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A developmental study of target attribution

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Abstract

The purpose of this study was to determine the existence of target

attribution, and its interaction with other variables. Subjects were

obtained from grades one, seven, and college freshmen; thirty of each

age group were used. The subjects consisted of an equal number of

males and females, who scored as internal or external on a locus of

control measure. Each individual was asked to assume the role of

actor in each of four videotapes, and to rate the degree of responsi-

bility they felt for the action on each scene. The subjects were

also asked to rate the actor and the other person in each scene on

a kindness/consideration scale, the strength of their identification

with the actor in each scene, and to answer several open-ended questions

about each scene. In general, subjects tended to assume a high level

of responsibility for events, including the actions of other people.

The tendency for self-attribution was stronger among first graders

and in actor-initiated scenes. Target attribution was greater in

females when the situation outcomes were negative, whereas males assumed

greater responsibility for positive outcomes. Locus of control was

not a factor in any of the analyses. All subjects indicated a strong

or very strong identification with the actors in the tapes. Overall,

kindness/consideration ratings were higher for the actor, who represented

the subject than for the other person in the scene. Males rated them-

selves more highly than the other, but females rated the other higher

on kindness/consideration.

Acknowledgements

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Chapter I

Introduction

Target attribution is a theory with a name, a definition, a modest number of citations in the literature of general attribution theory, and no studies to claim as its own. Even Heider, the catalyst for the entire field of attribution research comments, "There are many other things that have not yet been adequately treated in attributional terms--the whole thing which I am not quite clear about--which I call target attribution" (Harvey, Ickes, & Kidd, 1972:12). Target attribution is one part of the general processes of self- and interpersonal attribution, in which the self is seen as the most important feature of the environment. In one sense, this is true, because each person is more intimately acquainted with himself/herself than with any other person, and because one may continue to function after removal of many persons or aspects of one's surroundings, but not after removal of the self. As Heider (1976) notes, when something in the environment is perceived as very important, persons will use this event, person, etc., as an object of attribution, especially if it is the person himself. Events occur because of actions of the self, or actions of others influenced by the self. The behavior of others is perceived as revolving around and being heavily determined by the attributor; therefore, actions occur for that person's benefit or harm, because s/he is causally important.

Apparently, everyone is capable of, and at times engages in, egocentric thought processes. The degree of egocentricity may be arranged along a developmental continuum from the infant, who seems

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unable to differentiate anyone else from self, to children who see
most of the world as revolving around themselves, to adults who, ideally
hold a view of their importance that is closely in accord with reality.
Because target attribution is directly related to egocentricity, it
is not surprising that we also expect to find target attribution varying
with age, and with changes accompanying maturation.

Aside from the universal condition of being individual, conscious
beings, what else motivates this bias of heavily weighting oneself
in seeking explanations for the behavior of another person? Heider
(1976) suggests that it may be a need to be taken into account by
that person, a combination of a wish to receive attention, to be vali-
dated as a person of some worth, to be considered important by others,
or a desire to consider oneself important. This mechanism can go
awry, and the attributor then seeks negative attention rather than
deprivation of any attention. This condition may lead the person
to attribute the blame for misfortunes of friends to self, perceiving
self as the causal agent of unavoidable tragedies, or to assume respon-
sibility for events in one's life over which one has no control. Target
attribution may also develop into clinical paranoia in some individuals,
who then see the behavior of all other persons as centering on them.

The strength of target attribution may vary between males and
females. According to Deaux (1976) and Guttentag and Longfellow (Note
1), females should make self-attributions in situations with negative
outcomes, whereas males should make self-attributions after a positive
outcome. Locus of control may be an interacting factor because previous
findings show that internals tend to attribute successful outcomes
to the self and failure to the environment, while externals attribute

success to their environment and failure to the self (Gilman & Minton,
1974; Sosis, 1974). Other studies show that internals always attribute
outcomes to their own efforts and abilities, but externals attribute
all successes and failures to factors outside themselves (Rotter,
1966; Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1972). The
conflicting results make it difficult to predict the relationship
between target attribution and internal-external control.

The focus of this study is (1) to investigate age differences
in target attribution, and (2) to determine the nature of the inter-
action between the variables of age, sex, internal/external locus
of control, initiator of action, and situation outcome with amount
of target attribution expressed.

