

A DEVELOPMENTAL STUDY OF CAUSAL ATTRIBUTION: ²² BALANCE AND THE
USE OF INTERNAL VERSUS EXTERNAL, ORGANIZATIONAL SCHEMAS
IN SOCIAL SITUATIONS

by

ANNA C. SMITH

2148-
5605A

B.A., Kansas State University, 1972

A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Psychology

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1974

Approved by:

A. N. Pres

Major Professor

LD
2068
T4
1974
S635
C.2
Document

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
A. Background	1
1. Actor-Observer Bias	7
2. Individual Differences	9
II. METHOD	13
A. Overview	13
B. Subjects	14
C. Procedure	14
D. Experimental Task	16
E. Dependent Measures	17
F. Experimental Design and Statistical Analyses . .	18
III. RESULTS	20
A. Balance Effects	20
B. Age Effects	23
C. Self-Other Comparisons	26
D. Subsidiary Analyses--Individual Differences Measures	29
1. Percentage of Egocentric Constructs	29
2. Errors on the Spatial Perspectives Task . .	31
3. Egocentric Errors on the Spatial Perspectives Task	31
IV. DISCUSSION	36
A. Balance Effects	36
B. Self-Other Comparisons	37

C. Age Effects	38
D. Order Effects	39
E. Implications	40
V. BIBLIOGRAPHY	42

INTRODUCTION

This research is a developmental study of the attribution process, the way in which children perceive and account for their own behavior and for the behavior of others. The aim is to study the effects of balance on causal attribution in children. Specifically, it will attempt to show, in contrast to the Blanchard & Price (1971) study, that children in the concrete and concrete-transitional stages (Piaget, 1967) do structure social situations in terms of balance. This will be done using a method first reported in Press & Bethel (1971), a study which examined the attribution process in adults. Press & Bethel found that for adults, behavior in balanced situations elicited explanations that reflected internal, dispositional qualities of the actor, while behavior in imbalanced situations was attributed to situational factors. In the present study it was expected that children of varying ages would also use these types of explanations differentially in balanced and imbalanced situations. In addition, it was expected that children would estimate that an observer, viewing the behavior of someone unknown to him, would explain that behavior in terms of internal, dispositional causes regardless of whether the situation presented was balanced or imbalanced.

Background

One of the most well-known of Heider's (1958) formulations about interpersonal relations is that people strive

for consistency among their cognitions. This striving can be viewed as an attempt to "balance" perceptions of interpersonal behavior. Balance implies "that the entities comprising the situation and the feelings about them fit together without stress." (Heider, 1958, p. 180). This can be seen in the standard POQ triads, where P is the person, and O and Q are liked or disliked others. There are eight combinations of these triads such that all combinations of positive and negative relationships are used. A situation is balanced if it contains an odd number of liking relationships, for example, P likes O, P dislikes Q, and O dislikes Q. An imbalanced situation, on the other hand, contains an even number of liking relationships, for example, P likes O, P likes Q, O dislikes Q. Heider suggested that in an imbalanced situation "we sense that the factors in the situation 'do not add up'; they seem to pull in different directions." (1958, p.180). Numerous investigators (Crockett, 1974; Jordan, 1953; DeSoto & Keuthe, 1959) have demonstrated the operation of the balance principle with adults.

The situation with children, however, is less clear. A series of studies by Blanchard and his colleagues (Blanchard & Price, 1971; Blanchard & Bindseil, 1971; Vickers & Blanchard, 1973) has attempted to demonstrate the operation of balance in children. These authors sought evidence that preference for balanced configurations develops in a manner consistent with Piaget's theorizing, that is, that there would be differences in preference for balance between adjacent age groups in

different stages (preoperational, concrete operational, and formal operational) but no differences between age groups within a given stage. They found that children in the formal operations stage (8th grade and college freshmen) preferred balanced over imbalanced situations, while concrete operational children (2nd and 4th grades) responded in terms of positivity rather than balance (that is, the greater the number of liking or positive relationships in a triad, the more pleasant it was rated).

One of the problems with the Blanchard & Price (1971) study and the Blanchard & Bindseil (1971) study is that the situations used were very abstract. They were presented orally in the form "You like X, you like Y, you see that X and Y like each other." (Blanchard & Price, 1971, p. 345). Because of this abstractness it is not clear just what the children were responding to, particularly the younger ones (first and second graders). It is possible that these children were unable to coordinate such a complex series of relationships, or perhaps they were simply unable to understand what was expected of them. In addition, a number of other investigators (Crockett, 1974; Cottrell, in press; Gutman & Knox, 1972; Gutman, Knox & Storm, 1974) have pointed out that a pleasantness rating is not necessarily indicative of balance. Crockett (1974) and Cottrell (in press) argue that it is the way that subjects conceptualize the situation that determines balance, while Gutman et al. (1972, 1974) give evidence that "balance relates more directly to the

cognitive than to the affective component of social perception." (1972, p. 351). The abstractness of these presentations, coupled with the fact that Blanchard and Price (1971) and Blanchard and Bindseil (1971) had the children rate the situations on affective dimensions (happy-sad, good-bad) leaves the interpretation of their results somewhat ambiguous.

