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MOOD AND CHILDREN'S GENEROSITY

A Thesis Presented

By

JEFFREY DAVID LOWELL

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

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Psychology Department

MOOD AND CHILDREN'S GENEROSITY

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES	v
Chapter	
I. INTRODUCTION	1
II. METHODS	11
Sampling Procedure and Experimental Setting	11
Design of the Study	12
Mood Induction Procedure	14
Cognitive Measure Procedure	17
Teachers' Rating Procedure	20
III. RESULTS	22
Analyses of Data	22
Donation	24
Prosocial Wish	30
Person-Oriented Wish	35
Self as Agent of the Wish	38
Others as Agents of the Wish	38
Magnitude of Gain	38
Story-Related Wish	38
Deficiency-Remedying Wish	41
Correlational Analyses	47
IV. DISCUSSION	51
Summary of Findings	51
Interpretation of Results	52
Donation Effects	52
Wish Score Effects	55
Conclusions	58
Critique of the Paradigm	59
REFERENCES	62
Appendix	
A. MOOD INDUCTION STORIES	64
B. TEACHERS' QUESTIONNAIRE	68
C. TABLES OF UNTRANSFORMED CELL MEANS	70

LIST OF TABLES

Table	Page
1. Analysis of Variance for Transformed Donation	25
2. Analysis of Variance for Transformed Donation	26
3. Cell Means for Transformed Donation: Grade Effect	27
4. Cell Means for Transformed Donation: Grade x Sex	27
5. Cell Means for Transformed Donation: Sex x Mood Category . .	29
6. Cell Means for Transformed Donation: Grade x Sex x Mood Category	29
7. Cell Means for Frequency per Subject of Prosocial Wish: Positivity	31
8. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Sex	31
9. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Mood Category	33
10. Cell Means for Frequency per Subject of Prosocial Wish: Sex x Positivity x Mood Category	33
11. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Treatment	34
12. Cell Means for Transformed Frequency per Subject of Person-Oriented Wish: Sex x Mood Category	36
13. Cell Means for Transformed Frequency per Subject of Person-Oriented Wish: Grade x Sex	36
14. Cell Means for Transformed Frequency per Subject of Person-Oriented Wish: Grade x Sex x Collapsed Treatment .	37
15. Cell Means for Transformed Magnitude of Gain per Subject: Sex x Mood Category	39
16. Cell Means for Transformed Frequency per Subject of Story-Related Wish: Mood Category	39
17. Cell Means for Transformed Frequency per Subject of Story-Related Wish: Positivity x Mood Category	40
18. Cell Means for Transformed Frequency per Subject of Story-Related Wish: Treatment	40
19. Cell Means for Transformed Frequency per Subject of Story-Related Wish: Grade x Positivity	42
20. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Positivity	42
21. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Collapsed Treatment	42
22. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Treatment	43
23. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Grade x Sex	43

Table	Page
24. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Grade x Collapsed Treatment . . .	45
25. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Sex x Collapsed Treatment . . .	45
26. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Sex x Positivity x Mood Category	46
27. Cell Means for Transformed Frequency per Subject of Deficiency-Remedying Wish: Sex x Treatment	46
28. Correlations for All Subjects	48
29. Correlations for Males Only	48
30. Correlations for Females Only	49
31. Cell Means for Donation in Cents per Subject: Grade	71
32. Cell Means for Donation in Cents per Subject: Grade x Sex .	71
33. Cell Means for Donation in Cents per Subject: Sex x Mood Category	72
34. Cell Means for Donation in Cents per Subject: Grade x Sex x Mood Category	72
35. Cell Means for Donation in Cents per Subject: Grade x Sex x Treatment	73
36. Cell Means for Frequency per Subject of Prosocial Wish: Positivity	74
37. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Mood Category	74
38. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Sex	74
39. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Mood Category x Positivity	75
40. Cell Means for Frequency per Subject of Prosocial Wish: Grade x Treatment	75
41. Cell Means for Frequency per Subject of Person-Oriented Wish: Grade x Sex x Collapsed Treatment	76
42. Cell Means for Frequency per Subject of Person-Oriented Wish: Grade x Sex	76
43. Cell Means for Frequency per Subject of Person-Oriented Wish: Sex x Mood Category	77
44. Cell Means for Magnitude of Gain per Subject per Three Wishes: Sex x Mood Category	77
45. Cell Means for Frequency per Subject of Story-Related Wish: Positivity	77
46. Cell Means for Frequency per Subject of Story-Related Wish: Mood Category x Positivity	78
47. Cell Means for Frequency per Subject of Story-Related Wish: Treatment	78
48. Cell Means for Frequency per Subject of Story-Related Wish: Grade x Positivity	78
49. Cell Means for Frequency per Subject of Deficiency- Remedying Wish: Treatment	79

Table	Page
50. Cell Means for Frequency per Subject of Deficiency- Remedying Wish: Collapsed Treatment	79
51. Cell Means for Frequency per Subject of Deficiency- Remedying Wish: Sex x Collapsed Treatment	79
52. Cell Means for Frequency per Subject of Deficiency- Remedying Wish: Grade x Sex	80
53. Cell Means for Frequency per Subject of Deficiency- Remedying Wish: Grade x Collapsed Treatment	80
54. Cell Means for Frequency per Subject of Deficiency- Remedying Wish: Sex x Treatment	81

C H A P T E R I

INTRODUCTION

Much public concern has been aroused by the incidence of violence, larceny and other criminal acts. Researchers in the social sciences have been exploring the determinants of antisocial behavior to find out how it occurs and how to prevent it. In the last decade they also began to study the determinants of prosocial behavior to find out how it occurs or fails to occur, and how to promote it. Behavior patterns are acquired over time. The personality and social development of children has become a focus of inquiry into the determinants of prosocial behavior.

The impact of the environment upon the child's behavior is mediated by the child's affects and cognitions. Events have cognitive and affective consequences for the individual, which in turn influence the relative probabilities of behaviors in the individual's repertoire. Affect has a role as a "setting condition" (Moore, Underwood & Rosenhan, 1973) in the choice, planning and timing of behavior.

Given the social relevance of the investigation of prosocial behavior, and the role of affect as a mediator between the environmental situation and the individual's behavior, it seems reasonable that the demonstration of a relationship between mood state and altruistic behavior in children has been the goal of many researchers (Moore, Underwood & Rosenhan, 1973; Rosenhan, Underwood & Moore, 1974; Underwood,

Froming & Moore, 1977; Harris & Siebel, 1975; Isen, Horn & Rosenhan, 1973; and Cialdini & Kenrick, 1976). The results have not been entirely consistent.

Moore et al. (1973), working with 42 white middle class 2nd and 3rd graders, gave each 25 pennies before a sham hearing test. Upon receiving the money, subjects were told they would later have an opportunity to share it with schoolmates who would not have a chance to participate. Affect induction followed the hearing test. Children were asked to tell the experimenter something that makes them happy (or sad in negative mood conditions). The experimenter repeated what the child said, then instructed the child to think about that happy (or sad) situation. After 30 seconds, the experimenter reminded the child that he/she could share the pennies but need not; then the experimenter left the room on the pretext of preparing for the next child. Thus, the donation was made in apparent privacy. In control conditions, subjects counted slowly or just sat quietly for 30 seconds. The data analysis resulted in a significant main treatment effect, with sharing increasing linearly from negative to control to positive affect conditions. The median donation by girls exceeded that for boys.

Rosenhan et al. (1974) hypothesized that altruism and self-reward would be negatively correlated under negative affect conditions, and positively correlated under positive affect conditions. They used a fixed resource model in which resources are limited and thus sharing with others results in a complementary decrease in resources for the self. The authors appear to stipulate that negative affect conditions create a situation effectively similar to scarcity of resources. In a

study with 36 second and third graders, an affect induction similar to Moore et al. (1973) was used, except that the subjects were allowed to reward themselves with candy as well as share pennies when the experimenter left the room. Both positive and negative groups rewarded themselves more than did the controls. The positive group shared more than control but the negative and control groups did not differ significantly. The Spearman correlation between sharing and self-reward was $+0.51$ in the positive group and -0.50 in the negative group. These results constitute a partial replication of Moore et al. (1973).

Harris and Siebel (1975) used happy, sad, angry and neutral conditions. They measured sharing and aggression (directed at a Popeye doll). Seventy-three third grade subjects were each given 50 balloons to keep or share. Following a brief activity intended to be distracting and irrelevant to subsequent procedures, the affect induction took place as in the Moore et al. (1973) study. Although the researchers noted that most sharing was done before playing with the toys, including the Popeye doll, the opportunities for sharing and aggression were concurrent. Mood induction did not effect how much children donated. Girls shared more than boys. Boys were more aggressive than girls overall and especially in the angry and happy conditions.

Isen et al. (1973) did a series of studies (which will be discussed in greater detail later) in which success and failure experiences were used to generate positive and negative moods in elementary school children. Given the opportunity to donate to a charity not associated with the experimenter, children in positive conditions gave more than controls, while no difference was found between controls and

the subjects in negative conditions. When the charity was associated with the experimenter and it was apparent that the experimenter knew of the subject's failure, then children in the negative conditions were more charitable than controls. This finding was explained as the failing subject's attempt to repair a tarnished image in the eyes of the experimenter. When children whose failure was private were compared with children whose failure was observed by the experimenter, the former group did not differ from controls but the latter donated more than controls. The authors noted that although subjects had the opportunity to donate in apparent privacy, 80% of donations were made in the experimenter's presence or reported to the experimenter by the subject.

Underwood et al. (1977) speculated that the Rosenhan et al. and Harris et al. studies did not replicate Moore et al. because of the use of multiple dependent measures which may have altered the induced affect. Using 153 parochial school children in grades 1 through 5, sharing was measured after affect induction. (Incidental attention to a picture display was measured after the sharing opportunity, but it was found that attention bore no significant relationship with treatment condition or amount of sharing.) Sharing increased linearly from negative to control to positive affect conditions. Sharing also increased monotonically with age, except that first graders gave more than would be expected on the basis of the second to fifth grade pattern. The authors suggested that first graders were unable to grasp the value, the "exchange rate," of the money given them. This writer suspects that instead of being more ignorant, first graders may be less planful than second graders.

The general evidence, then, is that positive affect promotes prosocial behavior. [When guilt is not involved, and public failure does not elicit image reparation], negative affect promotes sociophobia, the desire to avoid others and to husband one's resources for oneself. Positive affect, on the contrary, creates sociophilia, the tendency to move toward others and to consider their needs on a par with one's own. (Rosenhan, Moore & Underwood, 1976, pp. 250, 251)

The polarity (later termed positivity) of a mood is not the only useful dimension for distinguishing among moods. The intensity of a mood is also highly variable. Isen, Shalke, Clark and Sharp (1978) note that mood has a cognitive dimension. The cognitive content is an integral feature of a mood. A mood state has implications for both the content of thought and the options for categorizing new input (Isen, Clark & Schwartz, 1976). The cognitive differences among different moods can be expected to influence the relative probabilities of various behaviors, all else held constant. It makes little sense, a priori, to group behavioral data purely on the basis of "positive mood" when the range of associated cognitive content is potentially immense. Six moods will be described below, three positive and three negative; three cognitive content categories will be represented by one positive and one negative mood each. (Please note that the names of the categories are intended to denote bipolar scales rather than one particular pole of the category. For instance, "social affinity" sounds positive but its use here is to name a content category that includes both positive and negative moods.)

