in terms of interference with professional obligations and personal interests reduce altruism in the family (Lang & Brody, 1983). However, help and support in the family are sometimes provided even when costs are high (Bruder, Klusmann, Lauter, & Lüders, 1979; Stoller, 1985). Whether or not and to what extent anticipated costs will be outweighed by sympathy and affection, or by personal norms, remains to be investigated.

(5f) Ability and Opportunity to Provide Help (AbOpp)

Example of items: "My abilities and opportunities to comply with my mother's desire to care for her during a temporary illness are ..." [6-point rating scale with the poles very good (1) and very bad (6)].

Obviously, personal abilities and opportunities are prerequisites for prosocial activities. Experimentally, this has been demonstrated by Midlarsky (1971), for example. Self-assertiveness may be considered a special kind of competence (see Wilson, 1976). Kuhl (1986) has found this personality variable to predict whether someone intervenes against authorities or majorities for the benefit of a person in need, that is, in cases in which the specific kind of help requires moral courage. Huston et al. (1981) have found that the majority of helpers who intervened in an ongoing crime had special skills and trainings. In the case of filial responsibility, perceived abilities have been found to be among the variables that predicted support (Clark & Rakowski, 1983; Kreuzer & Montada, 1983).

(5g) Anticipated Guilt in Case of Not Acting Prosocially (AntGuilt)

Example of items: "If I do not comply with my mother's desire that I help her with heavy chores (e.g., cleaning the house) I would have ..." [6-point rating scale with the poles an extremely bad conscience (1) and no bad conscience at all (6)].

Costs are not only caused by prosocial activities. There might also be costs if the subject does not act prosocially. Three kinds of such costs were considered in the present study: (1) Guilt feelings are a consequence of neglecting personal norms, whereas (2) disappointment of one's own mother and (3) disapproval among friends indicate that social norms were violated.

Tobey-Klass (1978) and Rosenthal et al. (1981) have summarized research evidence showing that feelings of guilt increase the likelihood of helping. In their theory of reasoned action, Ajzen and Fishbein (1980) have emphasized the important role normative expectations of significant others play besides attitudes in making behavioral decisions. The motivation to comply with these expectations may indicate the significance of a person whose expectations are considered.

(5h) Anticipated Disappointment of the Mother in Case of Not Providing Help (AntDisap)

Example of items: "If I do not comply with my mother's desire that I accept financial aid from her, she will be ..." [6-point rating scale with the poles extremely disappointed (1) and not disappointed at all (6)].
(5) Anticipated Criticism From Friends in Case of Not Providing Help (AntCrit)
Example of items: "If I do not comply with my mother's desire that I tolerate attitudes and behaviors of her that I don't understand, most of my best friends will ..." [6-point rating scale with the poles approve of my behavior very much (1) and disapprove of my behavior very much (6)].

(6) Criterion Variables

(6a) Intention to Act Prosocially (Int)
Example of items: "I intend to comply [(fully (1) ... not at all (6)] with the desire of my mother to take her into my home (with separate households)." (Subjects were instructed to answer these items for the period of the following weeks.)

In line with Fishbein and Ajzen's (1975) model, various studies have found intention to be the most powerful predictor of behavior. Based on this evidence, intentions instead of actions have often been chosen as criteria. Yet in every study known to us, intentions and actions correlated less than perfectly with each other, sometimes much less. Therefore, it should be quite possible to find variables that explain the variance of actual behavior in addition to intentions. In the data analyses reported below, intentions were used both as a criterion variable and as a predictor of actual behavior.

(6b) Actual Prosocial Activities (Help)
Example of items: "I complied (entirely (1) ... not at all (6)) with my mother's desire that I visit her regularly." (Subjects were advised to refer to the time period since they had been asked to report their intention to help (a period of about three weeks)).