That there are other simpler ways of assessing the operation of balance has been demonstrated in a study by Press & Bethel (1971) which looked at the way balance was achieved through the use of internal and external attributions of causality. Their study was based on an analysis by Jones & Davis (1965) in which the concept of correspondence was used in examining the types of attributions people use in explaining the behavior of others. For Jones & Davis correspondence refers to "the extent that the act and its underlying characteristic or attribute are similarly described by the inference." (p. 223). Low correspondence is characterized by uncertainty as to whether the behavior does reflect an underlying disposition or quality. For example, if the behavior is seen as largely constrained by the situation, or if virtually everyone would act the same way in that situation, then there is little basis for inferring a disposition.

Based on Heider's (1958) suggestion that the balance of a situation will influence causal attribution, Press & Bethel (1971) argue that correspondence can be viewed as a means of establishing balance. For example, in an imbalanced situation the perceiver will "assume that the actions are not

correspondent to qualities of the same valence in the person's character" (p. 13), that is, that the person's behavior is not reflective of some internal disposition, but rather is dependent on some external factors.

Using others already known to the perceiver, they have provided evidence that correspondence varies directly with the degree of balance of the situation. They had subjects describe and account for the behavior of peers in situations in which the behavior ranged from highly socially desirable to highly socially undesirable. By varying the degree of liking for the target person, as well as the social desirability of his acts, Press & Bethel demonstrated that "the more polarized the behavior and/or the liking for the person, the higher the perceived degree of correspondence in balanced situations and the lower the perceived degree of correspondence in imbalanced situations." (p. 15).

It was hypothesized that for children in the present study the degree of perceived correspondence would vary as a function of balance, that is, behavior in balanced situations would be seen as more correspondent than behavior in imbalanced situations. A balanced configuration might be a situation in which a liked person shares something with another person. The explanation for the liked person's behavior is that "he's a generous person." The same behavior performed by a disliked person (e.g., an imbalanced situation) might be explained in terms of the demands of the situation, for example, "the teacher was there so he had to share."

Support for the hypothesis was found in a preliminary study using a task similar to that of Press & Bethel (1971). In that study both 3rd and 6th grade children explained the behavior of peers in terms of internal, dispositional qualities to a greater extent in balanced than in imbalanced situations. Their task was to think of a time when someone they liked or disliked performed a positive or negative act, and then to explain and account for why the other acted the way he did. All combinations of affect for the other and valence of behavior were used.

The present study presents a formal test of this hypothesis. In addition, the task above was extended to include the subjects' estimation of how a stranger would account for the behaviors that the subjects had described and explained. No effects for balance were expected for the subject's estimation of how a stranger would explain the behavioral incidents. Since in these situations the actors would be unknown to the strangers, balance should not be a factor as strangers very likely would attribute the actors' behavior to stable dispositional qualities of the actors (e.g., Jones & Nisbett, 1971).

No effects were expected as a function of sex of subject or sex of target, that is, no differences were expected in the way males and females responded, nor in the way they explained the behavior of same or opposite sex peers.

Also, in contrast to the Blanchard et al. (1971, 1971, 1973) findings, no age differences were expected for the

following reason. There is currently a controversy in the literature over whether younger compared to older children can take into account the intentions of the other. Piaget (1965) found that children younger than eight or nine years based judgment of behavior on consequences while older children focused on intentions. While these results have been replicated in a number of studies, recent articles by Chandler, Greenspan & Barenboim (1973) and Constanzo et al. (1973) have shown that younger children can take intentionality of the other into account when the situation is structured so that consequences are not much more salient than intentions. As Chandler et al. (1973) pointed out, despite the findings that younger children do not take intentions into account, they routinely act as if intentions are important, "An unintended injury inflicted on a child is, for example, often appreciated as such and responded to differently than is a similar hurt purposely administered" (p. 315).

Since in the present study children were dealing with situations they themselves were reconstructing, it was expected that younger and older children would be equally able to take intentions and consequences of the situation into account.

Actor-Observer Bias

Jones & Nisbett (1971), in a study that described the differential perceptions of actors and observers with regard to behavior, introduced the concept that they call the "actor-observer bias"--the tendency of an actor to attribute his

behavior to stimuli inherent in the situation, while an observer attributes the same behavior to stable dispositions of the actor.

They note that despite the pervasiveness of this bias there are reversals of the observer's bias such as "when the observer likes the perpetrator of bad acts ("the other boys made him do it") or dislikes the performer of good acts ("you must have caught him in a good mood")." (1971, p. 15). These are, of course, examples of imbalanced configurations and the explanations can be viewed as attempts to restore balance.

Subjects in the present study were asked to describe and account for instances of their own positive and negative behavior. According to Heider (1958) and Jones & Nisbett (1971) there is a tendency for a person to attribute his own as opposed to others' behavior to external factors rather than to personality characteristics. In particular, Press & Peterson (1974) found that in both balanced and imbalanced configurations the person attributed his own behavior to external causes to a greater extent than he did the behavior of liked peers. Thus, it was expected in the present study that subjects would explain their own positive and negative behavior in differentially more external terms than the behavior of liked peers; also their own negative behavior would be seen by themselves as more situationally determined than their positive behavior.