Social affinity moods arise from experiences that affect the way a person perceives his/her relationship to others. A particular experience may make a relationship seem more or less close, or charac-

terized by greater or less shared affection or shared values.

A positive mood would be expected to follow a warm interpersonal interaction: this type of mood will be called positive social affinity. Positive thoughts about others may facilitate perception of their needs, promote recognition of opportunities to help, reduce preoccupation with the self, and enhance the perception of sharing with others as self-rewarding. Intuition suggests that generous behavior is highly likely in this affective state. Prosocial cognitions would be expected to occur more frequently in a positive social affinity mood than in a neutral condition.

Negative social affinity moods result from experiences of conflict and/or rejection. Estrangement from others may inhibit prosocial action because of decreased awareness of others' needs, decreased concern about others' welfare, or preoccupation with others as objects of hurt and angry feelings. For some individuals, negative social experience may promote prosocial behavior: if the feeling of estrangement were unbearable, a person might seek direct recourse (or symbolic reconciliation) in some beneficent act. Nonetheless, negative social affinity would be normally expected to reduce the incidence of prosocial acts and thoughts compared with a neutral condition.

Self-concern moods are products of experiences which influence the way a person perceives him/herself. Such moods often follow experiences which "have implications for one's value, one's goodness or competence, and thus affect self-esteem" (Staub, 1978).

A positive mood resulting from a success experience is an example of positive self-concern. Positive thoughts about the self may

evoke a "warm glow" which might promote general optimism and affection toward others (Isen et al., 1973), as well as self-confidence and self-approval. In this frame of mind, compared with a neutral condition, both prosocial behavior and prosocial thoughts would be more likely. On the other hand, a person in a mood of positive self-concern may feel complacent and self-satisfied. Especially if the person receives material rewards in conjunction with a success experience, he/she may perceive the material resources as justly deserved. The need to share might not be perceived and altruistic behavior might not surface (Staub, 1978). Nevertheless, based upon Isen's work with children (Isen et al., 1973) and also upon studies cited earlier showing a consistent relationship between positive moods and generosity, the weight of the evidence leads this writer to expect that prosocial behavior would be promoted by a mood of positive self-concern.

The corresponding negative mood, resulting from a failure experience, for example, is a more complex situation. Negative thoughts about the self may carry the implication that future rewards are not forthcoming, i.e., the individual feels in some way not good enough to procure resources as needed. When a condition of scarcity is perceived, sharing is inhibited (Rosenhan et al., 1974).

The negative mood resulting from a failure experience may initially be very self-preoccupied. This state is aversive, so the person may seek to terminate it. Isen et al. (1978) have suggested that behavior is instrumental to the continuation or termination of a mood state. When opportunities for prosocial behavior are available, they provide two potential exits from the negative state: either positive

feedback from the beneficiary or observer of the prosocial act, or self-reward for doing what socializing agents have labelled as "good." The latter notion is what Cialdini and Kenrick (1976) have called the hedonic function of altruism. Isen et al. (1973) explained the finding of failure-induced charitability with the concept of image reparation. This notion merits closer examination.

The child whose failure is observed by the adult experimenter presumably feels that his/her image is tarnished in the eyes of the adult. The child may believe that the adult thinks less of him/her as a result of the failure. Aware of the social approbation attached to generosity, the child expects that sharing will elicit the adult's approval and thus mend the child's image. This rationale presumes the adult's awareness of the child's sharing. When the child shares in the adult's presence or announces that a contribution has been made, the desired balance obtains: the public failure is mitigated by the public donation. Isen et al. (1973) make a special point of reporting the children's efforts to publicize their prosocial behavior. Yet, their procedure provided subjects the opportunity to contribute in privacy. There were no indications that subjects suspected that their apparent privacy was a sham. The effect on the observing adult of a child's public failure could not be counteracted by a generous act that was truly private. The fact that many children publicized their sharing does not support an image reparation explanation for the generosity of children who shared privately following public failure; on the contrary, if private sharing served to repair a tarnished image, then the publicity would have been superfluous. Isen's interpretation seems to

be applicable only to public donors. (One additional point: image maintaining efforts may be elicited by public failure in any situation which has a bearing on the person's self-concept. In the context of negative mood-evoking experiences, those which tend to produce negative social affinity may also generate negative self-concern when the situation is perceived as a social failure. When others observe an event which reflects negatively on the self, image-repairing efforts may follow.)

In a mood of negative self-concern, prosocial behavior is less likely than it would be under neutral conditions, except if the situation provides an opportunity for image reparation, or if altruism is experienced as self-therapeutic. The latter two possibilities would be expected to increase the likelihood of generous behavior.

There are moods which are not fundamentally related to one's self-esteem nor to one's relationships with others. Events due to chance or luck may elicit strong feelings that are centered on impersonal aspects of the world. These states will be called general moods.

A positive general mood results from good fortune, e.g., buying a winning lottery ticket. While positive cognitions are probably involved in this mood, their content could be quite diverse. One's propensity for altruistic behavior would depend upon one's own feeling of need, one's perception of other's need, and the degree to which beneficence results in self-reward.

The corresponding negative general mood, a product of misfortune, may vary from (1) mild disappointment to (2) severe self-pity depending on the nature and magnitude of the loss. If the unlucky event

jeopardizes one's welfare, or engenders self-recriminations and erodes self-confidence, then negative self-concern could occur. (The possibility that a misfortune could evoke at least two distinct types of mood shows that there is not a one-to-one correspondence between eliciting conditions and the resultant mood state. Individual differences and surrounding circumstances probably both contribute to the variability of the affective responses.) Although negative general mood states are not likely to elicit prosocial behavior, whatever prosocial behavior does follow is probably an attempt to remedy the negative mood state.

The present study is an attempt to extend the understanding of how moods affect positive behavior. Different kinds of positive and negative moods were induced to explore the effects on children's generosity and cognitions. An attempt was made to account for stable individual differences in characteristic mood by asking teachers how they perceive the moods of the children.

C H A P T E R I I

METHODS

Sampling Procedure and Experimental Setting

Subjects were 85 second, third and fourth grade children of both sexes from two elementary schools in Northampton, Massachusetts. Both schools were older buildings serving predominantly white, middle to lower middle class families. South Street School had one class per grade, while Florence Elementary had two. South Street is closer to Smith College and the University of Massachusetts in Amherst, so it may have a larger proportion of children from academic families. The teachers in Florence Elementary appeared younger as a group. In both schools, the teachers adhered to a traditional classroom structure.

Subjects were solicited using packets of information carried home by the children. The packets contained a letter describing the study, a permission slip to be signed indicating approval or disapproval of the child's participation, and a stamped return envelope. This method of recruitment was used because school officials felt it would be legally inadvisable for them to release names and addresses of the pupils. If no response was received after several weeks, a follow-up packet was sent home.

Of 137 possible subjects from Florence Elementary School, 88 responses (64%) were received. Of those 88, 65 parents (74%) gave permission. The net result was that 47% of possible subjects were actually

available.

Of 55 possible subjects from South Street School, 35 responses (64%) were received. Of those 35, 28 parents (80%) gave permission. The net result was that 51% of possible subjects were actually available.

Overall, 48% of the possible subjects were permitted to participate in the study.

While 93 subjects were run, the data from 8 were thrown out for the following reasons: 4 subjects predicted the amount of their donation before the mood induction took place; 2 subjects were unable to think of any events on which a mood induction could be based; one subject in a negative mood condition did not donate until after he heard the remedial positive sample story; and one subject spoke only in a barely audible whisper, leading the experimenter to doubt whether her responses could be considered representative of a normal population.

All experimental procedures were conducted in one of the rooms of the child's school. Neither school had a room that was always available, so the experimenter accepted what the principal offered: a vacant cafeteria, a vacant office, or a lightly trafficked corridor.

The experimenter was the author, a 29 year old white male psychology graduate student.

Design of the Study

For both sexes, in each grade, subjects were randomly distributed across treatment and control conditions. There were six treatment conditions, three of which induced positive moods and three negative.

In the positive social affinity condition, the child was expected to experience positive feelings due to a satisfying social relationship; in the negative social affinity condition, the child was expected to experience negative feelings due to a dissatisfying social relationship. In the positive self-concern condition, the child was expected to experience positive feelings due to a situation that enhanced self-esteem; in the negative self-concern condition, the child was expected to have negative feelings due to a situation that promoted self-doubt. In the positive general condition, the child was expected to have positive feelings due to good luck; and in the negative general condition, bad luck was expected to elicit negative feelings. In the control condition, the child was interviewed about his/her food preferences.

Each subject was presented with a sample story which illustrated the occurrence of the target affect and labelled it verbally. The verbal labels in the stories (see Appendix A) served to define the moods. Next, the child was asked to describe a related event that he/she experienced and to reminisce about it. After the mood induction came two dependent measures. Subjects were given an opportunity to share pennies that were given to them earlier. Then they were asked to make three wishes.

This study was also an attempt to test the interactive effects of individual differences and mood induction. Each child's classroom teacher filled out a questionnaire about the frequency with which each subject displays particular positive affects. It was assumed that the teacher's everyday experience with the child had provided sufficient

familiarity to permit a valid judgment of each child's "typical" mood states.

Mood Induction Procedure

As subjects were escorted individually by the experimenter from their classroom to the research setting, they were questioned gently about the class activities at the time of their departure, in order to develop rapport and reduce anxiety. E: "What was your class doing when we left just now? Were you working in a group or by yourselves? Have you been going to this school for a long time?" In all cases, subjects were taken from class during a sedentary academic period, never during recess, gym, art, music, lunch or any special activity.

Upon arrival, the subject was told: "We're testing some new hearing equipment, and we're asking some of the children in your room to help us. For helping us today, we are going to give you 30 cents that you can use in any way you want." E poured 30 pennies from an envelope into his hand and showed them to the child. The pennies were then replaced in the envelope and placed on the table near the subject. It was intended by this gesture that the subject understand that the pennies had changed ownership. E continued: "Some of the children in the school are going to get a chance to help us and some aren't. We are going to give some money to the kids who don't get to come. Later, when I leave the room, you can share some of your pennies with the other kids by putting them in that can (E indicated a can with a slotted top, labelled PENNIES FOR OTHER CHILDREN) if you want to. But you don't have to. Just do what you want. Do you understand?" After pro-

viding any requested clarification, E introduced the hearing test:

"This machine is called an audiometer. It makes very soft sounds through these headphones. When you put the headphones on, please raise your hand when you hear a sound. I won't tell you when I am making a sound, so you must listen very carefully. Be sure to raise your hand as soon as you hear something. Ready? (Wait) O.K., please put the headphones on." E presented 12 tones, 3 frequencies x 2 intensities x 2 ears.

