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Self-Recording as a Method of Increasing Altruistic Behavior

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SELF-RECORDING AS A METHOD OF
INCREASING ALTRUISTIC BEHAVIOR

by

Raymond J. Webb

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

May

1979

TO MY PARENTS
WHO HAVE TAUGHT ME MUCH
ABOUT
ALTRUISTIC BEHAVIOR

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VITA

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CHAPTER I

INTRODUCTION

Since the separation of philosophy and psychology into distinct disciplines is a fairly recent phenomenon in the history of knowledge, it is not surprising that issues involved in the interface between the two remain of current interest. Weimer (1973) noted the roots of Chomsky's theory of language development in Plato's work on human knowledge. Kohlberg (1971) acknowledged a debt to Kant, Rawls, and others in the theoretical grounding of his empirical studies of moral development. It can be argued that Kohlberg's six stages based on justice represent, not the totality of moral reasoning, but rather only the beginning (Puka, 1976). Altruism would seem to be the next step after justice. If psychology could offer means to increase altruism in the world, then it might well be applauded for a contribution to the betterment of the human race. Yet to make such a statement is to take a philosophical position on the nature of man and of good. Even to define altruism can put one in a particular camp regarding a philosophical definition of man or the psychological dynamics of the human personality.

Various behaviors which are labeled "altruistic" have been the subject of psychological investigations. Donations

of blood, candy, money, chips, and time as well as aid given to persons in need or distress are typical of the many dependent variables found in altruism studies. In order to include all such variables and, at the same time, to avoid theoretical issues (such as paradigm clashes on the existence and nature of internal hypothetical constructs), altruistic behavior can be defined as any behavior which benefits another, even co-operative behavior (as long as the benefactor might more easily have accomplished the task alone).

In recent years some shift has occurred in the focus of altruism studies. There has been a decline in the number of investigations of personality correlates of helping behavior, since this avenue of approach has led to little success. There has been more interest recently in the antecedents of altruism, such as affect states, modeling, and normative influences (Krebs, 1970; Lau & Blake, 1976). Most studies of altruistic behavior involve short-term situations; even modeling effects are rarely studied over more than a week.

Models have been proposed which suggest the genetic selection of altruistic genes and the contribution of altruism to social evolution (E. O. Wilson, 1975; Campbell, 1975). In this interdisciplinary investigation, as well as in psychological research, the focus seems to be on the description and explanation of the phenomenon of altruism.

Yet, even without direct consideration of the philosophical questions involved, psychology ought to be able to offer methods to augment "naturally" occurring altruism.

The field of educational psychology has quite properly embraced learning and development in a much wider sense than purely academic subjects. Researchers in moral development have worked to produce programs which can be used in both public and private schools. The helping behavior of students is certainly a matter of interest to the schools. In addition, educational researchers have been advised that investigation of behavior in a holistic context, with less attention to the minute details surrounding it, can at times be most useful, given the infinite complexity of the normal "field" setting (Magoon, 1978).

The present study considers several questions: 1) Can a method of increasing altruistic behavior be developed? 2) Can a widely used standardized personality inventory (the M.M.P.I.) predict who are the more likely altruists? 3) Do self-rating and peer-rating predict altruistic behavior? 4) Is there a relationship between altruistic behavior and later self-rating?

CHAPTER II

REVIEW OF RELATED LITERATURE

Krebs (1970), in an extensive review of research on altruism, was unable to find a clear definition of altruism. Certainly altruism involves action that benefits another. Whether such behavior must be at cost to the benefactor and what motivates altruistic behavior are matters of much dispute. Just because a man appears to act altruistically does not mean that he is altruistic, according to Krebs. He contended that empathy and co-operative and pro-social behaviors do not necessarily qualify as altruistic, since they may benefit the actor. Darley and Latane (1970) called altruistic any behavior which benefits another in need, regardless of the helper's motivation. Hoffman (1975a) defined as altruistic any purposive act on behalf of someone else that involves a net cost to the actor. For Macaulay and Berkowitz (1970), altruism is behavior carried out to benefit another, without anticipation of rewards from external sources. Bryan and London (1970) saw altruistic acts as those behaviors intended to benefit another but which appear to have a high cost to the actor with little possibility of material or social reward. To Aronfreed (1970) altruism is a

dispositional component of behavior, which is controlled by anticipation of the consequences for another. Empathy is essential. External outcomes for the actor are irrelevant, although behavior controlled by expectation of increased self-esteem is not altruistic. E. O. Wilson (Wilson, Harris, & Carroll, 1978) stated that, in a biological sense, altruism is self-sacrificing behavior engaged in for the benefit of others.

Evolution

The emerging field of sociobiology, which studies the biological basis of social behavior, considers both genetic endowment and the evolutionary history of a species to be major components of social behavior in both man and infra-human species. There are genetic constraints on social behavior (E. O. Wilson, 1978). While genetic inheritance and cultural factors overlap in influencing behavior, E. O. Wilson (Wilson, Harris, & Carroll, 1978) maintained that predispositions to learn one thing instead of another and certain accompanying emotional constraints require genetic explanations. "Hard core" altruism, a set of responses relatively unresponsive to reward and punishment beyond childhood, is distinguished from "soft core" altruism, which expects reciprocation for self or relatives (E. O. Wilson, 1976). The hard core strain has evolved through interpopulation and kin selection. Whereas the Darwinian paradigm posits individuals in competi-

tion, with the most successful surviving, the evolution of social animals, in contrast to solitary ones, is found to favor not individuals but rather groups whose members sacrifice some individual gain for the greater good of the group (E. O. Wilson, 1975). Social insects (ants, bees, termites) are closest to humans in social interdependence, with dramatic degrees of self-sacrifice (Campbell, 1972). Holmes (1945) regarded altruism as deep seated in the animal kingdom, resting on basic instincts, especially the care of parents for offspring, whether through nurturance during infancy or simply leaving food at the hatch site. Nature also builds in rewards for such care (Trivers, 1971).

Soft core altruism seems to have evolved through individual level selection and to have been influenced by cultural evolution. Variations within species may well be purely environmental in origin. E. O. Wilson (1976) has presented a model to account for the natural selection of altruistic behavior, showing how selection operates against non-reciprocators. Humans seem to exhibit relatively little hard core altruism compared to the social insects (E. O. Wilson, 1976). Human altruism is based on impulses and emotional rewards and also involves conscious decision making (Wilson, Harris, & Carroll, 1978). A problem is to separate hard and soft core altruism both in human behavior in general and also within various cul-

tures (E. O. Wilson, 1976). The evolutionary model of hard core altruism may prove useful here.

Goldschmidt (1976) noted that cultural evolution has replaced biological evolution as man's primary mode of adaptation to the environment. This occurred when genetic pre-programming was replaced by learned behavior, though cultural evolution is nevertheless constrained by the limits of genetic endowment (Wilson, Harris, Carroll, 1978).

Since mapping evolutionary development depends on identifying the adaptive function of certain traits, E. O. Wilson (1975) asserted that such investigations are best done in field-like settings natural to the species in question. A holistic study of altruism focusing on contextual factors may prove more fruitful than the scrutiny of minute mechanisms. Magoon (1978) would apply this approach to the development and frequency of occurrence of a variety of phenomena (e.g. the relationship between teacher behaviors and student achievement behaviors) of interest to educational psychologists.

Internal States

Various investigators have examined the relationship between altruistic behavior and empathy. Hoffman (1975a; 1975b) has developed a theory of altruistic motivation based on the development of empathy and sympathy. A person's empathic response to the distress of another

interacts with the benefactor's cognitive sense of the other person and provides a motive independent of egoism for helping the other person. Coke, Batson, and McDavis (1978) found that taking the perspective of a person in need increases empathic emotion, which increases helping. Aronfreed (1968) demonstrated that empathic experience of distress is a prerequisite for the establishment of sympathetic behavior and altruism. Martin (1972) found that altruism is predictable from an empathy scale but unaffected by observation and empathy instruction. However, in six-year-olds, role-taking practice affected altruism but not empathic behavior (Iannotti, 1978).

Other studies have also considered internal states of benefactors. Regan, Williams, and Sparling (1972) reported that 55% of subjects who believed they had broken an experimenter's camera subsequently assisted a shopper needing help, versus only 15% of controls. Rawlings (1970) and Regan (1971) found that persons believing they had caused harm to another were more likely to perform a subsequent altruistic act. Mere witnessing of harm also led to greater likelihood of altruistic behavior. Cialdini, Darby, and Vincent (1973) found that observing or doing harm led to more altruism as long as a positive event had not intervened. Negative mood state, induced by thinking of depressing events led to more altruism in older subjects (Cialdini & Kenrick, 1976). Weiss, Boyer,

Lombardo, and Stich (1973) and Weiss, Buchanan, Alstatt, and Lombardo (1971) reported that people will learn an instrumentally conditioned response, the reward for which is deliverance of another person from suffering. They also found that performance of one altruistic deed increased the likelihood of the performance of a second, as did Harris, Ligouri, and Joniak (1973) and Harris and Samerotte (1975). Tipton and Browning (1972) reported contradictory results and questioned the Weiss et al. task (button pushing to relieve simulated suffering) as less demanding and involving. However, the Tipton and Browning results could have been caused by lack of attention. Sherrod and Downs (1974) showed a significant stimulus overload effect on altruism and Rudestam, Richards, and Garrison (1971) found reactive effects from the dependent variable. Harris (1972) reported that external reinforcement of the first altruistic act did not affect the likelihood of the second.