(7) Evaluation of Own Behavior and Coping Variables

Self-reported behavior (Help) was the ultimate criterion variable focused on in this chapter. It should be mentioned, however, that additional variables were included in the study: If a subject reported to have helped, she was asked to indicate the costs of her behavior and the extent to which she believed she had achieved what she wanted to achieve. Furthermore, emotional reactions to her own behavior were assessed (e.g., pride, shame, guilt). Moreover, subjects were asked to report on the emotional reactions of their mothers (e.g., gratitude, anger, disappointment). Finally, various strategies of coping with discrepancies between personal norms and actual behavior and with feelings of guilt were measured. These strategies included, for instance, intentions to act in line with one's own personal norms in the future or to deny one's own responsibility for the mother retrospectively.

Construction of Scales and Estimation of Regression Parameters

The variables described above were selected to investigate whether prosocial behavior in the family depends primarily on specific appraisals of the situation and the needs of others (variables from Group 6), or whether habitual prosocial behavior, dispositional variables (from Groups 3 and 5), and systemic variables (from Group 2) have to be taken into account as well.

To answer this question, all variables from Groups 2 to 5 were entered as predictors of prosocial behavior (Help) into a multiple regression analysis.

The measures for the systemic variables (Group 2) and the trait-like dispositions (Group 3) were constructed according to traditional psychometric methods (factor analysis, item-total correlation, internal consistency analysis) to ensure that they were homogeneous and reliable (Schmitt, Dalbert, & Montada, 1983). All items had to be answered on 6-point rating scales (see above). Scales scores were computed as mean item scores.

The items pertaining to the constructs of Groups 4, 5, and 6 were formulated in such a way that they could be related by the subject specifically to the 5 needs she had selected out of 34. All items had to be answered on 6-point rating scales (see above). To improve reliability, the five need-specific items pertaining to the same construct were aggregated into a scale score. For instance, Help was measured as the mean amount of help a subject had reported with regard to the five needs of her mother she had selected. This procedure was problematic since different subjects selected different needs. Therefore, the size of intrasubjective differences between items (needs) varies individually. Despite these Subject x Item interactions, a substantial gain in reliability and predictive validity was achieved by aggregation (Schmitt, Dalbert, & Montada, 1985).

Although this chapter primarily deals with the relative weights of different kinds of psychological variables as predictors of help, we also examined the question whether the predictors of help had stable weights across all needs, or whether there were need-specific patterns of relations among the variables (see Section 8). Of course, this question could not be investigated by aggregating items (needs) to form a scale score.

The effect sizes of different categories of predictors on the criterion variable were estimated via multiple regression from the two criterion variables Int (intentions to act prosocially) and Help (actual prosocial activities) on the 22 (or 21, respectively) predictors described above: the independent contribution of every predictor to the variance of the criteria explained was determined by partialing out all other variables.

Note however, that an insignificant partial effect of a predictor does not necessarily imply that it is irrelevant. First, such a variable could be an antecedent to one of the significant predictors and thus exert an indirect effect on the criterion. In
such a case, a path model would be more appropriate for formally conceptualizing
the relationship among the variables (see Schmitt, Dalbert, & Montada, 1986).
Second, the linear additive model might be wrong in the sense that predictors exert
interactive effects on the criterion. This possibility of moderating effects among the
predictor variables was tested by entering product variables as predictors into the
regression model (see Cohen, 1978; Dalbert, & Schmitt, 1986).

Sample and Data Collection

A sample of 673 adult daughters whose mothers were still alive was drawn
randomly from a population stratified according to three factors: (a) urban or rural
residence (middle-sized German city vs. rural community in the vicinity of the
city), (b) age (three cohorts: born 1957 - 1962, 1947 - 1952, 1929 - 1934), (c)
marital status (single, married, living with a partner). Due to different compliance
rates in the 12 stratified subpopulations, the corresponding subsamples differed
in size. In particular, the oldest cohort consisted of only 74 subjects and was thus much
smaller than the two younger cohorts. Partly, this was due to the fact that the
mothers of many daughters in the oldest cohort had died already. With regard to
educational level, the sample was somewhat above average: elementary school (n =
252), secondary school (n = 183), and high school diploma or university degree (n =
237); missing data (n = 1). Note that these criteria were derived from the German
schooling system.