Then E said: "Thank you. We are done with this. Now, I want us to do something else. First, I will tell you a story about someone, a boy/girl your age. Are you ready to listen? Here it comes." E told each child a story about a same-sex child. The subject was expected to derive a clearer grasp of the target affect by hearing the story. By describing a situation in which those feelings might arise, the experimenter tried to convey a central instance of the type of circumstances which promote those feelings; thus, the example was provided to specify the target mood (see Appendix A). E continued: "Do you think most kids would feel that way if what happened to Peter/Judy happened to them?" (Child responded.) "Would you?" (Child responded.) (One child responded that he didn't think other kids would feel as the story character did, nor would he. He nonetheless went on to produce stories which were appropriate for his mood condition. The child's appraisal of the sample story is of minor importance compared with his/her selection of an appropriate event.) Whether or not the child concurred, E asked: "I would like you to remember something that happened to you which made you feel (E named the affects mentioned in the story) . . .

O.K.? When you thought of something, please tell me what it was. (E waited. Child responded.) Can you think of something else which made you feel (E repeated the affects from the story)?"

If one example was more suitable, E picked the better one for subsequent use. The child's productions were evaluated according to these criteria: (a) Are the child's feelings comparable to those of the protagonist in the sample story?; (b) If the story is complex, are the target feelings at least as prominent as the additional feelings?; and (c) Is the affect in the story more intense than the child can manage, i.e., is the child's composure disrupted, his/her coloring visibly altered, and/or his/her facial expression displaying great discomfort? If (a) or (b) were affirmative without indications of (c), then the story was judged suitable. (One child actually held a scowl for several seconds before his face relaxed; shortly thereafter he calmly and fluently offered a story with appropriate content.) If both stories seemed equally suitable, E selected the first one offered. (Many children were unable to think of a second story.)

E proceeded, saying: "I would like you to think about one of these, let's say (E identified one story with a key phrase from the major action). Try to remember exactly how it was and how you felt. Without telling me, think about it and imagine that it is happening again now." E maintained intermittent eye contact with the subject during the 30 second induction period, to help the child maintain attention upon the task. He then excused himself from the room, saying: "I have to get some materials ready for the next person. Remember your money. (E pointed to the envelope.) You can share it (E pointed to

the can) if you want, but you don't have to. You can put the envelope in your pocket. I'll be back in a minute or two. Would you wait for me?" E left the room for 90 seconds, during which time he wrote down the stories told by the child. Upon his return, the cognitive measure followed.

Cognitive Measure Procedure

The rationale for a measure of prosocial cognition is based on the mediating influence of cognitions upon behavior. Since various cognitions may lead to the same behavior, it was expected that some knowledge of the child's cognitions would facilitate understanding of the behavior. Perhaps the cognitive task would offer a mode of expression for cognitions that would not otherwise become manifest in overt action. The child was asked to make three wishes in order to elicit in an unstructured way a sample of the child's current goals (i.e., end-states that he/she wished for) while under the influence of a specific mood.

E said: "Now, I would like to ask you something. If you could make three wishes and have them come true by magic, what would you wish?" E recorded all productions, nodding affirmatively for each. If the child did not spontaneously produce three wishes, E told the child how many wishes remained.

In order to insure that participants in the study were free of after-effects from residual negative affect, children in negative mood conditions received positive mood induction before returning to class. E said: "I want to tell you one more story. . . . Would you think of

something that happened to you that made you feel. . . ."

The experimenter thanked each subject, escorted the child back to class, and returned to the experimental setting to count the pennies in the can.

The content of the wishes was scored according to categories that were derived from inspection of the children's wishes. An attempt was made to capture the major dimensions of variability among the wishes. The following are descriptions of the categories.

a. Prosocial: Scored 0 if the wish benefits self only, e.g., "I wish I was rich"; scored +1 if it benefits family or friends, e.g., "I wish my Dad would get better, 'cause he's been sick"; or scored +2 if it benefits others, e.g., "I wish nobody was ever poor again."

b. Agency of self: Scored 0 if the goal of the wish is achieved by the action of others, or if the self is passive, e.g., "I wish I had a new bike"; scored +1 if the goal is achieved by the action of the self, e.g., "I wish I'll be a famous dancer." This category may detect positive expectations about the capabilities or potential capabilities of the self. The positive self-concern mood manipulation is conceptually related to these expectations.

c. Agency of others: Scored 0 if others are passive and not acting as agents of the child's satisfaction, e.g., "I wish I was better at math"; scored +1 if the goal of the wish is a product of the beneficence of others, e.g., "I wish to go places with my family more often." Cognitions about the benevolence of others are related to feeling a sense of community with others, which is the intended result of the positive social affinity mood manipulation.

d. Person-oriented: Scored 0 if the direct effect of the wish is to modify the status of an object, e.g., "I wish I had a million dollars," even though the money would have consequences for the recipient; scored +1 if the direct effect of the wish is to change the situation of a person, e.g., "I wish my friends and I would not fight." This category is tuned to social and self-related cognitions which are the intended results of the social affinity and self-concern mood induction procedures.

e. Magnitude of gain: Scored 0 if the goal of the wish cannot be construed as a gain; scored +1 when the goal is a small, realistically possible gain, e.g., "I wish I had \$5"; scored +2 if the gain is large, e.g., "I wish I had a Corvette." The magnitude of the gain might vary with the intensity of the mood state.

f. Relation to story: Scored 0 if the content of the wish is unrelated to the sample story or the child's story; scored +1 if the content is in the same category as the mood induction story (regardless of whether the story was a positive or negative instance of the category), e.g., for a child in the negative self-concern condition, "I wish I was on TV" is in the same content category because the goal is related to the child's self-esteem; scored +2 if some of the content of the wish is identical to the content of the sample story or the child's story, e.g., for a child who told a story about a pleasant visit to his uncle, "I wish to go see my uncle" has the "uncle" in common with the story. While a story-related wish can be seen as a validation of the mood manipulation, it further suggests that the story topic was salient for the child since it remained a focus of attention.

g. Deficiency-remedy: Scored 0 if the goal of the wish is purely a gain, a bonus, e.g., "I wish I had a race car"; scored +1 if the wish eliminates a personally-experienced deficiency, e.g., "I wish my Dad would not yell so much," because the excessive yelling seems to be experienced by the child as a deficiency (perhaps) in the peacefulness of the home, or (perhaps) in his/her security in the parent's approval. This category is intended to reflect the experience of deficiency that may result from events which generate negative self-concern or negative social affinity.

Each wish was scored on the basis of the seven categories described above. The scores for the three wishes (or fewer in the few cases where children made less than three wishes) were summed across wishes yielding seven dependent variables. The seven scores were not independent of each other since the three wishes were the basis of all of them. The reliability of the scoring system was assessed by having the wishes of 25 random subjects rescored by a co-worker who took no part in the development of the scoring system. The interscorer concordance rate was 94.7% across 511 items.

Teachers' Rating Procedure

After all subjects had undergone the experimental procedure, each teacher who had subjects in her class was asked to complete a questionnaire (see Appendix B) in which the children who participated in the study were to be rated on the frequency with which they display 8 positive affects. These 8 affects represented the three mood categories used in the induction procedure. The 8 ratings were collapsed

to 3 by adding the scores within categories. A sum teacher's rating score for each child was derived by adding the scores for all 8 affects. The sum score was used as an index of the positivity of the child's typical moods.

When they were given the questionnaire, the teachers were told that the purpose was to help account for individual differences. Individually each teacher was offered monetary compensation for the time required to complete the questionnaire; every teacher refused to accept payment.

C H A P T E R I I I

RESULTS

Analyses of Data

Several analyses were employed to examine the data. The design of each will be described below. The findings will be presented across each dependent variable. (In order to determine whether the data from the two schools could be justifiably pooled and analyzed together, the data were analyzed for a school effect, and for a school x treatment interaction. Grade and sex were treated as covariates to compensate for differences between the distributions of subjects from the two schools. An unweighted-means analysis of variance determined that both the school effect ($F_{1,69} = 2.62, p \leq .11$) and the school x treatment interaction ($F_{6,69} = .83, p \leq .55$) were not statistically significant. The data from the two schools were pooled for further analyses.)

Unweighted-means analyses of variance were performed to handle the unequal cell sizes (Winer, 1971). For all dependent variables, the distributions of the raw data were skewed from normal distribution. Low scores were very frequent, keeping the means low, but highly deviant individuals inflated the variances and extended the upper tails of the distributions. For this reason, a square root transformation was applied to the donation scores. All of the wish scores were incremented by 0.5, then the square root transformation was applied (Myers, 1972).

The first analysis (I) employed a grade (3) x sex (2) x treatment (7) design, using all 85 subjects. Since the factorial design did not include the control group, the mood induction conditions and the control group were arranged along a single treatment dimension. The seven treatments arise from one positive affect group and one negative affect group for each of the three bipolar mood categories--self-concern, social affinity, general--and one neutral control treatment. This seven-levelled treatment variable obscured the factorial structure of the induced affects, so a second analysis (II) was performed in which the 12 control subjects were omitted while the 6 remaining treatments were arranged into 3 mood categories with a positive and a negative version of each. The positive vs. negative variable will be called positivity. The resulting design was grade x sex x mood category x positivity, (3x2x3x2) with 73 subjects.

As described in the introduction, an attempt was made to examine whether individual differences in usual or customary affect modify the influence of treatments. In the third analysis (III), teachers' ratings of children's typical moods were introduced as covariates; otherwise, the design was identical to analysis II.

In order to compare the results of this study with previous findings, it was necessary to compare positive, negative and neutral affect conditions. The 3 mood categories were collapsed, yielding a new treatment variable with 3 levels: positive moods, neutral control, and negative moods. The design of this analysis (IV) was grade x sex x collapsed treatment (3x2x3), with N=85.

The correlational analyses generated simple intercorrelations

among donation, grade, the 7 wish scores, and the sum score from the teachers' ratings. This analysis was done for all subjects together, and again for each sex separately.

All of the pairwise comparisons of transformed cell means were done using Scheffé's method for post hoc contrasts. The experiment-wise error rate was set at 10% (Myers, 1972, pp. 363-64).

All significant results are reported below. Insignificant effects are generally not mentioned. The results of analysis III are not reported because the teachers' ratings failed to account for a significant portion of the variance when introduced as covariates in the analysis.

Donation. A main effect for grade was found in analysis I ($F_{2,43} = 9.19, p \leq .001$), analysis II ($F_{2,37} = 12.90, p \leq .001$), and analysis IV ($F_{2,67} = 3.41, p \leq .039$). (See Tables 1, 2, and 3.) Including control subjects, the difference between second and fourth grades was significant. Without control subjects, fourth graders donated significantly more than either second or third graders.

A grade x sex interaction was found in analysis II ($F_{2,37} = 3.58, p \leq .038$). (See Table 4.) Females' donations increased sharply between second and third grades, and then only slightly between third and fourth, while males' donations decreased slightly from second to third and then increased sharply between third and fourth grades. Fourth grade males donated significantly more than everyone but fourth grade females. Second grade females gave significantly less than third or fourth grade females.