The research findings described above can be briefly summarized. Both positive and negative mood states lead to increased altruism: a U-shaped relationship consistent with Cialdini's theoretical description (Cialdini, Darby, & Vincent, 1973; Cialdini & Kenrick, 1976). It can be argued that altruism is intrinsically reinforcing. So one good deed would lead to another. Similarly, empathy arising from another's need for help would lead to the

negative reinforcement provided by the altruistic act. Where a negative mood state precedes the altruistic act, the prior mood state is alleviated by the reinforcement coming from the altruistic deed. What relationship exists between negative mood states and empathy is an empirical question. The increase in altruistic behavior that has been generally found to accompany increased age may be attributed to the learning of social norms and a greater awareness of cues to the need of the recipient as a function of learning and socialization.

Other Benefactor Variables

Parental influences have been found to have significant influence on persons engaged in altruistic behavior. Rescuers of Jews had an intense identification with a parental model of moral conduct (London, 1970). Rosenhan (1970) found that fully committed civil rights activists had positive, cordial, warm, and respectful relationships with parents, as well as altruistic family models and good family psychological health. The altruistic behavior of parents significantly influenced graduate and undergraduate students (Rettig, 1956). Rutherford and Mussen (1968) found that generous boys saw their fathers as warm and sympathetic.

Other variables descriptive of benefactors have been examined in many studies. Diener, Westford, Fraser, and Beaman (1973) reported that middle-class subjects

were more likely to return wallets and money than lower-class subjects. Gaertner (1973) found that liberals and conservatives both harbored anti-black attitudes, but that liberals helped more when normative directions were salient. Church attenders were more likely than non-attenders to perceive themselves as acting concretely for others (Langford & Langford, 1974). College students from America rewarded a peer more than themselves, while the reverse was true for students from India. When cost was added as a factor, the difference disappeared (L'Armand & Pepitone, 1975). Weiner (1976) found significantly more helping in urban-reared subjects than in rural-reared subjects. This finding was attributed to differences in social-perceptual learning, resulting from the varied complexity of the stimuli afforded by the differing background experiences. High social responsibility subjects were more altruistic than low scorers (Willis & Goethals, 1973). An incomplete descriptive study (London, 1970) reported that Christians who rescued Jews from the Nazis had a spirit of adventurousness and saw themselves as socially marginal. Their initial involvement in rescue work was often accidental. Berkowitz (1970) indicated that persons with heightened concern about their own self-worth may be less likely to perform altruistic acts. The decision to be a kidney donor led to increased lifestyle changes and increased

self-esteem in a study by Feller and Marshall (1970).

Success on cognitive measures of egocentrism and moral judgment was positively correlated with incidents of altruistic behavior in seven-year-olds (Rubin & Schneider, 1973). Children experiencing positive affect (happiness) contributed more than sad and no affect children, but there was a strong positive correlation between non-contingent self-gratification and altruism in studies by Moore, Underwood, and Rosenhan (1973) and Rosenhan, Underwood, and Moore (1974). Staub and Sherk (1970) found a negative relationship between need for approval and donating and self-gratification, suggesting an inhibition effect. Perceived competence appeared to correlate positively with altruism (Harris & Huang, 1973). Emotionally disturbed boys classed as "isolates" were much more likely to symbolically save a friend than were "stars" (Schaefer, 1974).

Interaction among Variables

Krebs (1970) found that most altruism research examined the effects of temporary states of the benefactor, states which are largely situational. Bowers (1973) and Mischel (1973) have focused on the interaction of person and situation as a principal determinant of behavior. Both noted that people often create the situations in which they find themselves. Bowers found that person times situation interaction accounted for a greater percent

of variability than main effects in 14 of the 18 studies he reviewed. The understanding of behavior may require use of "behavior-contingency" units, the linking of behavioral patterns to conditions under which they are likely to occur (Mischel, 1973).

Reviewing basic models in personality research, Endler and Magnusson (1976) found that empirical results supported an interactional view of behavior, with actual behavior being determined by a continuous and multi-directional interaction between person variables and situation variables. J. P. Wilson (1976) studied bystander intervention in an emergency. His results suggested that helping behavior was determined not by situational factors alone, but by motivational states (esteem, safety, or middle-orientation) of the bystanders and situational factors in interaction with each other.

In assessing norms, Black, Weinstein, and Tanur (1974) found that subjects expected themselves to perform altruistic behaviors when there was low cost to themselves, a close relationship to the recipient, an audience present, and a high cost to the other. Cost to the benefactor reduced altruism in studies by Midlarsky and Midlarsky (1973) and Tipton and Jenkins (1974). Lack of action in helping situations may be explained by "diffusion of responsibility" in response to other observers (Darley & Latane, 1968), though this may be the case only in non-

interacting group (Misavage & Richardson, 1974). Darley and Latane (1970) found that where norms governing helping were constant, environmental variables affected helping, though norm-centered explanations are very difficult to apply. Cost explanations seem better in most cases.

Inducing Altruism

Specific techniques have been used to induce or increase altruistic behavior in children, modeling being the most common. However, studies have not usually been concerned with effects over time. Aronfreed and Paskal (1968) found that first to third grade girls exposed to a female model who emitted both expressive sounds of joy and hugs after she made a self-sacrificial response showed more altruism than children exposed to either contingency alone. They attributed their results to reinforcement by empathetically experienced positive affect, though Krebs (1970) saw here secondary reinforcement effects from altruism. Midlarsky and Bryan (1967) trained altruism in similar subjects through warm relationships to the model as well as her explicit statements of joy. Both were necessary. They believed that positive interpersonal relationships and explicit statements of pleasure by the socializing agent can provide the basis for the internalization of the norm of altruism. Rehearsal as well as observation of a model was necessary for later altruistic behavior by subjects when alone in a

study by Rosenhan and White (1967). Staub (1971c) used role playing to elicit distress aid in girls and candy sharing in boys. Some generalization of behavior occurred. Yarrow, Scott, and Waxler (1973) trained helping behavior over several weeks. Symbolic altruism increased through use of both high and low nurturance models. Altruistic behavior in distress situations was increased by model nurturance. Nurturance and modeling of both symbolic and distress situation altruism resulted in more help, more verbalized sympathy, and greater consistency.

Harris (1970) found that while reciprocity was not a necessary determinant of generosity, observation of a model's generosity can strongly influence the occurrence, amount, and direction of altruistic behavior. Verbalization about altruism seemed less effective than altruistic performance by a model (Anderson & Perlman, 1973; Bryan, 1970; Bryan, 1972; Bryan & Walbek, 1970; Grusec & Skubiski, 1970; Midlarsky & Bryan, 1972; Rushton, 1975), though Macaulay (1970) did find significant preaching effects. Children shared more after observing a generous model than after observing a stingy one (Presbie & Coiteux, 1971). Immediate vicarious reinforcement was more effective than delayed vicarious reinforcement in influencing self-sacrificing behavior (Bryan, 1971). Bryan, Redfield, and Mader (1971) found that children sacrificed more when rewarded by a preaching and practicing model

than when not rewarded by the same model. Approval of donation behavior from altruistic models was rewarding, while approval from selfish models was aversive (Midlarsky, Bryan, & Brinkman, 1973).

Staub (1970a; 1970b; 1971a; 1971b) studied influences on children's help to others in distress. Modeling and nurturance influenced kindergarteners' helping behavior. A curvilinear relationship was discovered between grade level and helping behavior. Pairs of children helped more often in the lower grades than in the sixth grade. Staub found older children and adults were influenced by social norms of approval and disapproval of permitted and prohibited behavior. However, Handlon and Gross (1959) and Green and Schneider (1974) reported that altruism simply increased with age.

Self-monitoring

Shapiro and Zifferblatt (1976) noted the effectiveness and necessity of self-observation in behavioral self-change strategies. Kazdin (1974) and Thoresen and Mahoney (1974) have indicated that self-observation of a behavior does influence the occurrence of that behavior. This has been found with particular behaviors, such as smoking (McFall, 1970) and study behavior (Broden, Hall, & Mitts, 1971; Johnson & White, 1971). While some attention has been paid to covert images and processes in the change dynamic, others have focused on a self-reinforcement

effect of self-recording (Shapiro & Zifferblatt, 1976). In any event, self-recording has been associated with behavior change.

Recording self-injurious responses on a wrist counter cued a total relaxation response and led to modification of behavior in a 31 year old woman (Ernst, 1973). Bolstad and Johnson (1972) found a reduction of disruptive classroom behavior in two children who recorded their own disruptive behavior. Self-recording of answers to comprehension questions within a token economy structure resulted in continued meeting of criterion standards by retarded children (Knapczyk & Livingston, 1973). Broden, Hall, and Mitts (1971) reported that two eighth graders who engaged in self-recording increased study behavior and decreased talking out. The effects were reversed when self-recording was discontinued. Two mothers who recorded their attention to appropriate child behavior increased appropriate attention. Appropriate behavior in their children also increased (Baer & Herbert, 1972). Removing the counters did not produce reversal. Telling one of the mothers to "count and decrease inappropriate behavior" had no effect. A third parent was unaffected by the entire procedure. Fixsen, Phillips, and Wolf (1972) found that self-recording did not produce improvement in delinquent boys' room cleaning behavior. McFall (1970) reported a decrease in smoking with a residual effect after self-monitoring.

Self-observation increased study output and effected an increase in course grades in a study by Johnson and White (1971). Both McFall and Johnson and White saw self-monitoring as a reactive procedure. But Simkins (1971) contended that in the absence of reliability estimates, it is difficult to evaluate the reported success of behavioral techniques that make use of self-control techniques.

Recapitulation

Since attempts to reach agreement on a definition of altruism can quickly move into the more general debate about the dynamics of human behavior, a descriptive definition such as that of Darley and Latane (1970)--any behavior which benefits another in need--may suffice until psychology reaches a consensual paradigm. Models offered by investigators of biological and socio-cultural evolution are intriguing in their hypothesis that altruism is more adaptive for survival. Limited descriptive research seems to indicate that notable altruists have been influenced by family traditions of similar behavior. It is interesting to note also that particular studies of altruistic behavior have found a relationship to cultural factors such as church attendance, liberal attitudes, urban rearing, and nationality.