Data were collected from September 1982 to January 1983 on six occasions of
measurement at 3 to 4 weeks intervals. This procedure was necessary since it would
have been impossible to assess the many variables at one occasion of measurement
only. Furthermore, the process of measurement had to be ordered and spaced in a
way that presumably corresponded to the "natural" process of forming a decision to
comply or not to comply with the kind of needs specified.

Validity of the Daughter's Self-Reports

All variables were assessed via self-report measures. Results may therefore be
biased due to social desirability or the tendency to avoid inconsistent answers. Social
desirability was measured by a German version (Lück & Timaeus, 1969) of the
Crown-Marlowe Scale (CM) and treated as a control variable by always entering it
first in the stepwise multiple regression analyses. CM exerted no direct effects on the
two criteria Int and Help, and the sum of all of its indirect effects remained small (.14 on Help and .15 on Int). Consequently, the pattern of relations among the
variables was not affected largely by the tendency of subjects to answer the
questionnaire items in a socially desirable manner.

The second possible source of biased results, that is, giving consistent but wrong
answers to related questions, can be ruled out for reasons of limited memory: Both
the large number of questions and the interval of at least three weeks between two
adjacent times of measurement made it unlikely that subjects remembered their
answers. This claim is supported indirectly by the fact that the two criteria Int and
Help differed substantially regarding their relations to the various predictors
considered (see below).

To test the validity of the self-report measures more directly, some answers of
some daughters (n = 96) were compared with the answers their mothers had given to
the same questions. Mothers were asked to rate the intensity of their own needs
(Intens), their impairment in case of no help (Impair), the amount of help given by
her daughter in general (corresponding to HabHelp), and their satisfaction or
dissatisfaction with their daughters' behavior (Schrameier, 1985). Furthermore,
mothers were asked to indicate specifically the amount of help they had received
from their daughters with regard to the five needs selected by the latter (Help).
Mothers were instructed to refer to the same period of time the daughters did when
answering this most important question. In general, mothers rated their daughters'
prosocial behavior more positively than the daughters did themselves. Despite the
restricted range of mothers' responses, the average correlation between Help (rated
by the mother) and Help (self-rated by the daughter) with respect to the single (not
aggregated) needs amounted to a remarkable .58. Consequently, daughters' self-
reports on their prosocial behavior seem to reflect the reality as it was perceived by
their mothers quite well.

Results

Prediction of the Criterion Help

A multiple regression from Help on all variables belonging to Groups 2, 3, 4, and 5
evidenced that predictors from each of these groups exerted significant partial
effects on the criterion (see Table 1).

From the system variables (Group 2), quality of relationship (QualRel) was the
most important and the only significant predictor of Help; from the dispositional
variables (Group 3), denial of responsibility in the sense of perceiving needs as
being self-inflicted (DenResp, Subscale 1) exerted a significant effect on the
criterion. Moreover, habitual prosocial behavior (HabHelp) contributed
significantly and independently from other predictors to the explanation of the
criterion variable. From the fourth group of variables, general attitudes to prosocial
behavior of daughters toward their mothers' needs and desires (AttGen) was
significant. Finally, among the cognitions (Group 5), ability and opportunity to
provide help (AbÖpp) was the most important and only significant predictor of
Help.
In accord with the theory of reasoned action (e.g., Ajzen & Fishbein, 1980), Int was the most powerful predictor. However, other variables contribute significantly to the prediction of Help over and above Int: habitual prosocial behavior (HabHelp), perceived ability and opportunity to provide help (AbOpp), and family cohesion in the parent family (FamCoh). This latter variable "replaces" quality of relationship between daughter and mother (QualRel) from Table 1. FamCoh and QualRel share psychological meaning and correlated significantly (see Section 9). After the inclusion of Int into the set of possible predictors of Help, denial of responsibility (DenResp) and general attitudes to prosocial behavior of daughters toward their mothers' needs and desires (attiGen) were no longer significant. Note, however, that the inclusion of Int into the regression model led to a modest increase of only 6% in explained variance of Help (compare the final $R^2$ from Tables 1 and 2).