Individual Differences

There are a number of individual difference variables that affect the differential ways in which children mature and interact with their world. Of particular interest in this regard is the work of two theorists, Jean Piaget and Heinz Werner.

Piaget differentiates development from physical maturation. For him development is a synthetic process whereby less advanced structures are incorporated into and replaced by more advanced structures. In his work on spatial perspective taking (Piaget & Inhelder, 1956) he outlined the concept of egocentrism-nonegocentrism as a dimension along which children vary in their ability to conceptualize the spatial perspective of another person. According to these authors the egocentric child is unable to recognize that another person's view may not be the same as his own. The nonegocentric child knows that the other's view is not the same as his own but he may not yet be able to choose the view that correctly represents what the other sees.

This raises the question of whether perspective taking would be predictive of the types of causal attributions children make, particularly as compared to the type of attributions they estimated that a stranger would make. In order to examine this possibility a version of Piaget & Inhelder's (1956) spatial perspectives task was used. Each subject was shown a three-dimensional display and then shown

photographs of the display taken from various perspectives. The subject was then asked to select the photograph which represented the view of another person seated at positions different from the subject's own. This task is designed to give some insight into the way the child sees the world along the dimension of egocentrism-nonegocentrism.

In a study that examined the types of errors that 5 to 11 year old children made on the spatial perspectives task Coie, Constanzo & Farnill (1973) found that perspective-taking ability varies directly with age but they also found qualitative as well as quantitative changes with increasing age. The older children in their study made fewer egocentric errors than the younger children although they were still making nonegocentric errors.

Thus, it was expected in the present study that the number of errors, per se, would not be predictive of the types of causal attributions used. However, it was expected that egocentric children, in view of their greater inability to take the perspective of the other, might use types of causal attributions that were different from those used by the non-egocentric children. Therefore, subsidiary analyses were done comparing the types of explanations used by children who made relatively few egocentric errors with those who made relatively many of those types of errors.

For Werner the concept of development involves increasing differentiation and organization as opposed to physical growth alone. His orthogenetic principle states that "wherever

development occurs it proceeds from a state of relative globality and lack of differentiation to a state of increasing differentiation, articulation, and hierarchic integration." (1957, p. 126). Applied to the present study this principle raises the issue of whether the child's characteristic way of perceiving others is a determining factor in the way he structures his social situations, that is whether the younger, presumably less developmentally advanced child structures his social situations differently from the way the older more advanced child does.

A study conducted within the Wernerian framework (Scarlett, Press & Crockett, 1971) has shown that younger, as compared to older children are relatively more egocentric as compared to nonegocentric. These authors analyzed children's descriptions of peers by assigning each personality construct to one of several categories, among which were:

Egocentric-concrete constructs--constructs which were both concrete, in describing what the other person does in particular contexts, and egocentric, in that the object of the sentence was the describer himself (e.g., "he gives me things" or "he hits me")

Nonegocentric-concrete constructs--constructs which referred to concrete behaviors, but did not include the subject himself in the sentence (e.g., "he plays baseball" or "he hits people all the time") (p.

Children's descriptions in the present study were examined using this same type of analysis. It was, then, a question of whether the types of causal attributions children in particular grades made were a function of

the degree to which they described others in either ego-centric or nonegocentric ways. Thus, a subsidiary analysis was done comparing the types of explanations used by children who described peers in relatively nonegocentric terms with those who described peers in relatively ego-centric terms.

METHOD

Overview

Subjects were initially asked to describe a liked and a disliked peer of the same and of the opposite sex. Following this task subjects were asked to describe situations in which these four peers acted positively or negatively and then to account for the peer's behavior in as much detail as possible. Subjects were also asked to describe and account for instances of their own positive and negative behavior. In each of the social situations subjects were also asked to estimate how a stranger would react to these behaviors. Finally, subjects were given a version of the Piaget and Inhelder (1956) spatial perspectives task.

The dependent measure abstracted from the children's explanations, the degree of perceived correspondence, was measured as follows: The behavioral incidents elicited were each scored using a seven-point scale with 1 indicating an explanation based on a corresponding personality characteristic of the person, and 7 indicating an explanation based on external, situational factors. The midpoint, 4, represented an explanation that either did not include internal personality characteristics or external explanations, or contained both. It also included references to mood and such neutral statements as "she's my friend" or "he's my brother."

The main experimental design was a 2^6 harmonic-n complete factorial analysis of variance (Winer, 1971). The between groups factors were order of presentation, the subject's sex, and the subject's grade; the repeated measures were affect for the target person, valence of behavior, and the target person's sex. A secondary design compared explanations the subjects gave for their own behavior with their explanations for the behavior of liked and disliked peers.

Subjects

Sixty-nine grade school children from the Woodrow Wilson Elementary School, Manhattan, Kansas, participated in the experiment. There were 20 sixth-grade males, 18 sixth-grade females, 16 third-grade males, and 15 third-grade females. The average ages were 11.85, 11.80, 9.09, and 8.93 years respectively. The subjects were predominantly white¹ and from the lower-middle and upper-lower socioeconomic classes.

Procedure

Pretest for children's descriptions. The types of constructs the subjects used were assessed by having each child describe four peers; one of each sex that he liked, and one of each sex that he disliked.