Review of the Literature

Attribution as a personal and interpersonal process existed before
the beginnings of an organized psychology. People have attempted
to explain and find reasons for their behavior, and to make judgments
about themselves: They also examine the behavior and circumstances
of others in making judgments and evaluations of them. This seems
to occur because people are curious about themselves and others, and
because they desire a fairly ordered mental representation of their
world (i.e., they want to know about the larger patterns into which
they fit, and the basis for these comparisons). But, these seemingly
universal processes were accorded little if any attention or systematic
investigation until very recently. Attribution theory has sometimes
been criticized as being too simplistic, common, and unscientific
to be considered part of psychology, although the ultimate goal of
social attribution is to understand and make predictions about behavior,

and to provide meaning and a measure of control to the world of beings

and their behavior, which is very similar to the goal of science.

In reviewing the literature pertaining to this study, five research

areas will be examined. (1) The social cognition studies question how

persons explain their own or others' behavior in social contexts.

(2) Experiments in causality and responsibility examine how persons

arrive at decisions regarding the causes of a given (usually social)

event, and when and how responsibility is assigned. (3) In the mode

of presentation research, an attempt is made to determine the effects

of varying media on outcomes of attribution experiments. Internal/

external studies look for interactions between locus of control and

attribution. Finally, some research is cited examining how attribution

is affected by sex of the individual. A majority of the research

cited will be developmental in nature, because most of the subjects

are children and adolescents.

Social Cognition

Studies of social cognitive development in children have taken

two primary routes: (1) the cognitive developmental theory of Piaget

(1948) in which cognitive development is seen as a product of the

interactions between an organism and its environment, resulting in

an organization of knowledge into systems of meaning or belief, and

(2) social psychological theory (often known as attribution theory),

such as that proposed by Bem (1967), Heider (1976), and Kelley (1973),

where the focus is on investigations into why a person acts in a speci-

fic way. Abilities and intentions are taken into account, with progress

seen as moving from the undifferentiated to the differentiated.

Shantz (1976) has focused on children's conceptions of others rather than self. She found several factors to be involved in making social inferences: type of response required, information provided about the other, information provided about the situation, children's ability to attend to relevant information, and children's processing of relevant information. Studies of the development of social inference, according to Shantz, generally ask five types of questions: (1) What is the other seeing? This is the least social of the various inferences. Only very young children cannot "take the other's point of view." (2) What is the other feeling? This inference involves empathy, and may elicit a cognitive or an affective response. Three-year-olds can correctly identify happy feelings in others, but a child must be older before he/she can correctly identify negative feelings. The mechanism of empathy in young children may be memory or self description because these processes are more accurate when the model is similar to the self, or is in a familiar situation. However, children are more accurate at describing behavior than the causes for behavior. (3) What is the other intending? By six years of age, children can differentiate between the intentional and the accidental, and use this ability to assign blame or credit. They take intentions into account with positive consequences, but they are unable to deal with negative consequences until about 10 years of age. (4) What is the other thinking? Six-year-old children realize others may have different thoughts or knowledge than they, and by mid-childhood, they know others are able to think about their thoughts. (5) What is the other like? The child has classification schemes for those s/he knows well, and later generalizes this to unknown persons.

Studies of personality trait attribution usually focus on attribution either to self or others. Jensen and Moore (1977) examined self-attribution in 7-12 year old boys by asking questions completely irrelevant to the task at hand. Each subject was told that, on the basis of his answers, he was shown to be predominately cooperative or competitive. Later the boys were given an opportunity to engage in a tower building task where they could be competitive, but stood to gain more through cooperation. Boys told they were competitive, and therefore presumably saw themselves as competitive, achieved significantly less success, while those told they were cooperative apparently made this self attribution and therefore were more successful.

Snodgrass (1976) examined the attribution of personality traits to others. Children in kindergarten through sixth grade were read descriptions of other children, which served as the basis for spontaneous and suggested inferences that they were then asked to justify. Trait inference appeared as early as kindergarten, and was found to increase in complexity as subjects increased in age. Older children used a greater variety of inferences to explain the behavior of others and were more able to give reasons for their choices. This increase may be due to a greater capacity for hierarchical organization, or an accumulation of experience from daily living. Baldwin and Baldwin (1970) found that children's judgments of kindness demonstrated differentiation between intended and unintended outcomes at an earlier age than their moral judgments. According to Baldwin et al., ability to attribute personality traits may precede other attributional abilities.