### Prediction of Intention to Act Prosocially (Int)

As can be seen from the coefficients presented in Table 3, the variables that predict the intention to act prosocially (Int) differed remarkably from those that predict Help. Whereas Help depended to a large extent on systemic variables, habitual prosocial commitments in the family

#### Table 3: Multiple Regression From Intentions to Help (Int) on All Predictors

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$R^2$</th>
<th>$r$</th>
<th>$b$</th>
<th>beta</th>
<th>$\text{Var}(b)$</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>LegitDes</td>
<td>.45</td>
<td>.67</td>
<td>.28</td>
<td>.28</td>
<td>.04</td>
<td>56.2</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>PerNorm</td>
<td>.54</td>
<td>.59</td>
<td>.11</td>
<td>.16</td>
<td>.03</td>
<td>16.7</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>AbOpp</td>
<td>.59</td>
<td>.43</td>
<td>.17</td>
<td>.17</td>
<td>.03</td>
<td>34.0</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>AntGuilt</td>
<td>.62</td>
<td>.57</td>
<td>.16</td>
<td>.20</td>
<td>.03</td>
<td>38.2</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>AttiGen</td>
<td>.63</td>
<td>.65</td>
<td>.17</td>
<td>.20</td>
<td>.04</td>
<td>23.1</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>SelfInf</td>
<td>.64</td>
<td>.43</td>
<td>.07</td>
<td>-.11</td>
<td>.02</td>
<td>12.6</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>GenOb</td>
<td>.65</td>
<td>.43</td>
<td>.08</td>
<td>.07</td>
<td>.03</td>
<td>10.2</td>
<td>1/522.01</td>
<td></td>
</tr>
<tr>
<td>(intercept)</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- LegitDes = Legitimacy of a need or desire
- PerNorm = Personal norms to act according to the needs and desires of one's own mother
- AbOpp = Ability and opportunity to provide help
- AntGuilt = Anticipated guilt in case of not acting prosocially
- AttiGen = General attitudes to prosocial behavior of daughters toward their mothers' needs and desires
- SelfInf = Self-infliction of needs
- GenOb = General obligations toward one's own parents, Subscale I (gratitude and reciprocity)
social commitment, and generalized dispositions (cf., Table 1). Int depended primarily on variables from Group 5, that is, cognitive appraisals and personal norms.

Aside from general attitudes to prosocial behavior of daughters toward their mothers' needs and desires (AttGen) and personal norms to act according to the needs and desires of one's own mother (PerNorm), the following variables contributed independently to the prediction of the intention to act prosocially: legitimacy of a need or desire (LegitDes), anticipated guilt in case of not acting prosocially (AntGuilt), ability and opportunity to provide help (AbOpp), and self-infliction of needs (SelfInf). Note that the regression weight of SelfInf was negative, that is, the more a need is perceived to be self-inflicted by the mother, the less willing the daughter will be to provide help. Finally, general obligations (gratitude and reciprocity) toward one's own parents (GenOb) had a small but very significant impact on the intention to act prosocially.

**Generalizability of the Results**

Next, we investigated whether the results reported in the last section were invariant across subsamples of subjects and across different kinds of needs. To answer the first question, it was necessary to split the total sample in a theoretically meaningful way, for instance, according to age, marital status, professional status, location of residence, religion, and so forth. Age, which was confounded with birth cohort in the present design, was selected as the most interesting moderator. To avoid confounding it with the kind of needs dealt with, we restricted our analyses to those needs that were selected by subjects from all three cohorts. Technically, generalizability across age was tested by use of dummy variables that represented the cohorts. These dummy variables and their algebraic products with the predictor variables (interaction terms) were included in stepwise multiple regression analyses (see Gujarati, 1970a, b). Significant interaction terms would imply that the regression weights of the predictors vary across the different cohorts. Of course, such a result would be valid only for the given category of needs.