If one is interested in simply increasing the amount of altruistic behavior present in a given environment, some of the kinds of studies reviewed here (e.g. transi-

tional personal states and recipient variables) are of lesser usefulness. While analysis of components does lead to a better understanding of altruism, the holistic approach advocated by E. O. Wilson (1975) and Magoon (1978) offers an avenue toward gross increases in altruistic behavior. There is no evidence of psychological research conducted to increase the incidence of a wide variety of behaviors labeled altruistic, over a period of time. Yet there is a method which seems suited to such a project: self-recording. It does lead to behavioral change. A "reactive" effect has been found from self-recording. So self-recording, consistent with evolutionary trends, should lead to increased altruism, even when subjects are instructed to record altruistic behaviors, without instruction to increase such behaviors.

Although current theory looks at interaction between situation and person, certain personal components have been found to be associated with altruistic behavior: ability to feel empathy, social responsibility, lack of egoism, positive feelings of self-worth, perceived competence, need level, and adventurousness. Identification of reasonably accessible ways of measuring characteristics predicting altruistic behavior would appear to be useful. Research might then return to investigating the development of such characteristics.

CHAPTER III

METHOD

Hypotheses

The following null hypotheses were investigated:

Experiment One

1. Members of the self-recording group will not perform more unobtrusively measured altruistic behaviors than members of the reading and control groups.

2. There will be no relationship between the number of unobtrusively measured altruistic behaviors and relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K).

3. There will be no relationship between the number of unobtrusively measured altruistic behaviors and self-rating on a measure of altruism.

4. There will be no relationship between the number of unobtrusively measured altruistic behaviors and peer-rating on a measure of altruism.

5. There will be no difference between members of the self-recording group and members of the other two groups in self-rating difference scores (altruism measure posttest minus pretest).

Experiment Two

6. There will be no relationship between the mean

daily amount of self-recorded altruistic behavior and relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K).

7. There will be no relationship between the mean daily amount of self-recorded altruistic behavior and self-rating on a measure of altruism.

8. There will be no relationship between the mean daily amount of self-recorded altruistic behavior and peer-rating on a measure of altruism.

9. There will be no relationship between the change in the daily amounts of self-recorded altruistic behavior and relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K).

10. There will be no relationship between the change in the daily amounts of self-recorded altruistic behavior and self-rating on a measure of altruism.

11. There will be no relationship between the change in the daily amounts of self-recorded altruistic behavior and peer-rating on a measure of altruism.

12. There will be no relationship between the adjusted amount (mean plus change) of self-recorded altruistic behavior and relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K).

13. There will be no relationship between the adjusted amount (mean plus change) of self-recorded altruistic behavior and self-rating on a measure of altruism.

14. There will be no relationship between the adjusted amount (mean plus change) of self-recorded altru-

istic behavior and peer-rating on a measure of altruism.

Hypothesis one was analyzed using the Kruskal-Wallis one-way analysis of variance by ranks. The Pearson product moment correlation coefficient was the statistic utilized for hypotheses two, three, and four. Student's t tests (modified Bonferroni procedure) were used for hypothesis five, with difference scores (posttest minus pretest) as the dependent variable. Hypotheses six through fourteen were analyzed using the Pearson product moment correlation. It was expected that null hypotheses one, five, and six through fourteen would be rejected and that null hypotheses two, three, and four would not be rejected.

Subjects

115 male college students from Niles College of Loyola University of Chicago, a seminary college and one of the schools of the university, were obtained as subjects through daily bulletin announcements and personal request of the experimenter. No course credit, payment, or other compensation was given to any subject. These subjects represented 80% of the all-resident population of the college. Only two of the students who were asked refused to participate in the study. All students can reasonably be assumed to have been aware of the bulletin announcements.

Groups

Subjects were stratified by class (freshman, sopho-

more, junior, senior). The members of each stratum were randomly assigned to one of three groups and then the groups were randomly assigned to treatments. The three treatments were: the self-recording group (experimental), the reading group (placebo), and the control group. Originally there were 39 subjects in the self-recording group and 38 subjects in each of the other two groups. Because of attrition (explained below), the experiment concluded with 34 subjects in the self-recording group, 32 in the reading group, and 37 in the control group.

Instrumentation

Fischer Altruism Scale

Fischer (1973) developed a 91 item inventory covering a variety of altruistic themes and attitude objects (see Appendix A). The response format is a four point scale (strongly disagree--disagree--agree--strongly agree). Only the 15 items of Factor V: Belief in Helping Others (Helping Attitude) were of interest in the present study, although all 78 items which related to Fischer's five factors were administered. (The 15 items of Factor V are hereafter referred to as the Fischer Altruism Scale.) The range of possible scores on the Fischer Altruism Scale is 15 to 60. One's score appears to reflect the subject's perception of the desirability or undesirability of aiding others (Fischer, 1973).

Minnesota Multiphasic Personality Inventory

The scales of interest on the Minnesota Multiphasic Personality Inventory (M.M.P.I.), with description (cf. Marks, Seeman, & Haller, 1974; Carson, Note 1), were:

1. Hy--hypochondriasis--low scorers are less egocentric, more optimistic, less concerned with themselves
2. Hs--hysteria--low scorers are alert, responsible, energetic, active; high scorers are narcissistic and egocentric
3. D--depression--low scorers are active, alert, cheerful, outgoing, optimistic, have positive feelings of self-worth
4. Pt--psychasthenia--high scorers can be narcissistic and overemphasize self needs
5. Pd--psychopathic deviance--high scorers have disregard for social norms, have depersonalized values
6. F-K--extreme scores indicate faking
7. K--a higher K is seen as enterprising, sociable, possessing a wide range of interests

The expected direction of relationships is none for F-K, positive for K, and negative for all the others.

Procedure

The M.M.P.I. was administered to all subjects upon entrance into the freshman year. The Fischer inventory, including the Fischer Altruism Scale, was completed by each subject before and after the experimental period. In addition, all subjects were asked to have the Fischer

instrument filled out by a peer who knew them well. The peer was instructed to complete the inventory as the peer believed the subject would (i.e. to indicate the subject's attitude toward each of the items).

The treatment period lasted 49 days.

Self-recording Group

Members of the self-recording group were given golf counters and daily record sheets. They were asked to keep the counter on their person at all times and to record each altruistic behavior. At the end of each day, the count was to be entered on a recording sheet and a point graph was to be plotted from the previous day. An altruistic behavior was defined as any behavior which benefitted another. Co-operative behavior was to be recorded if the subject could more easily have done the behavior alone. A list of samples of altruistic behavior was provided to each subject (see Appendix B). Subjects were never told to alter their rate of altruistic behavior, only to record it. If they asked if they should increase, subjects were told, "The instructions are to record accurately each day." The record was inspected each week by the experimenter and the subject was praised if up-to-date in recording. If behind, the subject was briefly encouraged to stay up-to-date. A subject who was behind one week on two occasions was eliminated from the experiment.

Reading Group

Members of the reading group were given one chapter per week from M. Mayeroff's (1971) On Caring. Weekly selections averaged 3500 words in length. A five question multiple choice test was to be completed at the end of the reading and returned when the new chapter was distributed. Subjects were socially praised for completing the test. Subjects who were behind were encouraged to stay up-to-date. Subjects who completed less than four tests were disqualified and eliminated from the experiment.

Control Group

The control group received only the Fischer inventory to be completed by themselves before and after the experimental period and by a peer also at the start. Disqualification would only occur if the final inventory was not completed.

Design and Data Analysis of Experiment One

The groups were compared on six unobtrusive measures of altruistic behavior (dependent variable), one about every eight days: volunteering time to work on physical and program arrangements for a series of presentations to the whole college (Fall Forum), cleaning up garbage after refreshments at a compulsory attendance lecture, waiting on table for a school Thanksgiving awards dinner and cleaning up afterwards, contributing money to a party for poor children, contributing money to the Campaign for

Human Development, and volunteering for an experiment to be conducted by a part-time psychology instructor.

Repeated requests were made for experimental subjects and for Fall Forum workers in the daily bulletin, with sign-up sheets in the business office. The daily bulletin is the main source of information at the college and is considered to be read regularly by most students. A count revealed that nearly all students were present for the Thanksgiving awards dinner and for the lecture. Requests for volunteer waiters and clean-up people were made at these events. Volunteers were observed and the names recorded. Under the direction of the Dean of Students, class representatives personally solicited contributions for the poor children's party from all students. The names of contributors were recorded. Campaign for Human Development envelopes with student names typed on them were placed in each student's room.

The Kruskal-Wallis one-way analysis of variance by ranks was performed to test for differences between members of the three treatment groups in total number of unobtrusively measured altruistic behaviors. The Mann-Whitney U statistic was used for pairwise comparisons. In addition, Pearson product moment correlation coefficients were computed to determine if the total number of unobtrusively measured altruistic behaviors was correlated with self-rating on the Fischer Altruism Scale, peer-

rating on the Fischer Altruism Scale, and/or relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K). Student's t tests (modified Bonferroni procedure) were also performed to compare the difference scores (Fischer Altruism Scale self-rating posttest minus pretest) of the self-recording group and each of the other two groups.

Design and Data Analysis of Experiment Two

The subjects of this experiment were the 34 members of the self-recording group. Pearson product moment correlation coefficients were computed to determine significant relationships between the mean daily amount of self-recorded altruistic behavior, the change in the daily amounts of self-recorded altruistic behavior (the algebraic sum of the day-to-day changes in recording), and the adjusted amount (mean plus change) of self-recorded altruistic behavior and relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K), self-rating on the Fischer Altruism Scale, and/or peer-rating on the Fischer Altruism Scale.