Guttentag and Longfellow (Note 1), who examined dispositional attributions, concluded that this type of inference is the cumulation

of the attribution process. Although these attributions are the most

global and all-encompassing, they are often made on the basis of very

limited knowledge. The methodology involved in such research is to

ask open-ended questions and have subjects describe persons they know.

Older children use more trait words and make references to psychologi-

cal qualities, while younger children use more egocentric and concrete

statements. Although girls use more abstract psychological terms

than boys, both sexes give greater detail about peers and males. In

general, children employed more developmentally advanced concepts

with regard to themselves than when considering others (i.e., they

were able to apply more differentiating concepts to themselves), and

brighter children made more psychological attributions.

Attribution of Causality and Responsibility

Guttentag and Longfellow (Note 1) also review and summarize several

important studies in the area of attribution of causality and responsi-

bility in children. They criticize many of the studies reviewed because

most deal with attribution to others, the materials used are boring

and nonsocial, and insufficient distinction is made between the child's

cognitions of physical and social events. Two major approaches have

been taken in this area of attribution: (1) the cognitive developmental

position which emphasizes changes occurring in the child, and (2) the

social psychological approach, which examines the effects of charac-

teristics of the child (e.g., age, race, and sex). With respect to

causal attributions, Guttentag and Longfellow note that before three

years of age children cannot infer a separate psychological existence

in another. By the age of four there is still confusion between subjec-

tive psychological states and observable behaviors, and children

experience problems in determining causality (i.e., any two independent

behaviors are likely to be linked if they occur closely in time).

About 6-7 years of age, children acquire the ability to make inferences

about motives and intentions. Across a number of studies it has been

shown that oversufficient justification lessens intrinsic motivation.

Regarding attribution of responsibility, Guttentag and Longfellow

(Note 1) show that children are able to assign responsibility only

after attaining the ability to make attributions of intentionality.

However, the tendency to judge actors as more responsible for negative

and positive outcomes continues into adulthood. Until 10 years of

age (which is beyond the age when children can make moral evaluations

based on intent), children judge an actor as more responsible and

more deserving of punishment when the consequences are severe. This

phenomenon probably occurs as a result of socialization and parental

upbringing. Children are more accurate in attributing responsibility

when the victim is human than when an animal or an inanimate object

is involved. But, when the situation involves an adult, both children

and adults attribute greater responsibility (negative and especially

positive) to the adult, acknowledging that adults are better able

to plan and execute. Perceiver characteristics also affect attributions.

Age has been the major variable in most studies, but sex and religious

differences have been considered in a few studies, although the latter

two variables have not yielded many significant differences. Race

seems to be an important variable, in that both black and white children

follow the same cognitive sequence. White children show this behavior

earlier, and are more punishing of negative results, whereas the black

children tend to be more rewarding of positive results. While young

children seem to judge characteristics on the basis of consequence, when these children are asked how much they like each of the characters, they consistently pick the one who had good intentions, even though s/he accidentally caused damage. Children, like adults, tend to judge another more objectively if this person is similar to the perceiver. Guttentag and Longfellow (Note 1) explain this finding in terms of defensive attribution, which implies that we try to reduce the threat of being judged unfairly, and tend to blame others unlike ourselves to reduce the threat to individuals similar to us from being randomly victimized.

Growth of understanding of psychological causality parallels the growth of moral judgment based on intentions, rather than just overt behavior, according to Whiteman (1967). Using two age groups, 5-6 and 8-9-year olds, who were told a story and asked for psychological explanations, Whiteman found that younger children experienced more difficulty in ascertaining covert intent, and tended to focus on overt behavior. They also encountered more problems in differentiating between observed locus of effect and inferred locus of cause. This finding supports Piaget's distinction between the intuitive and the concrete operational child. Whiteman noted that even older children had trouble assigning motives. Socioeconomic status of the child's family also affected results, but the main determinant was chronological age, which was more influential than mental age.

Rule and Duker (1973), in their study of children's evaluations of aggressiveness also concluded that age was the major variable. They tested severity of outcome attribution and found that older boys (12 years of age) thought it was less attributionally important than

younger boys (7 years of age). Salili, Maehr, and Gilmore (1976)
did a cross cultural study of Iranian and U.S. children ages 7-18
years, and noted differences in the methods by which the two groups
arrived at their conclusions, although the children generally arrived
at the same types of conclusions at approximately the same ages. Younger
children tend to be influenced by the outcome of the episode, whereas
older children were influenced by the intent of the actor. Causality,
according to Copple and Coon (1977), is an important dimension in
event perception. Their kindergarten-, third-, and sixth-grade subjects
were simultaneously shown a causal and a non-causal agent, after which
they were asked to reconstruct the scene, both immediately and a week
later. While young children experienced some difficulty in remembering
clearly one week later, all subjects were more accurate in reproducing
the causal event over the non-causal event.