The same methodology was utilized to test whether predictors and criteria were related differently to each other depending on the kind of need at issue. Technically, groups of similar needs were represented by dummy variables. Again, these dummy variables and their products with the predictors were included in stepwise multiple regression analyses. A significant interaction term would mean that the weight of the predictor varies as a function of the kind of need addressed.

A great number of these tests resulted in very few significant interactions - just a few more than were expected by chance alone. Before replicating these few interactions in further studies, they should not yet be taken as facts. Hence, the regression models presented in Tables 1, 2, and 3 should be considered as largely invariant across subsamples and needs.

Since the study was longitudinal, a majority of the sample answered the questionnaires three times within two years. Data from the second and third wave were used to replicate the results from the regression analyses reported above. By and large, the same patterns of relationships were found among the predictors and the two criteria. Consequently, the results reported in Tables 1, 2, and 3 were not only stable across age and the kinds of needs dealt with; they also did not change much across time.

**Discussion**

For obvious reasons, experimental studies on prosocial behavior are limited to a few independent (experimental) factors, three or four at most. When significant main or interaction effects are found, it is questionable whether they would remain stable if further independent variables were included in a larger design. The stability of effects can be tested more easily in multivariate correlational studies such as the present one. They allow an investigation of which variables out of a large set of potential predictors contribute independently to the explained variance of the criterion variable. Furthermore, multivariate approaches are necessary to discover interactions between predictors (i.e., moderator effects). Finally, multivariate correlational studies permit the estimation of indirect (mediated) effects on the basis of theoretical path models.

Some effects found in past experimental research on prosocial behavior could not be replicated in the present multivariate correlational study. For several reasons, this cannot be interpreted as disproof in a strict sense, however: (1) It is open to question how similar the samples are to each other, whether prosocial activities belong to the same category, whether the contexts of the studies are comparable, and whether the operationalizations of the independent variables are equivalent. (2) Possibly, a nonsignificant partial effect of a variable is due to the inclusion of another predictor that means essentially the same even though it is labeled differently. Interestingly, several variables that do not contribute partially to the prediction of Help have significant zero-order correlations with this criterion, for example, Cost \( r = -.22 \), PerNorm \( r = .42 \), and LegitDes \( r = .42 \).

It has to be kept in mind that 21 variables (plus CM as a control variable) are considered as possible predictors of the two criteria Int and Help. Many of these potential predictors are correlated, some of them substantially. Theoretically, this may be due to overlapping meanings, a possibility that has to be taken into consideration before concluding that a predictor is important or not. Let us take family cohesion (FamCoh) and quality of relationship between daughter and mother (QualRel) as an example. The correlation between these two system variables amounts to \( r = .54 \). A closer look at the items of the two corresponding scales reveals similarities in content and psychological meaning. Furthermore, there are theoretical reasons for expecting a correlation between cohesion (in the parent family) and the (present) quality of the relationship between daughter and mother. Cohesion in a family implies strong emotional ties among its members. Given that these ties are both positive and stable, a positive relationship between mother and daughter is to be expected. Interestingly, if QualRel is excluded from the regression
analyses reported in Table 1, FamCoh takes its place with a significant and very similar weight. This means that both variables not only share large parts of their variances with each other but that they most likely also share very similar parts of their variances with the other predictors and the criterion variable.

Such replacements in regression models may be very helpful for theoretical interpretations of the results. In order to interpret the nonsignificance of a predictor theoretically, it has to be determined whether or not its nonsignificance results from including other predictors, and which of the other predictors included actually attenuates its effect size.

Let us consider a second example. When the predictor AttiGen is eliminated from the regression equation depicted in Table 1, its place is taken - at a similar beta weight of .15 instead of .20 - by LegitDes. As can be expected from this finding, the correlation between AttiGen and LegitDes is high (.82), which means that the needs or desires of a mother are considered legitimate as long as her daughter's attitudes are positive.