The method for eliciting these descriptions was as follows: "Can you tell me the first name of a (boy, girl) that you (like a lot, don't like very much)? After naming each individual the subject was asked "Can you tell me what

¹There were four black children included in the study.

_____ is like as a person?" The experimenter then would ask "What kind of person would you say _____ is?"

After each description was completed the subject was asked to indicate on a sliding scale his degree of liking for the individual described. This scale consisted of a bar supported on both ends by wooden blocks. The side facing the subject was blank except for a midpoint line, while the side facing the experimenter contained a 12-inch ruler marked off in 1/8-inch increments. There was a sliding marker with which the subject indicated his degree of liking for the individual, with 0 indicating "like very much" and 12, "dislike very much".

A version of Piaget and Inhelder's (1956) spatial perspectives task was used to check on the subject's perspective-taking ability. This task was included in order to examine the possibility that the development of spatial perspective taking parallels the development of social perspective taking.

For this task each subject was shown an identical display consisting of a square of felt on which were placed three styrofoam cups of different sizes and colors. The child was shown 12 color photographs of the display taken from different perspectives and asked to choose which picture coincided with his own view of the display. If any child chose incorrectly in selecting his own view he was asked to examine the photographs carefully to determine "if there's one that looks more like what you see from where

you are sitting."²

The subject was then asked to select the photograph that looked like what a person seated at each of five different positions would see. These positions were: (1) directly opposite S's own position, (2) the side on S's left, (3) the side on S's right, (4) the upper right corner, and (5) the lower left corner.

Experimental Task

This procedure consisted of asking the subject to describe situations in which a liked or disliked peer performed a positive or negative act. He also was asked to describe situations in which he himself performed positive or negative acts. He was then asked to account for the peer's behavior and his own behavior, as well as to describe how a stranger would account for these behaviors.

The instructions for this task were as follows: "Can you think of a time when _____ (+ helped someone, was nice to someone, or shared his candy or toy with someone? - hit someone, hurt someone, or made someone cry?) Why do you think _____ acted that way? Is there anything else? Using this scale, can you show me how much you liked (him, her) when (he, she) did that? If someone who didn't know _____ at all saw (him, her, you) doing that, what would he think of (him, her, you)?"

²There were eight subjects (six third graders and two sixth graders) who chose incorrectly on the first attempt, and only one, a third grade male, who chose incorrectly on the second attempt as well.

The order of presentation of the tasks was generated as follows: The ten situations to which each subject responded (positive and negative behaviors for liked and disliked males, for liked and disliked females, and for the subject) were arranged in random order for Order 1.³ Order 2 was the reverse of Order 1.

All interviews were tape recorded and transcribed.

Dependent Measures

The dependent measures in this study were the degree of perceived correspondence for (1) the subject and (2) the stranger, and were measured as follows: The behavioral incidents elicited in the experimental task were scored using a 7-point scale where 1 indicated an explanation based on a corresponding personality characteristic of the person. For example, when a liked person helps another person his behavior is accounted for in terms of his "helpfulness". In the case of a disliked person, negative behavior on his part is seen as stemming from a disposition to act negatively: he does not share because he's a selfish person.

A score of 7 indicated an explanation based on external, situational factors: a disliked person shares his candy because "he knows his dad will spank him if he doesn't." A

³Order 1 consisted of: liked female, negative behavior; disliked male, negative behavior; self, positive behavior; liked female, positive behavior; liked male, negative behavior; disliked female, positive behavior; disliked male, positive behavior; self, negative behavior; disliked female, negative behavior; liked male, positive behavior.

liked person's negative behavior is likewise explained in terms of situational demands: "she hit him because he hit her first and wouldn't leave her alone."

The assignment of a score of 4, the midpoint, indicated an explanation that either included neither internal, personality characteristics nor external, situational factors, or included both these types of explanations, and the two were averaged. It also included such neutral statements as "she's my friend" or "he's my brother." Such statements were scored only if they were the only explanations given.

An independent scorer randomly chose two scores from each subject: one for the subject's own responses and one for the subject's estimation of a stranger's responses. A reliability check between the two judges yielded product-moment correlations of .92 ($N = 31$), .79 ($N = 31$), .87 ($N = 38$), and .65 ($N = 38$) for third grade subjects' own and strangers' scores and sixth grade subjects' own and strangers' scores respectively.

Experimental Design and Statistical Analyses

There were two dependent measures, the subjects' correspondence scores and the strangers' correspondence scores. For each dependent measure the main analysis was a 2^6 harmonic-n complete factorial analysis of variance (Winer, 1971). The between groups factors for this analysis were the subjects' sex (male vs female), the subjects' grade (3rd vs 6th), the order of presentation (order 1 vs order 2); the repeated measures were affect for the target person (like vs

dislike), valence of behavior (positive vs negative) and the target person's sex (male vs female).

In order to compare situations involving the subject himself with situations involving the subject's peer a subsidiary set of analyses were done. The between groups measures were the same ones used in the main analysis, while the repeated measures were role (self vs liked male vs liked female) and valence of behavior (positive vs negative).

Finally, in order to determine if the individual difference variable of egocentrism affected the types of causal attribution the subjects used, two subsidiary analyses were done substituting the measure of egocentrism for the subject's sex in the main analysis. These were the subject's measure of egocentrism (LO vs HI) and the subject's relative number of egocentric errors on the spatial perspectives task (few vs many).