Karniol and Ross (1976) provide additional support for Guttentag
and Longfellow's assertion that young children use an additive model
as opposed to the discounting principle in making causal attributions
to others (young children are able to employ the discounting principle
with respect to their own behavior). The discounting principle suggests
that one reason for an event will negate other reasons; the additive
model proposes that persons will combine several reasons in explaining
behavior. Their subjects were read story pairs in which the main
characters either chose to play with a toy or were coerced into playing
with it. The kindergarten children said that the coerced children
wanted to play with the toy more than the children who chose to play
with it. These children reasoned that the coerced child not only
got to play with the toy, but also managed to gain parental approval,

whereas the only gain to the second child was the play itself. Second graders were about equally divided in their use of the two models, and by fourth grade the discounting principle gained ascendence.

Mode of Stimulus Presentation

The mode of stimulus presentation in attribution experiments has been shown to exert some influence on outcomes. Stephenson, Power, Kelleher, and Richardson (1976) presented third- and fourth-graders with the task of judging intentionality in the breaking of some pop bottles. The conditions were (1) tape recorded dialogue alone, (2) tape recorded narrative alone, (3) tape recorded dialogue with slides, and (4) tape recorded narrative with slides. Young subjects were better able to judge correctly with narrative than with dialogue, whereas either mode was effective with older subjects. All subjects were able to judge more accurately with slides than without, and older subjects as a group were better able to judge intentionality under all conditions. However, Rybash, Sewall, Roodin, and Sullivan (1975) contrasted verbal descriptions depicting a conflict between damage and respect for adults with videotape presentations. The six-year-old subjects in the verbal condition based their judgments on intentions. This effect may have occurred because the videotaped scenes were more real to the children. Farnill (1974) and Costanzo, Coie, Grumet, and Farnill (1973) argue that videotape presentations increase children's ability to judge intent, because such presentations seem closer to real life, and hence facilitate identification with the character. However, Collins, Berndt, and Hess (1974) contend that videotape gives greater salience to consequences than to motives.

Attribution of Internal/External Control

While the area of internal/external locus of control has been explored extensively in adult attribution research, it has not been a very popular topic among those in the developmental attribution field. Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum (1972) examined the internal/external locus of control dimension with respect to achievement attribution in children. Six- and nine-year-olds were asked to rate the importance of stable or unstable and internal or external causes in determining achievement outcomes. If the outcome was consistent with past performance both groups made attributions to stable factors, but outcomes inconsistent with past performance were attributed to unstable factors. Young children combined ability and effort in an additive model, and were less able to see the possible interaction between the two. Young subjects also were less able to utilize information about past performance, whereas older children used more internal factors when the actors did well, and external factors when they did poorly, which is consistent with adult patterns. As children advance in age they tend to attribute more importance to effort than to ability, a pattern similar to adults.

Achievement attributions of kindergarteners have been investigated by Falbo (1975) who attempted to determine whether kindergarteners have consistent preferences in explaining situational outcomes, and whether these preferences are related to other variables associated with achievement motivation. He found no consistent internal/external personality differences at this age level, and concluded that attributional preferences are related to home environment and IQ. High IQ children more often cited intelligence and ability as explanations for

successful outcomes, while children with lower IQs tended to give credit to luck or an easy task. This finding supports the earlier work of Weiner et al. (1972).

Among the studies of internal/external control with adults, Gilman and Minton (1974) showed that internals attributed success to their own ability and failure to bad luck. In an analysis of an automobile accident, Sosis (1974) found that internals attributed more responsibility to the driver while externals attributed more responsibility to the situation. When a simulated psychotherapy session was used, internals and actors thought positive results were more attributable to their own ability, and negative results were due to unfortunate chance factors. Externals and observers attributed negative results to the ability of the actor exclusively.