CHAPTER IV

RESULTS

The results of the statistical analyses performed are as follows:

Experiment One

Treatment Group Comparisons

A comparison of the three treatment groups (self-recording, reading, control) on the six unobtrusively recorded altruistic measures (volunteering time to work on the Fall Forum program, cleaning up garbage after refreshments, waiting on table at the Thanksgiving awards dinner, contributing money to the children's party, contributing money to the Campaign for Human Development, volunteering for the psychology experiment) showed that the self-recording (experimental) group had the most unobtrusively recorded altruistic behaviors on five (Fall Forum, garbage, waiting, children's party, psychology experiment) of the six dependent measures and was second on a sixth, the Campaign for Human Development (see Table I). The reading (placebo) group had the most unobtrusively recorded altruistic behaviors on one measure (Campaign for Human Development), was second on two measures (children's party, psychology experiment), and was third on

TABLE I

A COMPARATIVE SUMMARY OF GROUP PERFORMANCE OF
UNOBTRUSIVELY MEASURED ALTRUISTIC BEHAVIORS

Observational code ^a								
Group	N	1	2	3	4	5	6	Total
Number of group members engaging in behavior								
Self-recording	34	5	11	14	26	13	9	78
Reading	32	2	4	4	21	16	8	55
Control	37	4	9	6	20	11	3	53

^aObservational codes: 1 = Volunteering time to work on Fall Forum program
 2 = Cleaning up garbage after refreshments
 3 = Waiting on table at Thanksgiving awards dinner
 4 = Contributing money to children's party
 5 = Contributing money to Campaign for Human Development
 6 = Volunteering for psychology experiment

three measures (Fall Forum, garbage, waiting). The control group had the second largest number of unobtrusively recorded altruistic behaviors on three measures (Fall Forum, garbage, waiting) and was third on three measures (children's party, Campaign for Human Development, psychology experiment).

Out of a possible six unobtrusive measures of the performance of an altruistic behavior, the experimental (self-recording) group subjects had a mean of 2.2647, the placebo (reading) group subjects a mean of 1.7188, and the control group subjects a mean of 1.4595.

The Friedman two-way analysis of variance by ranks test was performed to determine if the six behavioral measures were drawn from identically distributed populations. X^2_r was 11.81 ($p < .05$), indicating that across treatment groups subjects were more likely to perform some behaviors than others (see Table I). Of the 103 subjects in the experiment, 67 contributed money to the children's party, 40 contributed to the Campaign for Human Development, 24 helped clean up garbage, 24 waited on table, 20 volunteered for the psychology experiment, and 11 volunteered time to work on the Fall Forum.

The Kruskal-Wallis one-way analysis of variance by ranks was performed to test for differences between the subjects of the three treatment groups in total number of unobtrusively measured altruistic behaviors. H' (13.66)

was greater than $\chi^2_{.02,5}$ (13.38), indicating that there was a significant difference between treatment group subjects in total number of unobtrusively measured altruistic behaviors. The Mann-Whitney U statistic was utilized to make planned comparisons between the three treatment groups. A comparison of the experimental (self-recording) group and the control group yielded a z of 2.3024 ($p = .011$, one-tailed). Comparing the experimental (self-recording) group with the placebo (reading) group, z was 1.42 ($p = .0778$, one-tailed). For the placebo (reading) and control groups, z was .172 ($p = .857$, two-tailed). A comparison of the experimental (self-recording) group with all other subjects yielded a z of 2.0723 ($p = .019$, one-tailed).

Therefore, results obtained partially support null hypothesis one (that members of the self-recording group will not perform more unobtrusively measured altruistic behaviors than members of the reading and control groups). While the self-recording group subjects performed significantly more unobtrusively measured altruistic behaviors than both the controls and all other subjects taken together, the difference between the self-recording group members and the reading group members only approached significance.

Correlations with Unobtrusively Measured Altruistic Behaviors

Pearson product moment correlation coefficients were

computed to determine if there were any significant relationships between individual subjects' total number of unobtrusively measured altruistic behaviors and self- and peer-ratings on the Fischer Altruism Scale and/or the relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K). No statistically significant relationships were discovered (see Table II). The strongest relationship ($r = .13922$, $p > .10$) was with Pt (psychasthenia). The r for self-rating was $-.06397$ and for peer-rating $-.04267$. These results support null hypothesis two (that there will be no relationship between the number of unobtrusively measured altruistic behaviors and relevant M.M.P.I. scales), null hypothesis three (that there will be no relationship between the number of unobtrusively measured altruistic behaviors and self-rating on a measure of altruism), and null hypothesis four (that there will be no relationship between the number of unobtrusively measured altruistic behaviors and peer-rating on a measure of altruism). These findings are as expected.

Posttest-Pretest Altruism Scale Difference Score Comparison

Student's t tests were performed to compare the difference scores (Fischer Altruism Scale self-rating posttest minus pretest) of members of the self-recording group and members of each of the other two groups (see Table III). To minimize the possibility of Type I error, an experiment-wise significance level of .05 was set,

TABLE II

CORRELATION MATRIX OF TOTAL NUMBER OF UNOBTRUSIVELY MEASURED ALTRUISTIC BEHAVIORS,
 SELF-RATING AND PEER-RATING ON THE FISCHER ALTRUISM SCALE, AND M.M.P.I. SCALES

Variable	1	2	3	4	5	6	7	8	9
1. Total observations	1.00								
2. Self-rating	-.06	1.00							
3. Peer-rating	-.04	.35	1.00						
4. Hy	.07	.25	.21	1.00					
5. Hs	.04	-.07	-.08	.47	1.00				
6. D	.05	-.23	-.08	.17	.34	1.00			
7. Pt	.14	.00	.04	.18	.47	.42	1.00		
8. Pd	.02	.06	-.03	.15	.08	.22	.34	1.00	
9. F-K	-.05	-.24	-.18	-.37	.06	.25	.31	.31	1.00
10. K	.04	.25	.13	.35	.24	-.22	.02	-.09	-.74

TABLE III

TREATMENT GROUP PRETEST MEANS, POSTTEST MEANS, MEAN DIFFERENCE SCORES
(POSTTEST MINUS PRETEST), AND DIFFERENCE SCORE STANDARD DEVIATIONS
ON THE FISCHER ALTRUISM SCALE

Group	Pretest	Posttest	Difference	Std. Dev.
Self-recording	46.38	47.53	1.147	3.53
Reading	47.09	46.59	-.500	3.07
Control	47.03	46.70	-.324	3.62

with the alpha level for each of the two comparisons set at .025 (modified Bonferroni procedure). Comparison of the self-recording and reading groups yielded a t (64) of 2.015 ($p < .025$, one-tailed). For the self-recording and control groups, t (69) was 1.731 ($p < .05$, one-tailed). So, the results obtained partially support null hypothesis five (that there will be no difference between members of the self-recording group and members of the other two groups in self-rating difference scores: altruism measure posttest minus pretest). While the self-recording group showed significantly more positive change in difference score than the reading group, its difference from the control group was only nearly significant according to the experiment-wise alpha level set for these comparisons.

Experiment Two

Experiment two considered the relationship between the altruistic behaviors self-recorded by members of the self-recording group ($n = 34$) and relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K), self-rating on the Fischer Altruism Scale, and peer-rating on the Fischer Altruism Scale. The statistic utilized throughout experiment two was the Pearson product moment correlation coefficient.

Mean Daily Amount of Self-recorded Altruistic Behavior

The first relationship examined was the correlation of the mean daily amount of self-recorded altruistic behavior with self-rating and peer-rating on the Fischer

Altruism Scale and the M.M.P.I. scales (see Table IV).

The only statistically significant relationship was with peer-rating ($\underline{r} = .37748$, $\underline{p} < .05$). The next highest correlations were with the D (depression) scale of the M.M.P.I. ($\underline{r} = -.2366$, $\underline{p} > .10$), F-K (an index of faking) on the M.M.P.I. ($\underline{r} = -.20234$, $\underline{p} > .10$), and self-rating ($\underline{r} = .15892$, $\underline{p} > .10$). Mean daily amount of self-recorded altruistic behavior and peer-rating on the Fischer Altruism Scale have 14.25% common variability.

Therefore, the findings do not support null hypothesis eight (that there will be no relationship between the mean daily amount of self-recorded altruistic behavior and peer-rating on a measure of altruism). However, the results do support null hypotheses six and seven (that there will be no relationship between the mean daily amount of self-recorded altruistic behavior and relevant M.M.P.I. scales and/or self-rating on a measure of altruism).

Change in Daily Amounts of Self-recorded Altruistic Behavior

The second part of experiment two examined the relationship of change in the daily amounts of self-recorded altruistic behavior with self-rating and peer-rating on the Fischer Altruism Scale and the M.M.P.I. scales. The change measure was the algebraic sum of the day-to-day changes in the amount of self-recorded altruistic behavior. A day on which no entry was made was not counted.

TABLE IV

CORRELATION OF MEAN DAILY AMOUNT OF SELF-RECORDED
ALTRUISTIC BEHAVIOR AND SELF-RATING AND PEER-RATING
ON THE FISCHER ALTRUISM SCALE AND M.M.P.I. SCALES

Variable	Mean Daily Amount
Self-rating	.16
Peer-rating	.38*
Hy	.12
Hs	-.09
D	-.24
Pt	-.15
Pd	-.06
F-K	-.20
K	.09

* $p < .05$

The three highest and three lowest days were eliminated to correct for misleading distortion due to extremes.