RESULTS

These results will be presented in the following orders: (1) Balance effects, (2) Age effects, (3) Self-Other Comparisons, (4) Subsidiary Analyses involving the individual differences measures. Within each of these sections results will be presented for subjects' own responses followed by subjects' estimates of strangers' responses on the dependent measure of degree of correspondence.

Balance Effects

Subjects' own responses: As predicted there was a significant interaction between role and behavior ($F(1,61) = 52.56, p < .001$). As can be seen in Table 1, the effects for balance held for liked but not disliked persons. Individual comparisons¹ revealed that for liked persons, positive behavior was viewed as more correspondent than negative behavior, while for disliked persons there was no difference in the perceived correspondence of positive and negative behavior.

There was also an order by sex of target by behavior interaction contained within an unexpected five-way interaction of order by grade by affect for target by sex of target by behavior ($F(1,61) = 4.26, p < .05$). Although interpretation of these interactions is unclear, Table 2 shows that the effects for balance for liked persons did hold for both 3rd and 6th grade males and females for both orders of presentation.

¹All individual comparisons were done using the Tukey B Test (Winer, 1971).

Table 1

Subjects' Mean Degree of Correspondence for the Interaction of Role (Liked vs Disliked) and Behavior (Positive vs Negative)

	Liked	Disliked
Positive	2.2	3.0
Negative	4.9	3.2

Table 2

Subjects' Mean Degree of Correspondence for the Interaction
of Order by Sex of Target by Grade by Affect for Target
(Liked vs Disliked) by behavior (Positive vs Negative)

	3				6			
	O ₁		O ₂		O ₁		O ₂	
	M	F	M	F	M	F	M	F
L+	1.8	2.2	3.0	1.2	2.6	2.6	2.6	1.7
L-	4.9	4.7	5.2	5.5	4.9	4.5	5.1	4.8
D+	2.6	2.1	3.3	3.5	3.2	3.8	2.9	3.3
D-	3.0	3.5	2.9	3.0	4.1	2.9	2.7	3.4

Although no effects were expected for either sex of subject or sex of target, it appears that subjects responded differentially to same and opposite sex target persons across orders, as indicated by a sex of subjects by order by sex of target interaction ($F(1,61) = 6.07, p < .05$). While individual comparisons showed no differences in means, Table 3 suggests that male subjects saw female target persons' behavior as more correspondent for Order 1 than for Order 2, while for female subjects the reverse was true.

Strangers' responses: As expected (see Table 4) analyses of the strangers' responses failed to show any effects for balance. These results reflect the subjects' awareness that a stranger observing another person's behavior will tend to attribute that behavior to dispositions and personality characteristics of the person.

Age Effects

Subjects' own responses: As predicted, there were no effects for age, supporting the hypothesis that there would be no discernible differences in the perceived correspondence of younger and older children. This suggests that contrary to previous work (Piaget, 1965) which has shown that younger children focus on consequences rather than intentions, the younger children in the present study were able to distinguish between intended and situation-mediated consequences (means = 2.0 and 5.1 for positive and negative behavior of liked persons for 3rd graders vs 2.4 and 4.9 for positive and negative behavior of liked persons for 6th graders).

Table 3

Subjects' Mean Degree of Correspondence for the Interaction
of Sex of Subject by Order by Sex of Target

	Male <u>Ss</u>		Female <u>Ss</u>	
	Male Target	Female Target	Male Target	Female Target
O ₁	3.5	3.6	3.3	3.0
O ₂	3.6	3.1	3.3	3.6

Table 4

Subjects' estimation of a Stranger's Mean Degree of Correspondence for the Interaction of Role (Liked vs Disliked) and Behavior (Positive vs Negative)

	Liked	Disliked
Positive	1.6	1.5
Negative	1.6	1.4

Strangers' responses: As expected, there were also no effects for age for the subjects' estimation of strangers' responses (means = 1.51 and 1.69 for liked peers for 3rd and 6th graders respectively). That is, third and sixth grade subjects both estimated that a stranger would explain the behavior of peers liked by the subject in internal, dispositional terms.

Self-Other Comparisons

Subjects' own responses: Based on the actor-observer bias (Jones & Nisbett, 1971) it was expected that subjects would rate their own behavior as less correspondent than the behavior of peers. The role by behavior interaction lent support to this expectation. However, individual comparisons of the means in Table 5 indicate that while subjects saw their own positive behavior as significantly less correspondent than the behavior of both liked males and females, no difference was found between the correspondence of subjects' own negative behavior and the negative behavior of liked males and females.

The sex by role interaction ($F(2,122) = 3.70, p < .05$) also supports the findings that indicate that subjects tend to perceive their own behavior in general as less correspondent than the behavior of liked peers. However, individual comparisons of the means in Table 6 revealed that while females perceived their own behavior as less correspondent than the behavior of liked peers, no differences were found for males in this respect.