TABLE 1

ANALYSIS OF VARIANCE FOR TRANSFORMED DONATION
(from Analysis II)

SOURCE	SS	df	MS	F	p ≤
Grade	31.07	2	15.54	12.90	.001
Sex	.99	1	.99	.82	.371
Positivity	1.21	1	1.21	1.01	.323
Mood Category	.57	2	.28	.24	.791
Grade x Sex	8.63	2	4.32	3.58	.038
Grade x Positivity	5.90	2	2.95	2.45	.100
Sex x Positivity	.41	1	.41	.34	.561
Grade x Mood Category	7.64	4	1.91	1.59	.199
Sex x Mood Category	8.29	2	4.15	3.44	.043
Positivity x Mood Category	.53	2	.26	.22	.805
Grade x Sex x Positivity	.18	2	.09	.08	.926
Grade x Sex x Mood Category	13.55	4	3.39	2.81	.039
Grade x Positivity x Mood Category	8.24	4	2.06	1.71	.168
Sex x Positivity x Mood Category	6.89	2	3.44	2.86	.070
Grade x Sex x Positivity x Mood Category	3.89	4	.97	.81	.529
Error	44.57	37	1.20		

TABLE 2
ANALYSIS OF VARIANCE FOR TRANSFORMED DONATION
(from Analysis IV)

SOURCE	SS	df	MS	F	p ≤
Grade	10.65	2	5.32	3.41	.039
Sex	5.20	1	5.20	3.33	.072
Treatment (collapsed)	8.45	2	4.23	2.71	.074
Grade x Sex	.17	2	.08	.05	.948
Grade x Treatment	13.21	4	3.30	2.11	.089
Sex x Treatment	5.09	2	2.55	1.63	.204
Grade x Sex x Treatment	5.53	4	1.38	.89	.477
Error	104.63	67	1.56		

TABLE 3

CELL MEANS FOR TRANSFORMED DONATION:
 GRADE EFFECT
 (Analyses I, II, IV)

GRADE	DONATION (N=85)	DONATION (N=73)
2	1.54 (36) sd = 1.25	1.57 (30) sd = 1.20
3	2.09 (27) sd = 1.15	2.13 (25) sd = 1.09
4	2.80 (22) sd = 1.64	3.19 (18) sd = 1.45

TABLE 4

CELL MEANS FOR TRANSFORMED DONATION:
 GRADE X SEX
 (Analysis II)

GRADE	MALE	FEMALE
2	1.74 (15) sd = 1.40	1.40 (15) sd = .99
3	1.63 (11) sd = 1.13	2.52 (14) sd = .91
4	3.57 (10) sd = 1.68	2.71 (8) sd = 1.01

One main effect and several interactions involving mood category were found. Since each mood category includes both a positive and a negative mood, mood category is not a strictly affective variable. The author suggests that mood category be understood as a variable describing a focus of current cognitions in the subject. In the self-concern mood conditions, attention is centered on the self; the self is the topic of ongoing cognition. Similarly, in social affinity conditions, attention is focused upon one's relation to others. In general mood conditions, the focus is upon objects and impersonal aspects of the world.

A sex x mood category interaction was found in analysis II ($F_{2,37} = 3.44, p \leq .043$). (See Table 5.) While none of the intercell differences were significant, females were most generous in the general mood conditions, while males were most generous in self-concern related moods and least generous in the general mood conditions.

From analysis II, there was also a grade x sex x mood category interaction ($F_{4,37} = 2.81, p \leq .039$). (See Table 6.) An inspection of cell means showed that in social affinity conditions males' donations decreased slightly from second to third grade, then increased by a large amount from third to fourth; females' donations increased moderately from second to third, with virtually no change from third to fourth. In self-concern conditions, males' donations increased with grade level, while females' increased from second to third and then decreased in fourth grade. In general moods, males' donations decreased from second to third grade, then increased by a smaller amount from third to fourth resulting in a net decrease with age; females' dona-

TABLE 5

CELL MEANS FOR TRANSFORMED DONATION:
SEX X MOOD CATEGORY
(Analysis II)

SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Male	2.16 (12) sd = 1.71	2.57 (12) sd = 1.66	1.91 (12) sd = 1.54
Female	2.20 (12) sd = .80	1.92 (13) sd = 1.13	2.23 (12) sd = 1.39

TABLE 6

CELL MEANS FOR TRANSFORMED DONATION:
GRADE X SEX X MOOD CATEGORY
(Analysis II)

GRADE	SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
2	Male	1.51 (5) sd = 1.47	1.56 (6) sd = 1.29	2.30 (4) sd = 1.71
	Female	1.69 (5) sd = .95	.88 (5) sd = .88	1.62 (5) sd = 1.10
3	Male	1.35 (4) sd = .94	2.43 (3) sd = .41	1.31 (4) sd = 1.54
	Female	2.57 (5) sd = .50	2.85 (5) sd = .76	2.06 (4) sd = 1.42
4	Male	4.32 (3) sd = 1.01	4.75 (3) sd = .81	2.13 (4) sd = 1.62
	Female	2.53 (2) sd = .42	2.08 (3) sd = .14	3.47 (3) sd = 1.41

tions increased with age.

Mean comparisons showed that fourth grade females in general moods gave significantly more than second graders in self-concern conditions. Fourth grade males in self-concern conditions gave significantly more than: second grade males in self-concern and general conditions, third grade males in social affinity conditions, fourth grade males in general conditions, and fourth grade females in self-concern conditions. Fourth grade males in social affinity conditions were reliably more generous than: second and third grade males in social affinity conditions, second grade males in self-concern conditions, and third grade males in general conditions. In summary, in the fourth grade, males' donations increased in the social affinity and self-concern moods but not in the general mood conditions, while females' donations increased in the general moods but not in the other two categories of mood conditions. Primarily in the fourth grade, boys and girls responded differently to the mood conditions.

Prosocial wish. Analysis II revealed a main effect for positivity ($F_{1,37} = 4.13, p \leq .049$), with more prosocial wishes coming from subjects in negative mood conditions. (See Table 7.)

A grade x sex interaction was found in analysis I ($F_{2,43} = 5.40, p \leq .008$) and analysis II ($F_{2,37} = 5.38, p \leq .009$). (See Table 8.) While females made more prosocial wishes than males in second and third grades, that pattern was reversed in fourth grade. Fourth grade males scored significantly higher than third grade males and fourth grade females, when control groups were excluded. Including controls,

TABLE 7

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT
OF PROSOCIAL WISH: POSITIVITY
(Analysis II)

POSITIVE	NEGATIVE
.80 (36)	.92 (37)
sd = .22	sd = .38

TABLE 8

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT
OF PROSOCIAL WISH: GRADE X SEX
(Analyses I, II)

GRADE	(N=85)		(N=73)	
	MALE	FEMALE	MALE	FEMALE
2	.81 (18) sd = .25	.88 (18) sd = .35	.83 (15) sd = .27	.85 (15) sd = .33
3	.75 (12) sd = .15	.89 (15) sd = .33	.75 (11) sd = .16	.91 (14) sd = .34
4	1.07 (12) sd = .46	.76 (10) sd = .16	1.05 (10) sd = .47	.77 (8) sd = .18

those differences remained significant and fourth grade males exceeded second grade males as well.

A grade x mood category interaction was obtained in analysis II ($F_{4,37} = 4.51, p \leq .005$). (See Table 9.) The mood category eliciting the most frequent prosocial wishes varied from grade to grade. Among second graders, social affinity conditions were the strongest elicitors; in third grade it was the general moods, and in fourth the self-concern conditions had the greatest frequencies of prosocial wishes. Second graders in social affinity conditions reliably exceeded fourth graders in general conditions and also second graders in general and self-concern conditions.

In analysis II, there was a grade x positivity x mood category interaction ($F_{4,37} = 4.27, p \leq .006$). Including the control groups, the grade x treatment interaction from analysis I was also significant ($F_{12,43} = 2.56, p \leq .012$). (See Tables 10 and 11.) With the exception of third graders in social affinity conditions and second graders in self-concern conditions, the frequency of prosocial wishes in negative moods was equal to or greater than the frequency in the corresponding positive moods. Considered separately, the positive mood conditions appear to show a slight trend toward increased prosocial wishes in higher grades; the negative conditions in each mood category have different patterns of mean frequencies, which probably account for the grade x mood category interaction reported above. In negative social affinity, the age trend is U-shaped. In negative general the age trend is inverted-U-shaped; and in negative self-concern the frequencies increased with age. From analysis I, none of the intercell dif-

TABLE 9

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT
OF PROSOCIAL WISH: GRADE X MOOD CATEGORY
(Analysis II)

GRADE	SOCIAL AFFINITY	SELF CONCERN	GENERAL
2	1.07 (10) sd = .43	.75 (11) sd = .16	.71 (9) sd = 0
3	.76 (9) sd = .17	.84 (8) sd = .24	.93 (8) sd = .40
4	.99 (5) sd = .40	1.13 (6) sd = .51	.71 (7) sd = 0

TABLE 10

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
PROSOCIAL WISH: GRADE X POSITIVITY X MOOD CATEGORY
(Analysis II)

GRADE	SOCIAL AFFINITY		SELF CONCERN		GENERAL	
	POS	NEG	POS	NEG	POS	NEG
2	.81 (5) sd = .23	1.32 (5) sd = .44	.81 (5) sd = .23	.71 (6) sd = 0	.71 (5) sd = 0	.71 (4) sd = 0
3	.81 (5) sd = .23	.71 (4) sd = 0	.84 (4) sd = .26	.84 (4) sd = .26	.71 (4) sd = 0	1.14 (4) sd = .50
4	.97 (2) sd = .37	1.00 (3) sd = .50	1.00 (3) sd = .50	1.27 (3) sd = .58	.71 (3) sd = 0	.71 (4) sd = 0

TABLE 11

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
 PROSOCIAL WISH: GRADE X TREATMENT
 (Analysis I)

GRADE	POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
2	.81 (5) sd = .23	1.32 (5) sd = .44	.81 (5) sd = .23	.71 (6) sd = 0	.71 (5) sd = 0	.71 (4) sd = 0	.85 (6) sd = .36
3	.81 (5) sd = .23	.71 (4) sd = 0	.84 (4) sd = .26	.84 (4) sd = .26	.71 (4) sd = 0	1.14 (4) sd = .50	.71 (2) sd = 0
4	.97 (2) sd = .37	1.00 (3) sd = .50	1.00 (3) sd = .50	1.27 (3) sd = .58	.71 (3) sd = 0	.71 (4) sd = 0	.93 (4) sd = .44

ferences were significant. From analysis II, fourth graders in the negative self-concern mood made significantly more prosocial wishes than second graders in negative self-concern or positive general moods. Second graders in the negative social affinity mood scored significantly higher than all other second graders, third graders in positive general and both self-concern moods, and fourth graders in both general moods.