The only significant relationship ($r = -.36098$, $p < .05$) was between change and the D (depression) scale of the M.M.P.I. (see Table V). The correlation between change and self-rating was $.2085$ ($p > .10$). For change and peer-rating, r was $.07268$ ($p > .10$). Change in the daily amounts of self-recorded altruistic behavior and the D scale of the M.M.P.I. shared 13.03% common variability.

Therefore, the results do not support null hypothesis nine (that there will be no relationship between the change in the daily amounts of self-recorded altruistic behavior and relevant M.M.P.I. scales). But the findings do support null hypotheses ten and eleven (that there will be no relationship between the change in the daily amounts of self-recorded altruistic behavior and self-rating and/or peer-rating on a measure of altruism).

Adjusted Amount (Mean plus Change) of Self-recorded Behavior

The third part of experiment two considered the relationship of a measure of the adjusted mean daily amount of self-recorded altruistic behavior to self-rating and peer-rating on the Fischer Altruism Scale and/or the M.M.P.I. scales. The mean daily amount of self-recorded altruistic behavior was added to the algebraic sum of the day-to-day changes in the amounts of self-recorded altruistic behav-

TABLE V

CORRELATION OF CHANGE IN DAILY AMOUNTS OF SELF-RECORDED
ALTRUISTIC BEHAVIOR AND SELF-RATING AND PEER-RATING
ON THE FISCHER ALTRUISM SCALE AND M.M.P.I. SCALES

Variable	Change
Self-rating	.21
Peer-rating	.07
Hy	-.17
Hs	-.24
D	-.36*
Pt	-.18
Pd	-.17
F-K	-.16
K	.08

*
 $p < .05$

ior (with the three highest and three lowest recorded days eliminated). Thus, for example, Person A, who steadily progressed from five recorded altruistic behaviors per day to fifteen per day with an average of ten, would have a higher score on this index than Person B, who stayed at ten throughout.

The only significant relationship ($\underline{r} = -.36739$, $p < .05$) was between adjusted amount of self-recorded altruistic behavior and the D (depression) scale of the M.M.P.I. (see Table VI). For self-rating and adjusted amount, \underline{r} was $.22496$ ($p > .10$) and for peer-rating and adjusted amount, \underline{r} was $.26304$ ($p > .10$). Adjusted amount of self-recorded altruistic behavior and the D scale had 13.47% common variability.

Therefore, the findings do not support null hypothesis twelve (that there will be no relationship between the adjusted amount--mean plus change--of self-recorded altruistic behavior and relevant M.M.P.I. scales. However, the results do support null hypotheses thirteen and fourteen (that there will be no relationship between adjusted amount of self-recorded altruistic behavior and self-rating and/or peer-rating on a measure of altruism).

TABLE VI

CORRELATION OF ADJUSTED AMOUNT (MEAN PLUS CHANGE) OF
 SELF-RECORDED ALTRUISTIC BEHAVIOR WITH SELF-RATING
 AND PEER-RATING ON THE FISCHER ALTRUISM SCALE
 AND M.M.P.I. SCALES

Variable	Adjusted Amount
Self-rating	.22
Peer-rating	.26
Hy	-.04
Hs	-.20
D	-.37*
Pt	-.20
Pd	-.14
F-K	-.22
K	.10

*
 $p < .05$

CHAPTER V

DISCUSSION

Based on the statistical analyses presented in chapter four, decisions on the hypotheses of this study can be presented and discussed. Due to the scarcity of research on the topic of the relationship between personality variables and altruistic behavior, little comparison of that aspect of the present study with other research is possible.

Experiment One

On the unobtrusive measures of altruistic behavior, the self-recording group showed significantly more unobtrusively measured altruistic behavior than the control group (hypothesis one). Though the self-recording group subjects performed more unobtrusively measured altruistic behaviors than the reading group (self recording group $\bar{X} = 2.26$, reading group $\bar{X} = 1.72$), the difference between the two groups only approached significance ($p = .078$). There was no significant difference between the reading and control groups ($p = .857$). Systematic self-recording led to significantly more altruistic behavior than no treatment, whereas reading did not lead to significantly more altruistic behavior than no treatment. In the present study, the reading treatment appeared to have had a very

slight effect; sufficient so that the contrast between the self-recording and reading groups only approached significance but not enough to show any significant difference from the control group.

The stimulus control in the design and execution of this study provided for equal amounts of weekly experimenter attention to self-recording and reading group members and a lesser amount to the controls (only during pretest and posttest). If amount of attention were a confounding variable here, then the reading group should have been significantly different from the control group, but such was not the case. Attention by itself does not appear to be logically connected with the unobtrusive measures. No attention was paid to the altruistic behavior of the reading group subjects, only to their reading and test answering behavior. The self-recording group members were praised for being up-to-date, not for the number of recorded behaviors. Attention might have been a reinforcer for self-recording and reading and test answering behavior, but it is difficult to see how attention could have been linked to the six unobtrusive measures. The self-recording group members averaged 11.8 self-recorded altruistic behaviors per day over seven weeks. The six unobtrusively measured altruistic opportunities represented only a very small percentage of all possible opportunities for altruistic behavior which

would have occurred during the experimental period.

The finding that systematic self-recording led to significantly more altruistic behavior than no treatment is consistent with other studies cited in chapter two. Self-recording led to increased study behavior (Brodén, Hall, & Mitts, 1971), increased mothers' attention to appropriate behavior by their children (Baer & Herbert, 1972), and increased study output (Johnson & White, 1971).

There is evidence that participation in self-recording did affect one's self-rating on the Fischer Altruism Scale (hypothesis five). Table III shows the mean posttest scores of the reading and control groups to have declined, while only the self-recording group gained. The mean difference scores of the reading and control groups are very similar ($-.5$ and $-.324$), but the comparison of the self-recording and reading groups was significant ($p < .025$) while the comparison of the self-recording and control groups only approached significance ($p < .05$). Since the self-recording group showed significantly more positive change in difference score than did the reading group, systematic self-recording appears to have positively affected altruistic attitudes while reading about helping did not. Such a change may have resulted from the self-recording group members' daily attention to recorded altruistic behavior. Since the mean difference scores of the reading and control groups

were very similar and since the contrast between the self-recording and control groups would have been regarded as statistically significant were this contrast the only one being made, there would seem to be little reason to discuss the slight difference between the mean difference scores of the reading and control groups. There is no hard evidence or logical reason to indicate that the reading treatment should cause the reading group to decline slightly more than the control group in mean difference score.

The fifteen items of the Fischer Altruism Scale are included in the 78 item inventory together with items related to attitudes toward animals, criminals, non-traditional humanitarianism, and social responsibility. Demand characteristics would appear to be minimized. So there is some evidence here of the somewhat uncommon occurrence of a relationship between behavior and a paper-and-pencil measure, with behavior affecting how subjects rated themselves on a series of statements related to attitudes toward helping humans.

Therefore, decisions on all the null hypotheses of the first experiment were at least partially in the predicted direction. Null hypotheses one (that members of the self-recording group would not perform more unobtrusively measured altruistic behaviors than members of the reading and control groups) and five (that there would

be no difference between members of the self-recording group and members of the other two groups in self-rating difference scores: altruism measure posttest minus pretest) were partially rejected. Null hypotheses two, three, and four (that there would be no relationship between the number of unobtrusively measured altruistic behaviors and relevant M.M.P.I. scales and self-rating and peer-rating on a measure of altruism) were not rejected.

Experiment Two

The remaining nine hypotheses dealt only with the members of the self-recording group. These hypotheses related to a search for variables significantly correlated with the mean daily amount of self-recorded altruistic behavior, change in the daily amounts of self-recorded altruistic behavior, and the adjusted amount of daily self-recorded altruistic behavior (the mean daily amount added to the algebraic sum of the changes in the day-to-day amounts). The relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K) and self-rating and peer-rating on the Fischer Altruism Scale were the variables investigated. The M.M.P.I. is usually used as a diagnostic instrument for possible psychopathological conditions. However, it is also widely used throughout the country as part of the process of admission to seminary colleges and professional schools of theology. In addition, Hogan (1969) used item pools from the M.M.P.I. and the California

Psychological Inventory to construct an empathy scale.

Mean Daily Amount of Self-recorded Altruistic Behavior

The only variable significantly correlated with the mean daily amount of self-recorded altruistic behavior was peer-rating on the Fischer Altruism Scale ($r = .38$, $p < .05$). The correlation between mean daily amount and self-rating was $.16$ ($p > .10$). The M.M.P.I. scale score with the strongest relationship to mean daily amount was the D (depression) scale ($r = -.24$, $p > .10$). Although only peer-rating was significantly correlated with mean daily amount, the non-significant correlations were all in the predicted direction (no relationship for F-K, positive for K, negative for Hs, D, Pt, Pd), except for Hy (which was found to be positive). Yet, since one cannot reject the null hypothesis of no relationship between these variables and mean daily amount, no conclusions can be drawn from this predicted directionality. Based on the data presented, the hypothesis (eight) that there will be no relationship between peer-rating and the mean daily amount of self-recorded altruistic behavior can be rejected. However, one cannot reject the hypotheses (six and seven) that there will be no relationship between relevant M.M.P.I. scales and/or self-rating and the mean daily amount of self-recorded altruistic behavior.