Table 5

Subjects' Mean Degree of Correspondence for the Interaction
of Role (Self vs Liked Male vs Liked Female) and Behavior
(Positive vs Negative)

	Self	Liked Males	Liked Females
Positive	3.8	2.5	1.9
Negative	5.3	5.1	4.9

Table 6

Subjects' Mean Degree of Correspondence for the Interaction of Role (Self vs Liked Male vs Liked Female) and Sex of Subject

	Self	Liked Males	Liked Females
Male <u>Ss</u>	4.2	3.9	3.4
Female <u>Ss</u>	4.9	3.6	3.4

Strangers' responses: Subjects apparently recognized that a stranger would not rate their behavior as more or less correspondent than the behavior of others. This is borne out by the lack of a role by behavior interaction.

Although no effects were expected for sex of subject, it appears that male and female subjects felt that a liked same sex peer's behavior would be perceived by a stranger as somewhat more correspondent than a liked opposite sex peer's behavior. The sex of subject by role interaction ($F(2,122) = 8.43, p < .001$) supports this perception even though individual comparisons failed to detect significant differences among the means in Table 7.

Subsidiary Analyses--Individual Differences Measures Percentage of Egocentric Constructs

Subjects' own responses: No differences were expected in the types of causal attributions that children in particular grades made as a function of the extent to which they described others in egocentric or nonegocentric ways. No effects for this variable were found.

Strangers' responses: It was expected that high egocentric children might be less able to view their own and peers' behavior from the perspective of the stranger. This expectation was somewhat ambiguously confirmed. For their estimates of the strangers' responses on this measure, third and sixth graders did respond differently depending on their degree of egocentricity (LO vs HI). Although individual comparisons did not detect any differences among means, the

Table 7

Subjects' estimation of a Stranger's Mean Degree of Correspondence for the Interaction of Role (Self vs Liked Male vs Liked Female) and Sex of Subject

	Self	Liked Male	Liked Female
Male	1.4	1.3	1.9
Female	1.2	1.9	1.3

pattern of results in Table 8 suggests that for sixth but not third grade subjects high egocentric subjects did feel that strangers viewed another's behavior as less correspondent than did low egocentric subjects.

Errors on the Spatial Perspectives Task

Subjects' own responses: No differences were expected in the types of causal attributions that subjects made as a function of the number of errors they made on the SPT. There was, however, a number of errors by grade by sex of target interaction ($F(1,65) = 6.14, p < .05$) which was uninterpretable.

Strangers' responses: No differences were expected as a function of the number of errors on SPT and none were found.

Egocentric Errors on the Spatial Perspectives Task

Subjects' own responses: No differences were expected between children who made relatively few egocentric errors on the SPT and children who made relatively many of those types of errors. There was, however, a significant interaction of number of egocentric errors by affect for target ($F(1,65) = 5.59, p < .05$) which indicated that low egocentric children viewed the behavior of liked persons as less correspondent than the behavior of disliked persons, while high egocentric children did not differentiate between liked and disliked persons with regard to correspondence.

Strangers' responses: The expected effects were not found for this variable. This suggests that low egocentric and high egocentric (as measured by the SPT) children did

Table 8

Subjects' estimation of a Stranger's Responses for Mean Degree of Correspondence for the Interaction of Degree of Egocentricity (LO vs HI) and Grade (3rd vs 6th)

	LO	HI
3rd	1.5	1.4
6th	1.3	1.9

Table 9

Subjects' Mean Degree of Correspondence for the Interaction of Number of Errors (LO vs HI) by Grade (3rd vs 6th) by Sex of Target

	LO		HI	
	3rd	6th	3rd	6th
Male	3.0	3.8	3.6	3.0
Female	3.3	3.4	3.2	3.2

Table 10

Subjects' Mean Degree of Correspondence for the Interaction of Number of Egocentric Errors (Few vs Many) and Affect for Target (Liked vs Disliked)

	Few	Many
L	3.6	3.4
D	2.9	3.6

not differ in their ability to take the perspective of the stranger.

DISCUSSION

These results will be discussed in the following sections: (1) Balance effects, (2) Self-Other comparisons, (3) Age effects, (4) Order effects, and (5) Implications.

Balance Effects

It was expected that behavior in balanced situations (situations that involved a liked person performing a positive act (indicated by ++) or a disliked person performing a negative act (--)) would evoke explanations that reflected dispositional qualities of the actor; while imbalanced situations, a liked person performing a negative act (+-) or a disliked person performing a positive act (-+), would be explained in terms of external, situational factors.

The findings of a preliminary study supported these expectations. The following are some examples of the types of explanations used by third and sixth grade subjects in that study.

(++) "Like if he bought a new eraser at the store and a boy doesn't have an eraser on his pencil, he'd give it to him."

"Why did he act that way?"

"He's always courtesy [sic]."

(--) "He yelled at some girls one time."

"Why did he act that way?"

"They were bugging him."

(-+) "Sometimes the teacher calls for people to help her and he'll go up there and help her."

"Why does he act that way?"

"When the teacher's around he will because he knows he'll get in trouble if he doesn't."

The results of the present study, however, only partially supported the hypothesized relationship between balance and causal attribution. These results showed that balance effects held for liked but not disliked persons. It appears that situations involving disliked persons were not perceived as either balanced or imbalanced but rather somewhere between the two.