Tables 1 and 2 suggest that a few variables are sufficient for the prediction of prosocial behavior and that the majority of the variables included in the regression analyses could in fact be dispensed with. If one is merely interested in the prediction of prosocial behavior, this would be true. However, if one wants to understand the processes that lead to prosocial behavior, an extended model of the relations between the variables might be more appropriate. Therefore, we have tested path models based on the assumption that an immanent ordering of the variables exists such that some are proximate and direct predictors of prosocial behavior while others are more distant in the sense that they affect the criterion only indirectly via the proximal factors (see Schmitt, Dalbert, & Montada, 1986).

After these general remarks, let us now turn more specifically to the most important findings of the present study.

(1) It should be noted that an accurate prediction of prosocial behavior of daughters toward their mothers requires the consideration of systemic variables as well as personality traits and need-specific appraisals.

(2) Generalized empathy does not contribute to the prediction of the criterion Help. This contradicts the predominant motivating role most writers attribute to empathy (Batson & Coke, 1981; Eisenberg & Miller, 1987; Hoffman, 1979, 1982). In most empirical studies, empathy was induced through specific instructions whereas in the present study it is conceptualized as a generalized trait. Since we neither assess empathy with one's own mother nor need-specific empathy in specific situations, the missing significance does not prove that empathy does not play a role. However, this may be stated for empathy assessed as a generalized trait.

(3) In contrast to our expectations, most of the cognitive appraisals dealing with specific needs in specific situations and the consequences of acting or not acting according to the needs and desires of one's own mother (these are variables of Category 5 like legitimacy of need or desire, costs of helping, anticipated guilt) do not contribute independently to the prediction of actual prosocial activities (Help).

Among the variables of this category, only ability and opportunity to provide help (AbOpp) is significant. This result is rather unexpected considering the results of experimental research that have evidenced the impact of such situational variables. Moreover, this finding does not seem to correspond to the basic postulate of theories of reasoned action (Lück, 1988) that claim that behavioral decisions largely depend on the expected consequences. In the present study, neither negative consequences of not acting prosocially (feelings of guilt, disappointment of one's own mother, critique by friends) nor negative consequences of acting prosocially (anticipated costs) are necessary to predict the criterion (Help). This is rather surprising since costs have often been found to be a powerful negative predictor of prosocial behavior in the laboratory and in field experiments. One might object that, due to social desirability, statements pertaining to costs are not valid in this study; yet social desirability is controlled for.

(4) Equally surprising, personal norms to act according to the needs and desires of one's own mother (PersNorm) do not contribute significantly to the explanation of actual prosocial commitment. Does this mean that moral norms and feelings of responsibility are unimportant when deciding for or against prosocial behavior in family systems? Even though this must not necessarily be true for each individual, of course, it seems to be the case within the sample as a whole, that is, for the average individual. In this study, moral obligations do not turn out to be important among the variables considered as might be expected from everyday psychology. To be sure, our study is not the only one that has found relatively small unique effects of personal norms on helping. Similar results have been reported, for example, by Kuhl (1986). Interestingly, we detect a significant and relatively strong interaction effect between personal norms (PerNorm) and costs of help (Cost). The more costs subjects anticipate in case of helping, the more influential personal norms become, whereas "low cost helping" does not depend on felt obligations at all (see Schmitt, Montada, & Dalbert, 1986).

(5) Justice-related appraisals (legitimacy of need or desire, self-infliction of needs) and the norm of reciprocity (included in this variable is felt general obligation toward one's own parent) do not contribute significantly to the criterion Help. In other contexts (see Montada & Schneider, in this volume) as well as in experimental studies (see Meyer & Mulherin, 1980) perceived injustice of needs and the attribution of responsibility for their existence are predictors of the readiness to prosocial commitments. Whereas all three variables contribute to the prediction of intentions to act prosocially (Int) (see Table 3) they do not contribute to the prediction of Help.

(6) Quality of relationship between daughter and mother (QualRel) turns out to be an important predictor of help. This variable does not represent need-specific arguments for the decision to help but mutual affection between a mother and her daughter. It may be conceived of as a general motivational basis for prosocial behavior without regarding specific situational factors. Probably, within a warm and loving relationship between a daughter and her mother, the costs of prosocial behavior will subjectively be perceived as being low. The better the relationship, the
less demanding prosocial activities will be experienced to be. Actually, QualRel and Cost correlate negatively.