Person-oriented wish. Analysis II revealed a sex x mood category interaction ($F_{2,37} = 4.21, p \leq .023$). (See Table 12.) In social affinity conditions, males and females made person-oriented wishes with virtually equal frequency; but in self-concern conditions the males made more, while the reverse pattern held in general mood conditions. Males in self-concern conditions reliably exceeded males in general conditions and females in self-concern conditions.

A grade x sex interaction was obtained from analysis IV ($F_{2,67} = 3.51, p \leq .036$). (See Table 13.) The age trend for males was U-shaped, while the age trend for females was inverted-U-shaped. No intercell differences were significant.

Analysis IV also produced a significant grade x sex x collapsed treatment interaction ($F_{4,67} = 2.90, p \leq .028$). (See Table 14.) Among second graders, the mean frequency for males in negative moods exceeded that for males in positive moods by a much greater amount than did females in negative moods exceed females in positive moods. In third grade, the difference between the female groups was larger than that between the male groups. In fourth grade, the direction of the differ-

TABLE 12

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
PERSON-ORIENTED WISH: SEX X MOOD CATEGORY
(Analysis II)

SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Male	1.18 (12) sd = .45	1.32 (12) sd = .43	.93 (12) sd = .37
Female	1.21 (12) sd = .35	.93 (13) sd = .31	1.11 (12) sd = .33

TABLE 13

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
PERSON-ORIENTED WISH: GRADE X SEX
(Analysis IV)

GRADE	MALE	FEMALE
2	1.21 (18) sd = .46	1.07 (18) sd = .36
3	1.01 (12) sd = .41	1.13 (15) sd = .40
4	1.18 (12) sd = .45	1.09 (10) sd = .36

TABLE 14

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF PERSON-
ORIENTED WISH: GRADE X SEX X COLLAPSED TREATMENT
(Analysis IV)

GRADE	SEX	POSITIVE	NEGATIVE	CONTROL
2	Male	.88 (8) sd = .34	1.56 (7) sd = .26	1.27 (3) sd = .58
	Female	1.10 (7) sd = .40	1.18 (8) sd = .33	.71 (3) sd = 0
3	Male	1.02 (6) sd = .37	1.04 (5) sd = .51	.71 (1) sd = 0
	Female	.98 (7) sd = .36	1.18 (7) sd = .36	1.87 (1) sd = 0
4	Male	1.22 (5) sd = .52	1.16 (5) sd = .44	1.14 (2) sd = .62
	Female	1.05 (3) sd = .30	.91 (5) sd = .28	1.58 (2) sd = 0

ences was reversed with positive moods generating higher frequencies than negative moods for both sexes. The mean score for second grade males in negative moods was significantly higher than second grade males in positive moods, second grade female controls, third grade females in positive moods and fourth grade females in negative moods.

Self as agent of the wish. There were no significant results.

Others as agents of the wish. There were no significant results.

Magnitude of gain. A significant sex x mood category interaction was found in analysis II ($F_{2,37} = 4.49, p \leq .018$). (See Table 15.) Females wished for larger gains than males in the general mood conditions but the reverse trend occurred in self-concern and social affinity mood conditions. Females in self-concern conditions wished for significantly smaller gains than females in general moods or males in social affinity mood conditions.

Story-related wish. A main effect for mood category was found in analysis II ($F_{2,37} = 4.32, p \leq .021$). (See Table 16.) The frequency of story-related wishes was significantly higher in social affinity moods than in general moods.

From analysis I, a main treatment effect was significant ($F_{6,43} = 3.15, p \leq .012$). The positivity x mood category interaction from analysis II ($F_{2,37} = 4.68, p \leq .015$) is comparable, except for the exclusion of the control groups. (See Tables 17 and 18.) Of the social affinity moods, the positive condition evoked more story-related wishes, but in general and self-concern moods the pattern was reversed

TABLE 15

CELL MEANS FOR TRANSFORMED MAGNITUDE OF GAIN
 PER SUBJECT: SEX X MOOD CATEGORY
 (Analysis II)

SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Male	2.24 (12) sd = .29	2.15 (12) sd = .23	1.99 (12) sd = .49
Female	2.07 (12) sd = .22	1.87 (13) sd = .42	2.28 (12) sd = .24

TABLE 16

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
 STORY-RELATED WISH: MOOD CATEGORY
 (Analysis II)

SOCIAL AFFINITY	SELF CONCERN	GENERAL
1.04 (24) sd = .37	.92 (25) sd = .31	.80 (24) sd = .26

TABLE 17

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
 STORY-RELATED WISH: POSITIVITY X MOOD CATEGORY
 (Analysis II)

	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Positive	1.12 (12) sd = .41	.79 (12) sd = .20	.75 (12) sd = .15
Negative	.95 (12) sd = .32	1.04 (13) sd = .34	.85 (12) sd = .34

TABLE 18

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
 STORY-RELATED WISH: TREATMENT
 (Analysis I)

POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
1.12 (12) sd = .41	.95 (12) sd = .32	.79 (12) sd = .20	1.04 (13) sd = .34	.75 (12) sd = .15	.85 (12) sd = .34	.85 (12) sd = .34

with higher means in the negative conditions. The mean score for the positive social affinity condition was significantly higher than the positive self-concern condition and both general mood conditions, based upon analysis II. Also from that analysis, the mean frequency in the negative self-concern condition significantly exceeded that in positive general and positive self-concern conditions.

Analysis II revealed a grade x positivity interaction ($F_{2,37} = 3.49, p \leq .041$). (See Table 19.) The frequency of story-related wishes was higher in negative moods than in positive among second graders, but the opposite was true of fourth graders. The difference between the second grade means was significant.

Deficiency-remedying wish. The positivity effect from analysis II ($F_{1,37} = 7.84, p \leq .008$) is similar to the collapsed treatment effect from analysis IV ($F_{2,67} = 4.86, p \leq .011$). (See Tables 20 and 21.) In both analyses, the difference between positive and negative conditions was significant.

A main effect for treatment was found in analysis I ($F_{6,43} = 3.10, p \leq .013$). (See Table 22.) While no intercell differences were significant, the pattern of higher frequencies in negative moods appeared more pronounced in social affinity and self-concern moods than in general moods.

The grade x sex interaction was significant in analysis I ($F_{2,43} = 4.30, p \leq .020$) and analysis IV ($F_{2,67} = 4.84, p \leq .011$). (See Table 23.) The age trend for males was U-shaped, but the age trend for females was inverted-U-shaped. No intercell differences were

TABLE 19

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
STORY-RELATED WISH: GRADE X POSITIVITY
(Analysis II)

GRADE	POSITIVE	NEGATIVE
2	.80 (15) sd = .25	1.05 (15) sd = .36
3	.89 (13) sd = .30	.87 (12) sd = .30
4	1.05 (8) sd = .42	.90 (10) sd = .32

TABLE 20

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
DEFICIENCY-REMEDYING WISH: POSITIVITY
(Analysis II)

POSITIVE	NEGATIVE
.75 (36) sd = .17	.95 (37) sd = .34

TABLE 21

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
DEFICIENCY-RELATED WISH: COLLAPSED TREATMENT
(Analysis IV)

POSITIVE	NEGATIVE	CONTROL
.75 (36) sd = .17	.95 (37) sd = .34	.88 (12) sd = .40

TABLE 22

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
DEFICIENCY-REMEDYING WISH: TREATMENT
(Analysis I)

POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
.82 (12)	1.05 (12)	.71 (12)	1.00 (13)	.71 (12)	.79 (12)	.88 (12)
sd = .28	sd = .40	sd = 0	sd = .37	sd = 0	sd = .20	sd = .40

TABLE 23

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
DEFICIENCY-REMEDYING WISH: GRADE X SEX
(Analyses I, IV)

GRADE	MALE	FEMALE
2	.89 (18) sd = .39	.82 (18) sd = .22
3	.75 (12) sd = .15	.95 (15) sd = .38
4	.87 (12) sd = .30	.79 (10) sd = .28

significant.

In analysis IV, there was a grade x collapsed treatment interaction ($F_{4,67} = 2.91, p \leq .028$). (See Table 24.) In positive moods, the frequency of deficiency-remedying wishes increased from second to fourth grade, despite a negligible decrease from second to third grade. In negative moods, the frequency decreased with age. In control conditions, the age trend was curvilinear; the mean frequency was smaller than for either collapsed treatment in second grade and higher than either in third and fourth grades. The mean for second graders in negative moods was significantly higher than for second or third graders in positive moods.

Analysis IV also revealed a sex x collapsed treatment interaction ($F_{2,67} = 5.23, p \leq .008$). (See Table 25.) While the means for negative moods were higher than positive for both sexes, male controls scored like males in positive moods, but female controls scored like females in negative moods. The mean for female controls was significantly higher than for male controls. Females in positive moods had mean scores significantly lower than females in negative or control conditions, and also significantly lower than males in negative moods.

There was a sex x positivity x mood category interaction from analysis II ($F_{2,37} = 3.50, p \leq .041$), and with controls, a sex x treatment interaction from analysis I ($F_{6,43} = 3.79, p \leq .004$). (See Tables 26 and 27.) The positivity effect described above among males was relatively large in self-concern moods, small in social affinity moods, and absent in general moods. In contrast, among females the positivity effect was large in social affinity moods, and small in both general

TABLE 24

CELL MEANS FOR TRANSFORMED FREQUENCY PER
 SUBJECT OF DEFICIENCY-REMEDYING WISH:
 GRADE X COLLAPSED TREATMENT
 (Analysis IV)

GRADE	POSITIVE	NEGATIVE	CONTROL
2	.74 (15) sd = .13	1.03 (15) sd = .42	.71 (6) sd = 0
3	.71 (13) sd = 0	.95 (12) sd = .32	1.29 (2) sd = .82
4	.82 (8) sd = .31	.81 (10) sd = .22	.93 (4) sd = .44

TABLE 25

CELL MEANS FOR TRANSFORMED FREQUENCY PER
 SUBJECT OF DEFICIENCY-REMEDYING WISH:
 SEX X COLLAPSED TREATMENT
 (Analysis IV)

SEX	POSITIVE	NEGATIVE	CONTROL
Male	.78 (19) sd = .23	.97 (17) sd = .41	.71 (6) sd = 0
Female	.71 (17) sd = 0	.93 (20) sd = .29	1.05 (6) sd = .53

TABLE 26

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
 DEFICIENCY-REMEDYING WISH: SEX X
 POSITIVITY X MOOD CATEGORY
 (Analysis II)

SEX	SOCIAL AFFINITY		SELF CONCERN		GENERAL	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
Male	.94 (6) sd = .38	.99 (6) sd = .48	.71 (7) sd = 0	1.25 (5) sd = .41	.71 (6) sd = 0	.71 (6) sd = 0
Female	.71 (6) sd = 0	1.11 (6) sd = .34	.71 (5) sd = 0	.84 (8) sd = .24	.71 (6) sd = 0	.88 (6) sd = .27

TABLE 27

CELL MEANS FOR TRANSFORMED FREQUENCY PER SUBJECT OF
 DEFICIENCY-REMEDYING WISH: SEX X TREATMENT
 (Analysis I)

SEX	POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
Male	.94 (6) sd = .38	.99 (6) sd = .48	.71 (7) sd = 0	1.25 (5) sd = .41	.71 (6) sd = 0	.71 (6) sd = 0	.71 (6) sd = 0
Female	.71 (6) sd = 0	1.11 (6) sd = .34	.71 (5) sd = 0	.84 (8) sd = .24	.71 (6) sd = 0	.88 (6) sd = .27	1.05 (6) sd = .53

and self-concern moods. The mean frequency for males in negative self-concern conditions was significantly higher than the means for males and females in positive self-concern, males and females in positive general, males in negative general, females in positive social affinity (all from analyses I and II), and (from analysis I) males in control conditions.