These findings do, however, follow Newcomb's (1968) reformulation of balance. Newcomb suggested that situations involving disliked persons would be characterized by indifference on the part of the perceiver. This indifference would preclude any "strain toward balance" that would be present in imbalanced situations. Newcomb proposed the term "nonbalanced" as opposed to balanced or imbalanced for those situations involving disliked persons. In nonbalanced situations the lack of relevance for the subject, as a result of his dislike for the other person, would obviate the use of internal and external attributions of causality as a means of re-establishing balance, since in these situations balance would not be a factor.

Self-Other Comparisons

These results essentially replicated and extended

previous work that showed that actors tend to attribute their own behavior to situational factors while attributing others' behavior to dispositional qualities (Jones & Nisbett, 1971; McArthur, 1972; Nisbett et al., 1973; Press & Peterson, 1974).

Subjects saw their own positive behavior as less correspondent than the behavior of liked peers. Thus, while subjects saw their own behavior as generally more situationally determined than the behavior of peers they nevertheless attributed their own positive behavior more to dispositional qualities rather than to situational factors.

This does not appear to be a function of subjects selecting behaviors that were easier to explain in terms of situational determinants. In examining the types of incidents subjects chose in describing their own behavior as opposed to the behavior of liked and disliked peers, there did not appear to be any differences in the social desirability of the behaviors. That is, subjects did not select differentially more or less socially desirable behaviors for themselves than for either liked or disliked peers.

Age Effects

While the lack of age effects contrasts with the findings of Blanchard et al. (1971, 1971, 1973) it does lend support to the findings of Chandler et al. (1973) and Constanzo et al. (1973) which indicated that younger as well as older children can take intentionality into account instead of focusing primarily on consequences. These authors suggested that the focus of attention is a function of the relative

saliency of intentions and consequences. In the present study the use of situations that the subjects had themselves reconstructed apparently rendered intentions relatively more salient than consequences, as evidenced by the fact that even the youngest third graders were able to distinguish between intended and unintended outcomes.

There were also no age effects for the strangers' responses on the number of egocentric errors on the spatial perspectives task, indicating that third as well as sixth graders were able to take a stranger's perspective. These findings are inconsistent with previous work that has found that younger children are less able than older children to take another's perspective (Feffer & Gourevitch, 1960). This inconsistency can possibly be attributed to the fact that there was very little spread in the distributions of scores of those subjects who made relatively few egocentric errors on the SPT and those who made relatively many. In fact, there was only a difference of one error between the two groups (Few = 0-2 errors, Many = 3-5 errors) and 67% of all subjects were in the few errors group.

Order Effects

Although the order of presentation of the ten incidents the subjects described and explained was randomized there were, nevertheless, effects for order. There was no main effect for this factor but it was included in several higher-order interactions.

Possibly these effects are a result of the differential way in which subjects perceived the behavior of same and opposite sex peers. For example, the first task (for Order 1) was for subjects (both males and females) to describe and account for a negative behavior of a liked female. Perhaps the differences in correspondence can be attributed to the fact that females were responding to a same sex peer's behavior, while males were responding to an opposite sex peer's behavior.

Implications

This study offers evidence that the social perception of children as young as third grade is remarkably like that of adults. The causal attribution results very closely resemble the previous work in this area (Jones & Nisbett, 1971; McArthur, 1972; Nisbett et al., 1973; Press & Peterson, 1974); in addition, children too show the actor-observer bias. It is interesting to note that when the subjects were asked to estimate how another person would explain the behavior of children unknown to him, including the subjects themselves, subjects overwhelmingly said that strangers would explain the behavior of others in dispositional terms. This indicates that while the subjects themselves realized that there were sometimes extenuating circumstances and explained the negative behavior of themselves and of liked peers in terms of these circumstances, they still recognized that strangers would not be aware of such circumstances. This implies at least some ability to take the perspective

of the other, a prerequisite for effective social interaction.

Children apparently utilize cues that reflect an awareness of the intentions of others rather than focusing exclusively on the objective consequences of their behavior. Constanzo et al., (1973) suggest that it is the implicit adult sanction of certain behaviors that leads preoperational children to focus on consequences rather than the subjective cues of intentionality, and that in situations where this implicit sanction is not a factor these children will also take intentionality into account. The children in the present study were able to focus on intentions, perhaps as a result of the fact that they were reconstructing situations in which they themselves took part, or at least were witnesses, despite the implicit adult sanctions of most of the negative behaviors (hitting other people, being selfish, "picking on" smaller children, etc.). While the third grade children in this study were just beyond the preoperational stage, it would be interesting to look at whether the method of reconstructing situations would make intentionality more salient for preoperational children as well.