Peer-rating was not found to be significantly correlated with the number of unobtrusively measured altru-

istic behaviors in experiment one. However, under the experimental condition of experiment one, treatment would have confounded the relationship. To some degree the peer-rating was a function both of the rater's style (e.g. conservative or liberal) and the quality of the relationship between rater and subject. Subjects were instructed to give the Fischer instrument to "someone who knows you well." Raters were to indicate the subject's attitude toward the items on the inventory. Therefore, a question about the reliability of the peer-ratings could be raised. Yet, using the same rater(s) for all subjects would surely provide less accurate information about the subjects. Raters were giving their perceptions of the subjects' altruistic attitudes rather than estimating how much altruistic behavior subjects would record. Apparently, peers can provide information on the altruistic attitudes and behavior of their fellows, gleaned from unreflective observation. Of course, person variables may influence the rate at which a subject recorded behavior (e.g. scrupulosity, carefulness, giving oneself the benefit of the doubt). Still, such extraneous variation should be randomly distributed and not call into question the finding that rating by a peer can be significantly related to the amount of altruistic behavior one records.

Change in Day-to-Day Amounts of Self-recorded Altruistic Behavior

The relationship of change in the daily amounts of self-recorded altruistic behavior to self-rating and peer-rating on the Fischer Altruism Scale and the relevant M.M.P.I. scales was examined in the second part of experiment two. The change measure was the algebraic sum of the day-to-day changes in the amount of self-recorded altruistic behavior, with the three highest and three lowest days eliminated to correct for distortions due to extremes.

The only significant relationship ($r = -.36$, $p < .05$) was between change and the D (depression) scale of the M.M.P.I. The correlation between self-rating and change was $.21$ ($p > .10$). For change and peer-rating, r was $.07$ ($p > .10$). All relationships were in the predicted direction, but only D was significantly correlated with change.

Based on the data presented in this study, hypothesis nine (that there will be no relationship between change in the daily amounts of self-recorded altruistic behavior and the relevant M.M.P.I. scales) can be rejected. However, hypotheses ten and eleven (that there will be no relationship between self-rating and/or peer-rating on a measure of altruism and change in the daily amounts of self-recorded altruistic behavior) cannot be rejected.

The D scale was not found to be a significant correlate of the number of unobtrusively measured altruistic

behaviors in experiment one. However, under the experimental condition of experiment one, treatment would have confounded the relationship.

Adjusted Amount of Self-recorded Altruistic Behavior

By adding the algebraic sum of the differences in the day-to-day amounts of self-recorded altruistic behavior to the mean amount, the mean was adjusted so that if two subjects had the same mean daily amount, the one whose daily average increased the most over the experimental period would have the higher score on this measure.

The only significant relationship ($r = -.37$, $p < .05$) was between adjusted amount and the D (depression) scale of the M.M.P.I. The correlation between adjusted amount and self-rating was $.22$ ($p > .10$). Between peer-rating and adjusted amount the correlation was $.26$ ($p > .10$). All relationships were in the predicted direction (no relationship for F-K, negative for Hy, Hs, D, Pt, Pd, positive for K, self-rating, peer-rating), though no conclusions can be drawn from the non-significant relationships.

Based on the data presented, the hypothesis (twelve) that there will be no relationship between the adjusted amount of self-recorded altruistic behavior and relevant M.M.P.I. scales can be rejected. However, hypotheses thirteen and fourteen (that there will be no relationship between the adjusted amount of self-recorded altruistic

behavior and self-rating and/or peer-rating on a measure of altruism) cannot be rejected.

While adjusted amount and mean daily amount of self-recorded altruistic behavior share 63.98% common variability, peer rating was not significantly correlated with adjusted amount and the D scale was not significantly correlated with mean daily amount. Mean daily amount and change have only 12.4% of their variability in common. Change and adjusted amount share 71.2% common variability; the D scale was a significant correlate of both.

Further Commentary Related to the M.M.P.I. D (Depression) Scale

M.M.P.I. scales provide personality descriptions. Items that make up a given scale tend to be answered in a certain way by persons whose personalities fit a certain description. The D (depression) scale is frequently the highest scale in the profiles of psychiatric patients; it is also the best single predictor of immediate satisfaction in living (Carson, Note 1). High scorers tend to be silent, retiring, and may be withdrawn, while low scorers are described as active, alert, cheerful, outgoing, optimistic, and having positive feelings of self-worth (Marks, Seeman, & Haller, 1974; Carson, Note 1).

Berkowitz (1970) contended that heightened self-concern can lower the likelihood of altruistic behavior. He found that research suggested that persons concerned about their own self-worth were less willing to help

others than those who were confident about their personal self-worth. Self-pre-occupation and doubts about self-worth distract a person from perceiving the need for or possibility of help in a situation. Uncertainty about self-worth can also interfere with empathy and lead to possible derogation of those in need.

The finding that the D scale was significantly correlated with both change in day-to-day amount and adjusted amount of self-recorded altruistic behavior certainly supports Berkowitz. With attention focused on altruistic behavior and the recording of altruistic behavior as it was by the stimuli presented to the subjects of this experiment, subjects more secure in self-worth, more active and outgoing would seem more open to increase altruistic behavior. No assertion can be made that the D scale would be significantly correlated with change and adjusted amount where there is no focus on altruistic behavior and the recording of altruistic behavior.

Statements Supporting Internal Validity

Though the subjects in this study were not randomly selected, they were randomly assigned to groups and the groups were randomly assigned to treatments. An equal amount of time and attention was paid to subjects in the self-recording and reading groups. Each was visited every week and praised for being up-to-date in the required task or encouraged to stay up-to-date if there was some

falling behind. Self-recording group members were never told to increase altruistic behavior. Attention or demand characteristics probably did not act as confounding variables. Since all subjects lived in the same basic environment at the same time, outside influence would not appear to have been a confounding variable. Although there was greater mortality in the experimental and placebo groups than in the control groups, the tasks for the first two groups can be considered approximately the same in difficulty. A reasonable conclusion is that the self-recording group performed significantly more altruistic behavior than the control group and the reading group did not perform significantly more altruistic behavior than the control group as a result of the methods employed rather than because of any confounding variable.

Although caution would demand replication before putting complete confidence in the effect of self-recording on self-rating on a paper-and-pencil measure of altruism, the finding does not appear to have been contaminated by statistical regression toward the mean, since the subjects were randomly assigned to groups.

Internal validity is not an issue in regard to the significant correlations with mean daily amount, change in recording, and adjusted amount of self-recorded altruistic behavior, since no claim of causal relationships is being made.

Statements Supporting External Validity

The subjects in this study were all males, aged 17 to 22, attending a seminary college which is an integrated part of a large urban university. They pursued a variety of liberal arts majors (e.g. psychology, English, history). There is no evidence that males are more altruistic than females. Women are regarded as superior to men in empathy, a variable often considered a prerequisite for altruistic behavior (Hoffman, 1977). Nor are men more successful in self-recording. However, altruistic behavior has been found to increase with age (Bryan & London, 1970; Cialdini & Kenrick, 1976), so the findings of this study can only with caution be applied to much younger age groups.

A point of concern may be the degree to which a college seminary population may be atypical. However, only about 25% of the subjects utilized in the present study would be expected to later enroll in a professional school of theology. The mean of all subjects on the self-rating pretest on the Fischer Altruism Scale was 46.83 (N = 103; maximum score possible = 60), indicating a basic positive attitude toward altruism. Subjects were neither promised nor received any reward for their participation in the experiment (except "thank you" when returning final materials and also in the daily bulletin at the end of the experiment); no course project credits,

monetary payments, or gifts were given. Surely, the behavior of participating in the experiment can be labeled "altruistic." Subjects persevered in their tasks for seven weeks, with a relatively low attrition rate (six in the experimental group, seven in the placebo group, two in the control group). So it would seem that self-recording would be effective in increasing altruistic behavior in persons who personally value altruistic behavior and would value its increase in themselves (though they might not otherwise specifically attempt to achieve this). A conclusion from the present study is that self-recording is an effective method of increasing altruistic behavior, while reading about helping and caring was not found to be significantly more effective than no treatment at all. However, further investigation of the effectiveness of systematic self-recording in comparison with reading about helping as methods of increasing altruistic behavior is indicated.

No other limits on the generalizability of the self-recording finding as a method of increasing altruistic behavior are evident. The unobtrusive measures cannot be judged reactive since they were part of the normal rhythm of the institution and in no way appeared to be associated with the experiment.

Suggestions for Further Research

Systematic replications of this study could be

carried out according to the basic method described above. The present study was facilitated by the fact that it took place on a small, residential campus. A shared environment minimizes the possibility of confounding from history. The unobtrusively measured altruistic opportunities were available to all subjects, a situation seemingly more difficult to accomplish on a large campus. Because such events were part of the normal rhythm of life, they did not attract attention as being connected with the experiment. Environments with some commonly shared living space would seem more suited for replications (e.g. residential colleges, high commitment religious or humanitarian groups, other residential facilities). Replication would also seem to be possible in a high school of moderate size.

Recruiting subjects for an experiment of such duration may present difficulties. Payment would present the anomaly of the "paid altruist." An interesting question would be the difference between those who persevere and those who drop out. Also, how different are those who participate from the general population?

The phenomenon that peer-rating better predicted the mean daily amount of self-recorded altruistic behavior than the subject's own self-rating must be further investigated. What differences, if any, are there between altruistic behavior and self-recorded altruistic behavior?

The usefulness of the D (depression) scale of the M.M.P.I. as a correlate of increase in recording altruistic behavior deserves continued investigation. Imbedded is the question of the relationship between altruistic behavior and positive feelings of self-worth. Are other measures of self-worth also predictors of altruistic behavior and of the potential to increase altruistic behavior?

A measure of empathy might be added to the experiment. In order to avoid increasing psychometric testing, it would be useful if empathy and altruism scales could be developed from the M.M.P.I. Hogan (1969) compared the responses of men with high ratings for empathy with those of men with low ratings, but he used two instruments for his pool of items (the California Psychological Inventory as well as the M.M.P.I.).