Correlational analyses. Simple Spearman correlations were obtained among all dependent variables, grade level, and the summary score from the teachers' ratings of children's typical mood. Intercorrelations among the wish measures will not be reported because scores arising from the same data are not independent.

For the correlations based upon all subjects together, the cutpoints for significance at the .01 and .05 levels respectively are .2787 ($t_{83} = 2.64$) and .2072 ($t_{83} = 1.93$). For females, the cutpoints are .3888 ($t_{41} = 2.70$) and .3009 ($t_{41} = 2.02$). For males, the cutpoints are .3931 ($t_{40} = 2.70$) and .3044 ($t_{40} = 2.02$). (See Tables 28, 29, and 30.)

Donation correlated with grade for all subjects and also for males and females separately. Donation correlated with prosocial wish for males but not for females.

The teachers' rating score was negatively related to person-oriented wish for males, i.e., boys who were reported to have the most positive typical moods tended to make few person-oriented wishes. The teachers' rating was positively related to other-as-agent of the wish for females, i.e., girls whose typical moods seemed most positive to

TABLE 28
CORRELATIONS FOR ALL SUBJECTS

	GRADE	DONATION	SUM RATING
Donation	.400**		-.113
Prosocial	.095	.260*	-.060
Person-Oriented	-.017	.150	-.140
Self-Agent	.109	.106	-.045
Other-Agent	-.106	.092	.004
Gain	.106	.078	-.051
Story-Related	-.038	.176	-.027
Deficiency	-.032	.096	-.027
Sum Rating	-.074	-.113	

*p \leq .05

**p \leq .01

TABLE 29
CORRELATIONS FOR MALES ONLY

	GRADE	DONATION	SUM RATING
Donation	.434**		-.121
Prosocial	.310*	.467**	.046
Person-Oriented	-.054	.272	-.346*
Self-Agent	.042	.114	-.190
Other-Agent	-.079	.274	-.233
Gain	.142	.047	-.121
Story-Related	.046	.325	-.194
Deficiency	-.083	.185	-.166
Sum Rating	-.157	-.121	

*p \leq .05

**p \leq .01

TABLE 30
CORRELATIONS FOR FEMALES ONLY

	GRADE	DONATION	SUM RATING
Donation	.369*		-.187
Prosocial	-.142	-.070	-.089
Person-Oriented	.025	-.128	.161
Self-Agent	.203	.006	.143
Other-Agent	-.136	-.208	.353*
Gain	.064	.114	.026
Story-Related	-.118	.017	.219
Deficiency	.027	-.044	.171
Sum Rating	.026	-.187	

*p ≤ .05

their teachers were more likely to wish for events that must be carried out by others.

C H A P T E R I V

DISCUSSION

Summary of Findings

Generosity increased with age; the largest increase occurred earlier among females than among males. Self-concern related moods elicited the largest donations from boys, but general moods did so from girls.

Prosocial wishes were more frequent in negative mood conditions than in positive. For males, the frequency increased sharply between third and fourth grades.

Story-related wishes were most frequent in social affinity moods and least frequent in general moods. The mean for the positive social affinity condition was higher than those for positive self-concern or either general mood condition. Negative self-concern aroused more story-related wishes than positive self-concern and positive general mood conditions. Among second graders, those in negative moods made more story-related wishes than those in positive moods.

Deficiency-remedying wishes were most frequent in negative moods. In the negative mood conditions, the frequency decreased with age. Males in negative self-concern moods made more deficiency-remedying wishes than males in positive self-concern conditions.

Interpretation of Results

Donation effects. Sharing increased with age, as shown by the grade effects in the analyses of donation. Significant differences were found between the second and fourth grade means. The age effect supports previous findings (e.g., Underwood et al., 1977). It is plausible to suggest that sharing increases by virtue of the developmental increase in internalization of the value of sharing.

Significant increases in sharing occurred between grades two and three among females, and between grades three and four among males. A possible explanation of this finding is differential socialization of male and female children. Girls are traditionally encouraged to engage in maternal role play (e.g., to play house with doll babies), thus they may have experienced adult approval for past nurturant behavior. Since sharing can be seen as a nurturant behavior, girls may have been exposed to a stronger confluence of social prescriptions to share than were boys. While children of both sexes are encouraged to share, girls are presented with a nurturant maternal role-ideal with which to identify, and boys are not. This additional influence from parents and others may have resulted in the earlier increase in sharing by girls.

Another differential socialization explanation capitalizes upon a major distinction between traditional male and female role-ideals: relatively speaking, boys are more often supported for assertive, independent, self-sufficient behavior, while girls are more often supported for compliant, passive, cooperative behavior. One would then expect girls to be more susceptible than boys to the social prescrip-

tion to share. Girls might share more at earlier ages than boys because they were taught to be more conforming and receptive to adults' admonitions to share.

The sex x mood category interaction provided evidence consistent with the differential socialization arguments. Males were most generous in self-concern related moods, while females were most generous in general moods. Because the socialization of males traditionally emphasizes assertive, independent characteristics, their self-images may be highly responsive to success and failure experiences which bear upon their self-appraisal of their ability to act in a competent and self-sufficient manner. The self-concern moods may have been especially effective for males in eliciting sharing as a confirmation or remediation of their self-image. In other words, when boys are occupied with such matters as success and failure, they may be more prone to make other gestures which have a bearing on their self-esteem. Generosity may be that sort of gesture.

Females' responsiveness to the general mood conditions (essentially, the effects of luck) may be related to the somewhat passive character of the traditional female stereotype. The nature of this possible link is unclear.

Notable in its absence is any significant effect of the positivity of the mood state upon children's generosity. The previous research (reviewed in the Introduction) with comparable age groups has shown if anything an inhibitory effect of negative moods on prosocial behavior. In contrast, Isen's notion of image reparation (Isen et al., 1973) is an example of the way in which positive behavior can affect

mood to help restore emotional equilibrium (Isen et al., 1978). Perhaps previous research, with their relatively broad mood conditions, allowed children to select for mood induction only the negative events which they had already assimilated, i.e., recollections which barely if at all disturbed their emotional equilibrium. In that case, the induced negative mood might have been insufficient to arouse equilibrating prosocial impulses. In contrast, the present study required the child to supply events from much narrower ranges, leaving the child fewer options and increasing the likelihood that threatening feelings were aroused. This argument rests upon the questionable assumption that mild negative feelings are less likely to reach the threshold for eliciting positive social behavior, compared with strong negative feelings. This argument also leaves unresolved the question of why subjects in the present study's positive, negative and control mood conditions were on the average comparably generous.

Another possible explanation for the failure of children in positive mood conditions to donate significantly more than those in negative mood conditions is the personal style and training of the experimenter. If the experimenter inadvertently conveyed too warm and supportive an attitude, it is plausible to hypothesize that the negative mood-inducing effects were eradicated or even reversed. The experimenter's training and experience as a school psychologist may have left him with habits in relating to children such that negative mood effects could conceivably have been attenuated or lost. This possibility is rendered unlikely by the finding of a positivity effect on prosocial wishes.

Wish score effects. Prosocial wishes were significantly more frequent in the negative mood conditions than in the positive ones, as evidenced by the positivity effect. Prosocial wishes in negative moods suggest an explanation in which the child's benevolence has acquired a self-rewarding property (Cialdini et al., 1976). Self-commendation may ameliorate the negative mood state. This account raises the issue: why was there a positivity effect on prosocial wish and not on donation? Staub has suggested (personal communication) that negative moods might have increased prosocial wishes because such wishes reaffirmed the child's connectedness to other people. Feeling connected to others would serve as a source of comfort to the child.

The grade x sex interaction showed that the age trend for males' prosocial wish was like their age trend for donation, i.e., a significant increase occurred between third and fourth grades. For males, prosocial wish was significantly correlated with donation. These results were expected; they are consistent with the developmental notion offered to explain the grade effect for donation. On the other hand, females made numerically fewest prosocial wishes in the fourth grade--the age at which they made their largest donations. No ready explanation is apparent, although Staub (personal communication) has suggested that the increased donations may represent conformity to social norms rather than internalized values.

The frequency of story-related wishes was highest in social affinity moods (based upon the mood category effect) and lowest in general moods (the difference was significant), with self-concern falling between. This variable is interpreted as an index of the saliency

of the mood-inducing material. The rationale is that unimportant themes are soon forgotten or ignored, while important themes recur in the child's activities. As seen in the treatment effect, the means for positive social affinity and negative self-concern conditions were the highest (significantly higher than positive general and positive self-concern moods). Negative self-concern themes may have persisted, to appear in the wishes, by virtue of being most troublesome for subjects to resolve. Their continued preoccupation with that material may indicate that it remained a source of discomfort. Positive social affinity moods may have promoted story-related wishes simply because subjects prefer not to relinquish that feeling of interpersonal relatedness; in everyday life, positive social affinity may be a more transitory experience than positive self-concern, so children may dwell upon events which engender that mood state. The transitory nature of positive social affinity refers to the fact, often noted by school teachers, that social alliances among elementary school children tend to be temporary and somewhat fluid.

Story-related wishes among second graders were most frequent in negative moods, as evidenced by the grade x positivity interaction. Younger subjects in negative moods may have had more difficulty than older subjects in re-establishing emotional equilibrium. Their higher frequency of story-related wishes suggests that the mood-inducing material required further attention.

Significantly more deficiency-remedying wishes were made in negative moods than in positive. This result was expected; it offers evidence of the validity of the positive-negative distinction in the affect induction procedures.

The grade x collapsed treatment interaction revealed that the frequency of deficiency-remedying wishes decreased with age in negative moods, but in positive moods there was virtually no change from second to third grades and a small insignificant increase from third to fourth. The finding for negative moods may be explained as a developmental increase in the child's ability to re-establish emotional equilibrium. Consistent with the interpretation of story-related wishes, the persistence of deficiency-oriented cognitions suggests possible difficulty in assimilating the affect-inducing material.

The deficiency-remedying wishes of control subjects revealed a possible flaw in the control procedure. As evidenced by the sex x collapsed treatment interaction, female controls made deficiency-remedying wishes at a high rate, similar to that of females in negative moods; male controls' frequency was low, similar to males in positive moods. Our culture seems to socialize women to be more weight conscious than men. Boys hear, "Eat well so you'll grow big and strong." For them, an interview about food preferences may have reminded them of past encouragement to eat; perhaps it even stimulated fantasies of the "big, strong man" they were taught to want to become. Girls see pictures of slender female models and may hear their mothers discuss dieting, which indirectly teaches them to be concerned about the negative social consequences of indulging in one's favorite foods. For them, an interview about food preferences may have elicited vague fears about their present or future physical appearance. In summary, the differential socialization experiences of boys and girls may have rendered the control procedure somewhat positive for boys and somewhat

negative for girls.