BIBLIOGRAPHY

- Blanchard, E.B., and Bindseil, B.D. The development of cognitive balance and the transition from concrete to formal operational thought. Child Study Journal, 1971, 1, 126-134.
- Blanchard, E.B., and Price, K.C. A developmental study of cognitive balance. Developmental Psychology, 1971, 5, 344-348.
- Chandler, M.J., Greenspan, S., and Barenboim, C. Judgments of intentionality in response to videotaped and verbally presented moral dilemmas: The medium is the message. Child Development, 1973, 44, 315-320.
- Coie, J.D., Constanzo, P.R., and Farnill, D. Specific transitions in the development of spatial perspective-taking ability. Developmental Psychology, 1973, 9, 167-177.
- Constanzo, P.R., Coie, J.D., Grumet, J.F., and Farnill, D.A. A re-examination of the effects of intention and consequences on children's moral judgments. Child Development, 1973, 44, 154-161.
- Constanzo, P.R., Grumet, J.F., and Brehm, S.S. The effects of choice and source of constraint on children's attributions of preference. Journal of Experimental Social Psychology, 1973, in press.
- Cottrell, N.B. Heider's structural balance principle as a conceptual rule. Journal of Personality and Social Psychology, in press.
- Crockett, W.H. Balance, agreement, and subjective evaluation of the POX triads. Journal of Personality and Social Psychology, 1974, 29, 102-110.
- DeSoto, C.B., and Keuthe, J.L. Subjective probabilities of interpersonal relations. Perceptual and Motor Skills, 1959, 59, 290-294.
- Feffer, M.H., and Gourevitch, V. Cognitive aspects of role-taking in children. Journal of Personality, 1969, 28, 383-396.
- Gutman, G.M., and Knox, R.E. Balance, agreement, and attraction in pleasantness, tension, and consistency ratings of hypothetical social situations. Journal of Personality and Social Psychology, 1972, 24, 351-357.

Gutman, G.M., Knox, R.E., and Storm, T.F. Developmental study of balance, agreement, and attraction effects in the ratings of hypothetical social situations. Journal of Personality and Social Psychology, 1974, 29, 201-211.

Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.

Jones, E.E., and Davis, K.E. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.) Advances in experimental social psychology. Vol. 2. New York: Academic Press, 1965.

Jones, E.E., and Nisbett, R.E. The actor and the observer: Divergent perceptions of the causes of behavior. In E.E. Jones, D. Kanouse, H.H. Kelley, R.E. Nisbett, S. Valins, and B. Weiner (Eds.) Attribution: Perceiving the causes of behavior. New York: General Learning Press, 1971.

Jordan, N. Behavioral forces that are a function of attitudes and cognitive organization. Human Relations, 1953, 6, 273-278.

McArthur, L.A. The how and what of why: Some determinants and consequences of causal attribution. Journal of Personality and Social Psychology, 1972, 22, 171-193.

Newcomb, T.M. Interpersonal balance. In R.P. Abelson, E. Aronson, W.J. McGuire, T.M. Newcomb, M.J. Rosenberg, and P.H. Tannenbaum (Eds.) Theories of cognitive consistency: A sourcebook. Chicago: Rand McNally and Company, p. 28-51.

Nisbett, R.E., Caputo, C., Legant, P., and Maracek, J. Behavior as seen by the actor and as seen by the observer. Journal of Personality and Social Psychology, 1973, 27, 154-164.

Piaget, J. Six psychological studies. (Trans. by A. Tenzer) New York: Random House, 1967.

Piaget, J. The moral judgment of the child. (Trans. by M. Gabain) New York: The Free Press, 1965.

Piaget, J., and Inhelder, B. The child's conception of space. London: Routledge and Kegan Paul, 1956.

Press, A.N., and Bethel, M. The effect of balance on perceived causality: The use of internal versus external organizational schemas on casual attribution. Journal of Personality and Social Psychology, in submission.

- Press, A.N., and Peterson, G.L. Causal attribution as a function of the valence of the behavior of known and unknown others. Paper presented at the Forty-sixth Annual Meetings of the Midwestern Psychological Association, Chicago, May, 1974.
- Scarlett, H.H., Press, A.N., and Crockett, W.H. Children's descriptions of peers: A Wernerian developmental analysis. Child Development, 1971, 42, 439-453.
- Vickers, M., and Blanchard, E.B. The development of preference for cognitive balance. The Journal of Genetic Psychology, 1973, 122, 189-195.
- Werner, H. Comparative psychology of mental development. New York: International Universities Press, 1957.
- Winer, B.J. Statistical principles in experimental design. New York: McGraw-Hill, 1971.

A DEVELOPMENTAL STUDY OF CAUSAL ATTRIBUTION: BALANCE AND THE
USE OF INTERNAL VERSUS EXTERNAL ORGANIZATIONAL SCHEMAS
IN SOCIAL SITUATIONS

by

ANNA C. SMITH

B.A., Kansas State University, 1972

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Psychology

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1974

ABSTRACT

The purpose of this study was to investigate the effects of balance on causal attribution in children. On the basis of previous research and theoretical considerations it was expected that children would attribute their own behavior and the behavior of peers in balanced situations to internal, dispositional qualities, while behavior in imbalanced situations would be attributed to external, situational factors.

This hypothesis was only partially supported in that the expected effects were found for the subjects' explanations of their own behavior and the behavior of liked but not disliked peers.

The subject population consisted of 69 grade school children from the Woodrow Wilson Elementary School in Manhattan, Kansas. Half were sixth graders and half were third graders and approximately half the subjects from each grade were male and half were female. Each subject was pretested for his descriptions of four peers: one of each sex that he liked and one of each sex that he disliked.

Following this pretest, each subject was asked to describe and account for instances of positive and negative behaviors for each of the four peers as well as for instances of his own positive and negative behavior.