(7) In line with findings from other research (Bentler & Speckart, 1979), habitual prosocial behavior (HabHelp) turns out to be a significant predictor of actual prosocial behavior (Help). At least two explanations for this effect seem plausible: (a) Habitual prosocial behavior may lead to the expectation of the recipient that it will continue in the future; this expectation may in turn motivate to continue to help. Hence, habitual behavior may be normative in itself, since changes would have to be explained or justified. Our data support this hypothesis: HabHelp correlates positively with PerNorm ($r = .57$) as well as with AntGuilt ($r = .42$). (b) Habitual prosocial behavior indicates that abilities and opportunities to help are given unless large-scale changes occur, for example, changes in health or in marital or occupational status. According to Sherrod and Downs (1974), the self-concept of being competent is based largely on habitual behavior. Presumably, such a self-concept will generalize across new yet similar situations and thus will facilitate helping behavior in situations that may not have been experienced before. In our study, the correlation between HabHelp and AbOpp amounts to $r = .32$.

(8) General attitudes to prosocial behavior of daughters toward their mothers' needs and desires (AttGen) is an important predictor of the amount of help actually provided. Subjects with high scores on AttGen feel that it is appropriate in general for daughters to help their mothers in case of specific needs. This effect is consistent with Fishbein and Ajzen's model of the role of attitudes in actions (e.g., Ajzen & Fishbein, 1980), even though our operationalization is quite different.

(9) Denial of responsibility (DenResp) contributes independently to the prediction of prosocial behavior. This relationship is in accordance with Schwartz's (1977) model.

(10) From an action-theoretical perspective, it is important to note that variables representing arguments for a reasonable decision in a specific situation are much less important for the prediction of actual prosocial behavior (Help) than systemic variables (QualRel), general dispositions (DenResp), general attitudes (AttGen), and habitual prosocial behavior (HabHelp). The former are important, however, to predict intentions to act (Int). In addition to ability and opportunity to provide help (AbOpp), which is equally important for the prediction of behavior, the following three need-related cognitions exert independent effects on the intention to act prosocially toward one's own mother: legitimacy of a need or desire (LegitDes), anticipated guilt in case of not acting prosocially (AntGuilt), and self-infliction of needs (SelfInf). Furthermore, specific and general norms are important for the prediction of intentions (Int) but not for the prediction of behavior (Help). Both personal norms to act according to needs and desires (PerNorm) and general obligations toward one's own parents (gratitude and reciprocity; GenOb) are significant predictors of the intention to help but not of the amount of help actually provided.

Thus, intentions to act prosocially (Int) and actual prosocial behaviors (Help) have different sets of direct predictors even though intention is the best direct predictor of behavior. Consequently, predictors of intention affect behavior indirectly to some extent. It should be noted, however, that ignoring intention does not lead to a substantial loss of accuracy in the prediction of behavior (the proportion of explained variance drops only from 47% to 41%). Obviously, intention as a predictor of behavior can be compensated to a large extent by other predictors.

In summary, it can be stated that intention (Int) depends a lot more on specific perceptions, appraisals, expectations, and normative and justice-related variables than actual prosocial behavior (Help) does. Therefore, the intention to act must not be equated with the behavior itself, and the latter cannot be substituted by the former when empirically testing theoretical models that claim to describe the process of behavioral decisions. Furthermore, our data suggest that variables derived from theories of reasoned action merely predict the intention to act.

In contrast, actual prosocial commitments (Help) can be considered a matter of course that is not based on a decisional process. It becomes likely when a daughter acted prosocially before (HabHelp), when she is thinking that it is alright for a daughter to act that way (AttGen), and when she feels able to do it (AbOpp). Thus, Help rather seems to belong to an individual role of a daughter within the dyad with her mother and is not a matter of decision-making in every situation; this merely seems to be the case for building up intentions.

**References**