One position (Harris et al., 1973; Harris & Same-rotte, 1975; Weiss et al., 1971; Weiss et al., 1973) holds that altruistic acts are intrinsically reinforcing. Yet the attention paid to members of the experimental and placebo groups can be labeled as potentially extrinsically reinforcing. The relationship and overlap of intrinsic and extrinsic reinforcement in regard to altruistic behavior might profitably be explored, perhaps with close attention given to the age factor. Is extrinsic reinforcement useful in increasing altruistic behavior until intrinsic motivation takes over? A longitudinal study

would seem useful here.

A kind of ex post facto study could provide useful information about altruism, more specifically about "altruists" (i.e. persons identified as more frequently engaging in altruistic behavior). Such persons could be identified through lists generated by peers, through unobtrusive measures, and/or through psychometric testing. (Such identification might need to be confirmed through unobtrusive measures, unless the unobtrusive measures were themselves the identifiers.) Interviews and testing would then be used in an attempt to discover common characteristics and similar patterns in developmental histories. Then a reverse process could be employed with persons found to possess such characteristics and/or common influences in development. Do they engage in more altruistic behavior? Are they more likely to be influenced by procedures to increase altruistic behavior? Are positive feelings of self-worth and empathy characteristic of such persons? Are characteristics and patterns of behavior developed during childhood more significant for altruistic behavior in adulthood than adulthood training or attention programs?

A comprehensive model of the person with a high probability of engaging in altruistic behavior in a maximum number of situations could be developed. Such a model would indicate factors which affect altruistic behavior

and what steps could be taken to maximize the number and frequency of altruistic acts in adulthood. It would perhaps underline the importance of the development of sympathy, empathy, and feelings of self-worth in childhood. The relationship between these variables and focusing attention on altruism in adulthood would be described. Training programs would be considered. Other significant person variables and their relationship to various situations could be included. Moral development theory might be taken into account, insofar as it can be integrated with altruistic "attitudes." However, the focus would be on a model of altruistic behavior, not simply attitudes and judgments.

Educational Implications

Public schools are not and cannot be value free. "Good citizenship" is a value. School goals are values. All have implications for programs. Values Clarification and Kohlbergian Moral Development programs are not considered ideologically "off limits." Altruism education would seem to fit under the heading of "moral development." Altruism is the next step after the Kohlberg hierarchy. In the long run the study of altruism may be preferred to the philosophical debate to which Kohlberg's programs are open. So programs to increase altruistic behavior would not be out of place in the schools. If altruism is a value to be espoused, the first experiment

of the present study offers a method of operationalizing, of moving from attitude to behavior. Self-recording as a method of increasing altruistic behavior would seem suited for persons of high school age and beyond.

Education is more than classroom instruction. Improving our society and "building a better world" fall within the scope of the educational enterprise. While understanding the phenomenon of altruistic behavior in all possible aspects is a contribution, knowledge of the person who frequently engages in altruistic behaviors may prove to be of greater benefit in improving the quality of life. The present study has endeavored to contribute to knowledge in this latter area. In addition, self-recording has been shown to be a concrete method of actually increasing altruistic behavior.

Postscript

As a field experiment, the present study moved beyond the laboratory to an intervention in an ongoing, real life, everyday, normal environment. The 49 day duration of the study was a rarity among altruism experiments. The study demonstrated a way in which the findings of educational psychological research could be applied toward improving the quality of life. The technique found effective in this study can be used in a variety of settings with a great amount of adaptation. The findings regarding the D (depression) scale of the

M.M.P.I. suggest questions to be investigated on the relationship between positive feelings of self-worth and altruistic behavior. The finding on the peer-rating use of the Fischer Altruism Scale calls for further investigation of whether others know us better than we know ourselves in regard to altruism. It would be interesting to know if having an altruistic friend also affects one's behavior or only one's knowledge.

CHAPTER VI

SUMMARY

Two experiments were conducted in a seven-week field study of altruistic behavior. In experiment one, the subjects were 103 male, seminary college students, who were randomly assigned to one of three treatment groups. With all other subjects, the controls (n = 37) were given the M.M.P.I., rated themselves (pre- and posttest) on a measure of altruistic attitudes, and were rated (pretest) by a peer on the altruism measure. Members of the experimental group (n = 34) used counters and recording sheets to record the number of altruistic behaviors they engaged in each day. Placebo group members (n = 32) had a weekly reading assignment and accompanying brief test on helping and caring. A dependent variable in experiment one was six unobtrusively recorded measures of altruistic behavior. In total number of unobtrusively recorded altruistic behaviors, the self-recording (experimental) group was the highest ($\bar{X} = 2.26$ versus $\bar{X} = 1.72$ for the reading group and $\bar{X} = 1.46$ for the control group). The Kruskal-Wallis one-way analysis of variance by ranks test indicated a significant difference ($p < .02$) between the members of the three groups. Using the Mann-Whitney U statistic, a signi-

ficant difference was found between the self-recording and control groups ($p = .011$, one-tailed). However, the difference between the self-recording and reading groups only approached significance ($p = .078$, one-tailed). The difference between the reading and control groups was not significant ($p = .857$, two-tailed). A comparison was also made between the self-recording group and each of the other two groups, with difference scores (altruism measure self-rating posttest minus pretest) as the dependent variable. With the significance level set at $.025$, the difference between the self-recording and reading groups was significant ($p < .025$) but the difference between the self-recording and control groups only approached significance ($p < .05$).

In experiment two, the subjects were the 34 members of the self-recording group. Correlations were computed to determine if the mean daily amount of self-recorded altruistic behavior, the change in the daily recorded amounts of self-recorded altruistic behavior (the algebraic sum of the day-to-day changes in the amount of self-recorded altruistic behavior), and a measure of the adjusted mean daily amount (mean plus change) were significantly related to relevant M.M.P.I. scales (Hy, Hs, D, Pt, Pd, F-K, K), self-rating on the written measure of altruistic attitudes, and/or peer-rating on the written altruism measure. Significant relationships ($p < .05$) were found between rating by a peer and the mean daily amount of self-

recorded altruistic behavior ($\underline{r} = .38$), between the D (depression) scale of the M.M.P.I. and the change in the daily recorded amounts of altruistic behavior ($\underline{r} = -.36$), and between the D scale of the M.M.P.I. and the measure of the adjusted mean daily amount of self-recorded altruistic behavior ($\underline{r} = -.37$).

For persons of high school age and older, who value altruistic behavior and would value increasing it in themselves, self-recording would be an effective means of increasing such behavior. The inverse relationships between the D scale of the M.M.P.I. and change and adjusted mean daily amount of self-recorded altruistic behavior are consistent with research relating positive feelings of self-worth and altruistic behavior. The finding that peer-rating was related to mean daily amount of altruistic behavior suggests further investigation of whether others know us better than we know ourselves in the area of altruistic behavior.

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APPENDIX A

Name _____

Below are 78 statements. Indicate your attitude toward each of them by circling one number in front of each statement. Be sure to do all 78.

Circle 1 if you strongly disagree with the statement.

Circle 2 if you disagree with the statement.

Circle 3 if you agree with the statement.

Circle 4 if you strongly agree with the statement.

PLEASE COMPLETE THIS FORM TODAY OR TOMORROW.

CIRCLE ONE NUMBER FOR EVERY ITEM:

Strongly Disagree

Disagree

Agree

Strongly Agree

- | | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 1. Handicapped people who act offended when you try to assist them don't deserve your help. |
| 1 | 2 | 3 | 4 | 2. I would hesitate to give my blood to a stranger or to a volunteer organization like the Red Cross. |
| 1 | 2 | 3 | 4 | 3. Any wild animal that is dangerous or potentially dangerous to man ought to be destroyed. |
| 1 | 2 | 3 | 4 | 4. Under no conditions should laboratory animals be subjected to severe pain. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

- | Strongly Disagree | Disagree | Agree | Strongly Agree | |
|-------------------|----------|-------|----------------|---|
| 1 | 2 | 3 | 4 | 5. Women who have more than one illegitimate child don't deserve help from welfare. |
| 1 | 2 | 3 | 4 | 6. It is necessary to use extremely harsh penalties to prevent certain crimes, even in the most "civilized" countries. |
| 1 | 2 | 3 | 4 | 7. While some animal experiments are for the benefit of man, I would be willing to protest against any research agency that was careless or cruel to animals. |
| 1 | 2 | 3 | 4 | 8. A person who is suffering from an incurable disease ought to be allowed the choice of dying painlessly from a drug injection. |
| 1 | 2 | 3 | 4 | 9. If you help people too much they will soon depend on you for problems they could handle themselves. |
| 1 | 2 | 3 | 4 | 10. The torment that a condemned men suffers while awaiting execution is sufficient reason to abolish capital punishment. |
| 1 | 2 | 3 | 4 | 11. Most conscientious objectors who complain about the "immorality of war" are probably cowards. |
| 1 | 2 | 3 | 4 | 12. It is best to exterminate predators such as wolves and hawks which kill other wildlife and domestic animals. |
| 1 | 2 | 3 | 4 | 13. I would try to stop anyone I saw mistreating an animal. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

- | Strongly Disagree | Disagree | Agree | Strongly Agree | |
|-------------------|----------|-------|----------------|--|
| 1 | 2 | 3 | 4 | 14. It can be a real cruelty when attendants in mental hospitals and nursing homes do everything for the patient, and ignore his ability to do some things for himself. |
| 1 | 2 | 3 | 4 | 15. There is something inhuman about a moral code that denies a woman the right of birth control when she does not want more children. |
| 1 | 2 | 3 | 4 | 16. It is ridiculous to invest thousands of dollars in theaters and gymnasiums for people who contribute nothing to society, such as mental patients and retarded persons. |
| 1 | 2 | 3 | 4 | 17. There is no point in doing things for people who lead worthless lives. |
| 1 | 2 | 3 | 4 | 18. It is degrading for poor people to have to stand in line to receive welfare checks or food stamps. |
| 1 | 2 | 3 | 4 | 19. A woman has an obligation to stick by her husband, even if he abuses her. |
| 1 | 2 | 3 | 4 | 20. All suffering and sickness has a purpose, and some good usually comes from it. |
| 1 | 2 | 3 | 4 | 21. I feel bad about turning down a beggar who asks for a handout. |
| 1 | 2 | 3 | 4 | 22. Our responsibility to people of other nations ought to be as great as our responsibility to people of the United States. |
| 1 | 2 | 3 | 4 | 23. Almost any child needs to get a severe spanking every so often. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