As noted earlier, deficiency-remedying wishes were more frequent in negative than in positive moods. This positivity effect was greatest among males who were in self-concern conditions but among females the positivity effect was numerically greatest in social affinity conditions. These findings, from the sex x treatment interaction, are interpreted as further support for the differential socialization hypotheses offered earlier. The male pursuing the stereotypical sex role ideal is most threatened by events which arouse negative self-concern: a failure experience is hardest to reconcile with an ideal of independence, competence, self-sufficiency, etc. The female pursuing her stereotypical role ideal is most vulnerable to events arousing negative social affinity: a social rejection is hardest to reconcile with an ideal requiring social compatibility, compliance, etc. Generally, a mood condition which aroused a high frequency of deficiency-remedying wishes is viewed as one which stimulated the subjects' awareness of deficiencies (real or feared). The affect-inducing material may be seen as threatening to the child's image of him/herself in relation to the traditional role ideals promoted by significant adults.

Conclusions

Perhaps it seems that too much burden is placed on socialization practices as an explanation for the interactions of the sex of the subject with grade or any of the treatment variables. The grade x sex interactions allow for differential maturation explanations as well, but socialization and maturation are hard to distinguish empirically

in the current context. The innate, biological differences between the sexes have not been considered as sources of variance. Sex differences were not anticipated, and in today's relatively "liberated" social climate their enduring importance may be received with surprise.

As evidenced by the large within-cell variance in the raw donation scores (e.g., see Table 35 in Appendix C), individual differences were considerable. Teachers' ratings of children's typical moods were not an effective measure of the relevant differences. For all subjects, the sum teachers' ratings had no reliable predictive utility for generosity or prosocial wishes.

Finally, the results of the present analyses must be taken most cautiously. Due to problems in obtaining adequate numbers of subjects, the cell sizes were small and unequal. Normal distribution and homoscedasticity were shaky assumptions. The interpretations offered here were meant to be stimulating and provocative. Conclusions must await future research.

Critique of the Paradigm

When the type of mood induced has been specified, there remains the issue of mood intensity. The author assumes that the probability of a behavioral expression of a given affect is proportional to the intensity of the affect. It may also be that affect finds behavioral expression only when its intensity exceeds a particular threshold. Just as a person may not behave selfishly unless a certain degree of self-protective concern is experienced, so a person may not behave altruistically unless some other threshold of affective intensity is

reached.

Sharing with schoolmates who are not in need is hardly a central exemplar of altruistic behavior. Nobody's welfare is in jeopardy, nor would any person's lot be noticeably improved by the receipt of a few pennies or balloons. Since some sacrifice is made for the sake of others, these acts are clearly within the realm of prosocial behavior; but it is surprising that none of the researchers who use this dependent measure have seen fit to qualify their conclusions with some recognition that a child may be highly prosocial and yet not feel particularly moved by the opportunity for this relatively weak demonstration of altruism.

A further aspect of the Moore et al. (1973) paradigm merits comment. Consider the inferences available to the subject as the experimenter presents the situation. The wording of the sharing opportunity informs the subject that a condition of inequity exists in that some children will participate in the study--and receive a reward for their mere presence--while others will be denied such an opportunity. The subject is then told that he/she may rectify the situation, in effect, by sharing their windfall gain with others. The experimenter, who was ostensibly or at least proximally responsible for the creation of the inequity, is now casting the burden of amelioration upon the heretofore powerless child. How can the subject construe this situation? Perhaps the reward really was earned or will be shortly, in which case the gain is deserved and rightfully kept unshared (Staub, 1978). Perhaps the experimenter is modelling the principle that inequities are tolerable, in which case sharing is unnecessary. Or perhaps the experimenter is

rewarding me (the subject) when he/she could have as well (stochastically) rewarded any of the others, in which case the reward must be shared with others who had as much right to it. These cognitive projections are purely speculative, serving only to illustrate a few extreme interpretations to which this procedure is vulnerable.

Finally, by virtue of the unusual situation in which the child is placed, the subject's attention is drawn to the prospect of the hearing test and the interaction with the adult, rather than toward other specific children who are the normal, ecologically valid beneficiaries of the child's generosity.

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A P P E N D I X A
MOOD INDUCTION STORIES

NOTE: In the following stories, the underlined words are the verbal labels which define the target mood.

Positive Social Affinity

It is a rainy day, but _____ doesn't mind. He/she and a group of friends are on their way to a costume party. The streets are muddy, and some spots are very slippery. _____ slipped and fell, getting his/her costume wet and dirty. _____'s friends looked at him/her and they looked at each other; then, yelling and laughing, they jumped into the mud, one after another. They all stood up, dripping with mud, and continued to laugh and yell together. _____ felt very close to the others; he/she felt both friendly and accepted. It reminded him/her of telling jokes with his/her friends on the bus ride home from a school trip. _____ felt close, friendly and accepted then, too.

Negative Social Affinity

It is a rainy day, but _____ doesn't mind. He/she and a group of friends are on their way to a costume party. The streets are muddy, and some spots are very slippery. _____ slipped and fell, getting his/her costume wet and dirty. _____'s friends looked at him/her as he/she stood up, dripping with mud. The others began to laugh and yell. One shouted, "Don't come near us! You'll get us muddy too!" Another said, "You can't go to a party like that!" _____ felt lonely, hurt, and angry. It reminded him/her of the time he/she ran for class president and only got one vote. _____ felt lonely and hurt then, too.

Positive Self-Concern

It is a rainy day, but _____ doesn't mind. He/she and a group of friends are on their way to a costume party. The streets are muddy, and some spots are very slippery. One spot is so slippery that they start slipping, sliding and falling down. _____'s friends got wet and messy; they were dripping with mud. _____ slipped, too, but he/she managed to stop his/her fall by touching the ground with his/her hands; _____ was the only one clean and dry. _____ felt skillful, pleased with him/herself and smart. It reminded him/her of the time when he/she was the only one in the class who could answer a question the teacher asked. He/she felt pleased with him/herself and smart then, too.

Negative Self-Concern

It is a rainy day, but _____ doesn't mind. He/she and a group of friends are on their way to a costume party. The streets are muddy, and some spots are very slippery. _____ slipped and fell, getting his/her costume wet and dirty; he/she was dripping with mud. His/her costume was ruined. His/her friends had no trouble getting past the slippery spot; one slipped but kept his/her balance. _____ felt clumsy, dumb and ashamed. It reminded him/her of a time when he/she was asked a question in class but he/she couldn't answer. Everyone else had their hands up; they all seemed to know! He/she felt ashamed and dumb then, too.

General Positive

It is a rainy day, but _____ doesn't mind. He/she and a group of friends are on their way to a costume party. The streets are muddy, and some spots are very slippery. _____ slipped and fell, getting his/her costume wet and dirty. He/she went on to the party anyway. When the costumes were judged, _____ won the first prize for the most unusual one. He/she got a big ribbon saying "First Prize," and also a game he/she wanted for a long time. _____ felt happy and lucky. It reminded him/her of the time when he/she bought a raffle ticket which won a new bicycle. _____ felt lucky and happy then, too.

General Negative

It is a rainy day, but _____ doesn't mind. He/she and a group of friends are on their way to a costume party. The streets are muddy, and some spots are very slippery. _____ slipped and fell, getting his/her costume wet and dirty. He/she went home to change, but he/she couldn't find anything else to wear as a costume. _____ had looked forward to this party, but now it had gotten so late he/she would miss most of it anyway before getting there. _____ felt sad and disappointed. It reminded him/her of the time his/her family had planned a wonderful picnic, with friends coming, but it thunderstormed the whole day; they couldn't go. That made _____ upset and disappointed too.

No-Story Control

I am interested in children's eating habits and in their likes and dislikes. What did you have this morning for breakfast? (Child reports, E notes.) What did you eat at dinner last night? (S reports, E notes.) (Referring to the foods named, E asks about each of them):

Do you like _____ (a food named)? (S reports.) What are your most favorite foods? (S reports.) How often would you like to eat them? (S reports, E notes.) Are there any foods you hate? Which? (S reports, E notes.) Do you like _____ (E names a food not mentioned yet)? What do you think you'll have for dinner tonight?

A P P E N D I X B
TEACHERS' QUESTIONNAIRE

Dear _____:

In the research project we conducted in your class, we studied how temporary moods of children affect their generosity. We also wonder about the role of individual differences among children. For instance, does thinking about a happy experience have the same effect on a more frequently happy child as it does on a less frequently happy child? To help us try to answer that type of question, we would like you to identify the children in our project who seem to have certain kinds of moods more frequently than other kinds. For each adjective listed below, please indicate which children show that feeling frequently, sometimes, rarely, or very rarely. Please use the children's first names (if there is only one child on your list with that first name). The enclosed list has the names of the children in our project from your class. Each child's name should be used in each row, following each adjective, to indicate how frequently each child feels in the way designated by each adjective or group of adjectives.

Thank you for your assistance. Naturally, all the information collected in this study will be completely confidential.

CHILD'S EMOTION OR MOOD	HOW OFTEN CHILD FEELS EMOTION OR MOOD			
	Frequently	Sometimes	Rarely	Very Rarely
1. Child feels: confident				
2. Child feels: friendly, agreeable				
3. Child feels: close to others, accepted, well-liked				
4. Child feels: energetic				
5. Child feels: pleased with self				
6. Child feels: happy				
7. Child feels: competent				
8. Child feels: cheerful, joyful				

A P P E N D I X C

TABLES OF UNTRANSFORMED CELL MEANS

TABLE 31

CELL MEANS FOR DONATION IN
CENTS PER SUBJECT: GRADE
(Analyses I, IV)

GRADE	
2	3.89 (36) sd = 4.08
3	5.63 (27) sd = 3.94
4	10.41 (22) sd = 9.38

TABLE 32

CELL MEANS FOR DONATION IN CENTS PER SUBJECT:
GRADE X SEX
(Analysis II)

GRADE	MALE	FEMALE
2	4.87 (15)	2.87 (15)
3	3.82 (11)	7.12 (12)
4	15.30 (10)	8.25 (8)

TABLE 33

CELL MEANS FOR DONATION IN CENTS PER SUBJECT:
SEX X MOOD CATEGORY
(Analysis II)

SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Male	7.33 (12)	9.17 (12)	5.83 (12)
Female	5.42 (12)	4.85 (13)	6.75 (12)

TABLE 34

CELL MEANS FOR DONATION IN CENTS PER SUBJECT:
GRADE X SEX X MOOD CATEGORY
(Analysis II)

GRADE	SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
2	Male	4.00 (5)	3.83 (6)	7.50 (4)
	Female	3.60 (5)	1.40 (5)	3.60 (5)
3	Male	2.50 (4)	6.00 (3)	3.50 (4)
	Female	6.80 (5)	8.60 (5)	5.75 (4)
4	Male	19.33 (3)	23.00 (3)	6.50 (4)
	Female	6.50 (2)	4.67 (3)	13.33 (3)