- | Strongly Disagree | | | | | |
|-------------------|----------|---|-------|----------------|--|
| | Disagree | | Agree | | |
| | | | | Strongly Agree | |
| 1 | 2 | 3 | 4 | | 24. When organizations like the Salvation Army give hand-outs to drifters and bums, they encourage these people to remain a drain on society. |
| 1 | 2 | 3 | 4 | | 25. Rapists and other sex criminals deserve no mercy. |
| 1 | 2 | 3 | 4 | | 26. No living creature should be confined in a small cage except temporarily, for its own protection or for the protection of others. |
| 1 | 2 | 3 | 4 | | 27. If you happen to witness an accident or crime these days, the best thing to do is leave the scene and keep quiet about what you have seen or heard. |
| 1 | 2 | 3 | 4 | | 28. It is wrong to teach children patriotic songs which glorify war. |
| 1 | 2 | 3 | 4 | | 29. Execution is justifiable punishment for a soldier who deserts his buddies during combat. |
| 1 | 2 | 3 | 4 | | 30. It disturbs me to see animals that have been hit and killed by automobiles. |
| 1 | 2 | 3 | 4 | | 31. I favor the policy of allowing prisoners to be visited overnight by their wives (conjugal visits). |
| 1 | 2 | 3 | 4 | | 32. I find it hard to be sympathetic toward starving people in foreign countries, when there is plenty of trouble in our own country. |
| 1 | 2 | 3 | 4 | | 33. Not even the worst crimes justify the death penalty. |
| 1 | 2 | 3 | 4 | | 34. It is all right for scientists to use electrical shocks to study animal and human reactions, if knowledge may be increased by the research, and if the shocks are not too painful. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

- | Strongly Disagree | Disagree | Agree | Strongly Agree | |
|-------------------|----------|-------|----------------|--|
| 1 | 2 | 3 | 4 | 35. I seriously question the value of certain medical experiments which sacrifice the lives of dogs and monkeys. |
| 1 | 2 | 3 | 4 | 36. People who get so concerned about humane treatment of animals ought to focus on more important matters. |
| 1 | 2 | 3 | 4 | 37. One of the great injustices of racial segregation is that it leads to an inferior life for members of the minority. |
| 1 | 2 | 3 | 4 | 38. I would support a law that prohibited shooting animals for sport. |
| 1 | 2 | 3 | 4 | 39. Crimes like kidnapping are rape are so evil they ought to be punishable by death. |
| 1 | 2 | 3 | 4 | 40. Laws against abortion should be changed so that births resulting from rape and incest can be prevented. |
| 1 | 2 | 3 | 4 | 41. If you go out of your way to help someone, as often as not you will come out a loser. |
| 1 | 2 | 3 | 4 | 42. If I discovered that a person I knew had been hospitalized for a mental illness, I would be very cautious of him in the future. |
| 1 | 2 | 3 | 4 | 43. A doctor has spent many years training for his profession, and can't be blamed for being as interested in making money as he is in curing illness. |
| 1 | 2 | 3 | 4 | 44. If prisons were made more pleasant they wouldn't serve their purpose. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

Strongly Disagree

Disagree

Agree

Strongly Agree

- | | | | | |
|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 45. Homosexuals ought to be removed from society in some way, by keeping them in mental hospitals or prisons if necessary. |
| 1 | 2 | 3 | 4 | 46. It is silly for people to get upset about experimental animals being exposed to extreme temperatures, hunger, or stress, since the scientific knowledge that may come from such research far outweighs the comfort of a rat or monkey. |
| 1 | 2 | 3 | 4 | 47. Bullfighting is an extremely cruel "sport" and ought to be abolished. |
| 1 | 2 | 3 | 4 | 48. It is wrong for scientists to deceive people in order to study their reactions. |
| 1 | 2 | 3 | 4 | 49. Considering the way American Negroes have been abused, I can easily understand why some are resentful and even destructive at times. |
| 1 | 2 | 3 | 4 | 50. Even convicted criminals merit a better life than that which exists in the country's major prisons. |
| 1 | 2 | 3 | 4 | 51. I have no sympathy for a wealthy, educated person who wastes his life by becoming an alcoholic. |
| 1 | 2 | 3 | 4 | 52. I would not be too concerned if, while driving a car, I accidentally killed a wild animal such as a rabbit or squirrel. |
| 1 | 2 | 3 | 4 | 53. In many cases convicted criminals are victims of harsh circumstances and need help rather than punishment. |
| 1 | 2 | 3 | 4 | 54. Solitary confinement, where a prisoner is isolated in a dark cell, is unnecessarily cruel punishment no matter what the inmate has done. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

Strongly Disagree

Disagree

Agree

Strongly Agree

- 1 2 3 4 55. "An eye for an eye and a tooth for a tooth" is still a good guideline for dealing with criminals.
- 1 2 3 4 56. I would be willing to contribute money to save the lives of sea birds and fish that were dying from polluted waters.
- 1 2 3 4 57. A woman who makes her living as a prostitute deserves little kindness or respect from anyone.
- 1 2 3 4 58. I have no hesitation about people of any race or nationality living next door to me, so long as they are good people.
- 1 2 3 4 59. A drunken woman disgusts me.
- 1 2 3 4 60. It upsets me when people make rude or prejudiced comments about minority group members.
- 1 2 3 4 61. I see no objection to stepping on people's toes a little if it will help me get the important things I need in life.
- 1 2 3 4 62. I am not the kind of person who would assist the victims of a disaster by working nights or weekends in the emergency area.
- 1 2 3 4 63. All young people should be educated in methods of birth control, if only to spare some teen-age girl the ordeal of having an illegitimate child.
- 1 2 3 4 64. I would like to take part in a social action program for aiding needy or unfortunate persons.

CIRCLE ONE NUMBER FOR EVERY ITEM:

- | Strongly Disagree | Disagree | Agree | Strongly Agree | |
|-------------------|----------|-------|----------------|---|
| 1 | 2 | 3 | 4 | 65. Trapping animals for their fur should be outlawed if the animal must suffer by having its leg caught in a steel trap. |
| 1 | 2 | 3 | 4 | 66. The lives of lower animals are insignificant when compared to the lives of men. |
| 1 | 2 | 3 | 4 | 67. If a bank teller were seen spending money way out of proportion to his income it would be foolish not to suspect him of stealing. |
| 1 | 2 | 3 | 4 | 68. Despite all the talk about equality among the races, I would want to leave my neighborhood if colored people moved in. |
| 1 | 2 | 3 | 4 | 69. When people get into trouble they can't handle they shouldn't come crying to others about it. |
| 1 | 2 | 3 | 4 | 70. I find it annoying to be asked to help someone out of a jam. |
| 1 | 2 | 3 | 4 | 71. Children cannot be expected to behave properly unless they are instilled with a genuine fear of their parents. |
| 1 | 2 | 3 | 4 | 72. You can get into real trouble being a "Good Samaritan," and are better off steering clear of others' problems. |
| 1 | 2 | 3 | 4 | 73. Our children ought to learn that American soldiers killed in combat have died as heroes, and for the cause of freedom. |
| 1 | 2 | 3 | 4 | 74. I would be alarmed if I discovered that my young child's teacher was a homosexual. |

CIRCLE ONE NUMBER FOR EVERY ITEM:

Strongly Disagree

Disagree

Agree

Strongly Agree

- 1 2 3 4 75. In a country like the United States, where millions of dollars go to people on welfare, it is hard to be sympathetic toward persons who claim they don't get enough to eat.
- 1 2 3 4 76. Wars and famine are necessary evils which are needed to maintain the world's population at a reasonable level.
- 1 2 3 4 77. When scientists study the behavior of mental patients, one of their first considerations should be the integrity and privacy of every patient who takes part in the research.
- 1 2 3 4 78. It is disturbing for me to realize that some people are helpless and suffering much of the time.

APPENDIX B

Some Examples of Altruistic Behaviors

- Service projects
- helping someone with homework
- looking up something in the library for another
- buying something for another
- driving out of your way
- cleaning up a mess made by someone else
- errand for another
- taking another's tray to the garbage
- opening the door for another
- volunteering for a project
- doing another's work
- responding to a request for help
- asking a non-friend how things are going
- sitting at the table with someone who appears lonely
- passing to another in basketball when you could shoot
- going out of your way at all to benefit others
- talking to someone you really don't want to talk to
- cleaning the dorm
- changing behavior when asked
- sharing food
- associating with someone you really don't want to be with
- cleaning the dorm
- doing work for the student government
- confronting another in the other's interest

APPROVAL SHEET

The dissertation submitted by Raymond J. Webb has been read and approved by the following committee:

Dr. Ronald R. Morgan, Director
Assistant Professor, Foundations, Loyola

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Associate Professor, Foundations, Loyola

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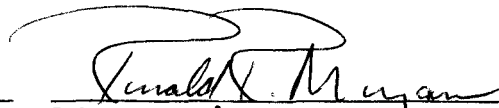
The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Date

4/20/79

Director's Signature

A handwritten signature in cursive script, appearing to read "Ronald R. Morgan", written over a horizontal line.