TABLE 35

CELL MEANS FOR DONATION IN CENTS PER SUBJECT:
 GRADE X SEX X TREATMENT
 (Analysis I)
 (not significant)

GRADE	SEX	POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
2	Male	3.3 (3) sd = 5.8	5.0 (2) sd = 2.8	2.7 (3) sd = 2.5	5.0 (3) sd = 5.0	3.5 (2) sd = 5.0	11.5 (2) sd = 7.8	5.7 (3) sd = 6.7
	Female	2.0 (2) sd = 1.4	4.7 (3) sd = 0.6	2.0 (2) sd = 1.4	1.0 (3) sd = 1.0	2.0 (3) sd = 2.7	6.0 (2) sd = 1.4	2.3 (3) sd = 4.0
3	Male	4.0 (2) sd = 0	1.0 (2) sd = 1.4	5.0 (2) sd = 1.4	8.0 (1) sd = 0	0.0 (2) sd = 0	7.0 (2) sd = 2.8	10.0 (1) sd = 0
	Female	6.0 (3) sd = 2.7	8.0 (2) sd = 2.8	5.5 (2) sd = 0.7	10.7 (3) sd = 5.1	6.5 (2) sd = 2.1	5.0 (2) sd = 0.7	0.0 (1) sd = 0
4	Male	30.0 (1) sd = 0	14.0 (2) sd = 1.4	19.5 (2) sd = 6.4	30.0 (1) sd = 0	7.5 (2) sd = 6.4	5.5 (2) sd = 7.8	4.0 (2) sd = 5.7
	Female	5.0 (1) sd = 0	8.0 (1) sd = 0	4.0 (1) sd = 0	4.5 (2) sd = 0.7	25.0 (1) sd = 0	7.5 (2) sd = 3.5	1.0 (2) sd = 1.4

TABLE 36

CELL MEANS FOR FREQUENCY PER SUBJECT OF
PROSOCIAL WISH: POSITIVITY
(Analysis II)

POSITIVE	NEGATIVE	CONTROL
.19 (36) sd = .47	.49 (37) sd = .90	.33 (12) sd = .78

TABLE 37

CELL MEANS FOR FREQUENCY PER SUBJECT OF PROSOCIAL WISH:
GRADE X MOOD CATEGORY
(Analysis II)

GRADE	SOCIAL AFFINITY	SELF CONCERN	GENERAL
2	.80 (10)	.10 (11)	.00 (9)
3	.11 (9)	.25 (8)	.50 (8)
4	.60 (5)	1.00 (6)	.00 (7)

TABLE 38

CELL MEANS FOR FREQUENCY PER SUBJECT OF PROSOCIAL WISH:
GRADE X SEX

ANALYSIS I			ANALYSIS II		
GRADE	MALE	FEMALE	GRADE	MALE	FEMALE
2	.22 (18) sd = .55	.39 (18) sd = .85	2	.27 (15)	.33 (15)
3	.08 (12) sd = .29	.40 (15) sd = .74	3	.09 (11)	.43 (14)
4	.83 (12) sd = 1.11	.10 (10) sd = .32	4	.80 (10)	.13 (8)

TABLE 39

CELL MEANS FOR FREQUENCY PER SUBJECT OF PROSOCIAL WISH:
 GRADE X MOOD CATEGORY X POSITIVITY
 (Analysis II)

GRADE	SOCIAL AFFINITY		SELF CONCERN		GENERAL	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
2	.20 (5)	1.4 (5)	.20 (5)	0.0 (6)	0.0 (5)	0.0 (4)
3	.20 (5)	0.0 (4)	.25 (4)	.25 (4)	0.0 (4)	1.0 (4)
4	.50 (2)	.67 (3)	.67 (3)	1.3 (3)	0.0 (3)	0.0 (4)

TABLE 40

CELL MEANS FOR FREQUENCY PER SUBJECT OF PROSOCIAL WISH:
 GRADE X TREATMENT
 (Analysis I)

GRADE	POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
2	.20 (5) sd = .45	1.4 (5) sd = 1.14	.20 (5) sd = .45	0.0 (6) sd = 0	0.0 (5) sd = 0	0.0 (4) sd = 0	.33 (6) sd = .82
3	.20 (5) sd = .45	0.0 (4) sd = 0	.25 (4) sd = .50	.25 (4) sd = .50	0.0 (4) sd = 0	1.0 (4) sd = 1.15	0.0 (2) sd = 0
4	.50 (2) sd = .71	.67 (3) sd = 1.15	.67 (3) sd = 1.15	1.3 (3) sd = 1.53	0.0 (3) sd = 0	0.0 (4) sd = 0	0.5 (4) sd = 1.00

TABLE 41

CELL MEANS FOR FREQUENCY PER SUBJECT OF PERSON-ORIENTED
WISH: GRADE X SEX X COLLAPSED TREATMENT
(Analysis IV)

GRADE	SEX	POSITIVE	NEGATIVE	CONTROL
2	Male	.38 (8) sd = .74	2.00 (7) sd = .82	1.33 (3) sd = 1.53
	Female	.86 (7) sd = .90	1.00 (8) sd = .76	0.0 (3) sd = 0
3	Male	.67 (6) sd = .82	.80 (5) sd = 1.30	0.0 (1) sd = 0
	Female	.57 (7) sd = .79	1.00 (7) sd = .82	3.00 (1) sd = 0
4	Male	1.20 (5) sd = 1.30	1.00 (5) sd = 1.00	1.00 (2) sd = 1.41
	Female	.67 (3) sd = .58	.40 (5) sd = .55	2.00 (2) sd = 0

TABLE 42

CELL MEANS FOR FREQUENCY PER SUBJECT OF
PERSON-ORIENTED WISH: GRADE X SEX
(Analysis IV)

GRADE	MALE	FEMALE
2	1.17 (18) sd = 1.15	.78 (18) sd = .81
3	.67 (12) sd = .98	.93 (15) sd = .96
4	1.08 (12) sd = 1.08	.80 (10) sd = .79

TABLE 43

CELL MEANS FOR FREQUENCY PER SUBJECT OF PERSON-
ORIENTED WISH: SEX X MOOD CATEGORY
(Analysis II)

SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Male	1.08 (12)	1.42 (12)	.50 (12)
Female	1.08 (12)	.46 (13)	.83 (12)

TABLE 44

CELL MEANS FOR MAGNITUDE OF GAIN PER SUBJECT PER
THREE WISHES: SEX X MOOD CATEGORY
(Analysis II)

SEX	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Male	4.6 (12)	3.9 (12)	3.7 (12)
Female	3.8 (12)	3.2 (13)	4.8 (12)

TABLE 45

CELL MEANS FOR FREQUENCY PER SUBJECT OF
STORY-RELATED WISH: POSITIVITY
(Analysis II)

SOCIAL AFFINITY	SELF CONCERN	GENERAL
.71 (24)	.44 (25)	.21 (24)

TABLE 46

CELL MEANS FOR FREQUENCY PER SUBJECT OF STORY-RELATED
WISH: MOOD CATEGORY X POSITIVITY
(Analysis II)

	SOCIAL AFFINITY	SELF CONCERN	GENERAL
Positive	.92 (12)	.17 (12)	.08 (12)
Negative	.50 (12)	.69 (13)	.33 (12)

TABLE 47

CELL MEANS FOR FREQUENCY PER SUBJECT OF
STORY-RELATED WISH: TREATMENT
(Analysis I)

POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
.92 (12)	.50 (12)	.17 (12)	.69 (13)	.08 (12)	.33 (12)	.33 (12)
sd = 1.00	sd = .67	sd = .39	sd = .75	sd = .29	sd = .78	sd = .78

TABLE 48

CELL MEANS FOR FREQUENCY PER SUBJECT OF
STORY-RELATED WISH: GRADE X POSITIVITY
(Analysis II)

GRADE	POSITIVE	NEGATIVE
2	.20 (15)	.73 (15)
3	.38 (13)	.33 (12)
4	.75 (8)	.40 (10)

TABLE 49

CELL MEANS FOR FREQUENCY PER SUBJECT OF DEFICIENCY-REMEDYING
WISH: TREATMENT
(Analysis I)

POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
.25 (12)	.75 (12)	.00 (12)	.62 (13)	.00 (12)	.17 (12)	.42 (12)
sd = .62	sd = .97	sd = 0	sd = .87	sd = 0	sd = .39	sd = 1.00

TABLE 50

CELL MEANS FOR FREQUENCY PER SUBJECT OF DEFICIENCY-
REMEDYING WISH: COLLAPSED TREATMENT
(Analysis IV)

POSITIVE	NEGATIVE	CONTROL
.08 (36)	.49 (37)	.42 (12)
sd = .37	sd = .80	sd = 1.00

TABLE 51

CELL MEANS FOR FREQUENCY PER SUBJECT OF DEFICIENCY-
REMEDYING WISH: SEX X COLLAPSED TREATMENT
(Analysis IV)

SEX	POSITIVE	NEGATIVE	CONTROL
Male	.16 (19)	.53 (17)	.00 (6)
	sd = .50	sd = 1.01	sd = 0
Female	.00 (17)	.45 (20)	.83 (6)
	sd = 0	sd = .60	sd = 1.33

TABLE 52

CELL MEANS FOR FREQUENCY PER SUBJECT OF DEFICIENCY-
REMEDYING WISH: GRADE X SEX
(Analysis I)

GRADE	MALE	FEMALE
2	.44 (18) sd = .98	.22 (18) sd = .43
3	.08 (12) sd = .29	.53 (15) sd = .92
4	.33 (12) sd = .65	.20 (10) sd = .65

TABLE 53

CELL MEANS FOR FREQUENCY PER SUBJECT OF DEFICIENCY-
REMEDYING WISH: GRADE X COLLAPSED TREATMENT
(Analysis IV)

GRADE	POSITIVE	NEGATIVE	CONTROL
2	.07 (15) sd = .26	.73 (15) sd = 1.03	.00 (6) sd = 0
3	.00 (13) sd = 0	.42 (12) sd = .67	1.50 (2) sd = 2.12
4	.25 (8) sd = .71	.20 (10) sd = .42	.50 (4) sd = 1.00

TABLE 54

CELL MEANS FOR FREQUENCY PER SUBJECT OF DEFICIENCY-
 REMEDYING WISH: SEX X TREATMENT
 (Analysis I)

SEX	POS SOC	NEG SOC	POS SELF	NEG SELF	POS GEN	NEG GEN	CONTROL
Male	.50 (6) sd = .84	.67 (6) sd = 1.21	.00 (7) sd = 0	1.20 (5) sd = 1.10	.00 (6) sd = 0	.00 (6) sd = 0	.00 (6) sd = 0
Female	.00 (6) sd = 0	.83 (6) sd = .75	.00 (5) sd = 0	.25 (8) sd = .46	.00 (6) sd = 0	.33 (6) sd = .52	.83 (6) sd = 1.33