Miller, Brickman, and Bolen (1975) explored attribution versus persuasion as a means for modifying behavior, by making attributions with varying degrees of internality/externality. In the first experiment using litter reduction as the target behavior, second and fifth graders were divided into three groups. Group I was told that they were neat and tidy people, who were very unlikely to engage in littering. Group II was told they should be neat and tidy people, that they should not litter, and they were given a list of reasons for not littering. Group III was a control group who heard a speech on an unrelated topic. When given the opportunity to litter, at a later time, Group I exhibited a significantly lower incidence of littering. Miller et al. concluded that attribution can disguise persuasive intent, and improve chances of success, especially if such intent is attributed to an internal aspect of the person. In their second experiment,

math achievement was used as the target behavior. Group I was told they had the ability to do well in math, Group II was told they had the motivation to do well, Group III was reinforced for doing well in math, Group IV was exhorted to do well for logical reasons, and Group V was the control group. Group I did slightly better than Group II, and Group II had a small advantage over Group III, although these differences were not significant. Groups IV and V did not show an improvement better than would be expected by chance. The major difference was between the first three and the last two groups.

Sex Differences in Attribution

Until recently, few studies of developmental attribution examined sex differences in much detail, if at all. The most extensive work in this area has come from Guttentag and Longfellow (Note 1). Their main finding with respect to achievement motivation is that girls expect to perform poorly. When girls succeed, they attribute success to unstable factors (i.e., luck, an easy task), whereas failure is attributed to stable factors (i.e., low intelligence, lack of initiative). Boys display the opposite trend. Girls who were evaluated by an adult female attributed failure to lack of ability and stopped trying to improve, whereas if they were evaluated by a male or a peer, they attributed failure to lack of effort and attempted to improve their performance. Boys displayed the opposite pattern. When feedback from teachers is observed, the amount of positive to negative feedback does not vary with the sex of the child, but feedback varies in quality. Positive feedback directed at male students focuses on the intellectual quality of their work 94% of the time, as compared to 79% of the instances for girls. Negative feedback to boys alludes to their intellectual

capabilities 54% of the time, compared to 88% of the time for girls.
Guttentag and Longfellow note that children tend to use the largest
category and the least ambiguous information to form future achievement
expectations, and with the female students, this category would be
the negative intellectual evaluations.

Guttentag and Longfellow's (Note 1) most extensive work is in
the area of sex role attributions, where they performed several experi-
ments comparing children of both sexes in kindergarten-, and fifth-,
and ninth-grades. Five- and six-year-old children were able to
sex type objects and activities in the traditional fashion, and males
were seen as more competent and more valuable by both sexes, whereas
females viewed themselves as less able. Both sexes determined sex
on the basis of hair and clothing, therefore any intervention at this
age must be concrete and closely tied to the child's everyday world.
At the fifth grade, 10-year-olds focused on role related aspects of
sex differences as well as physical attributes; females expected to
do less well than males. Both sexes tend to believe that rigid sex
roles are necessary to maintain the world, and that persons wish to
fulfill the rules they currently hold. The ninth-graders displayed
many similarities to adults. They could distinguish individual psy-
chological differences independent of social roles; they were aware
that social roles are not binding and inevitable, and their achievement
attributions tended to fit the adult pattern. But girls still attri-
buted their success to luck, whereas boys made ability attributions.
Guttentag and Longfellow note that peer group pressure is a major
factor in this age group, therefore the entire group must be won over
if change is to occur.

Guttentag and Longfellow (Note 1) conclude that neither cognitive developmental theory nor social learning theory can account for the nature of sex role concepts and their change. When speaking of their present self, all ages and both sexes saw self as fairly androgynous, having positive qualities of both sexes, although this was not reflected in their other and ideal categories. Stage of cognitive development had little predictive power in sex role attributions.

The aim of this study was to investigate target attributions among three age groups who differ in locus of control scores and sex, and who view scenes in which story outcome and initiator of action vary. Based on the previous discussion, the following predictions were advanced. (1) Target attribution is an interpersonal process expressed to some degree in persons of all ages. (2) The strength of target attribution as a determining variable decreases with the age of the subject. (3) Target attribution is related to direction and degree of internal/external locus of control, and to sex of the individual. Internals tend to make attributions to the self more strongly under all conditions, and females are more likely to do so when situation outcomes are negative.

Chapter II

Method

Subjects

Three groups of randomly selected subjects were used, consisting of individuals in the following age ranges: 6-7-year-olds ($M = 84$ months), 12-year-olds ($M = 144$ months), and 20-year-olds ($M = 243$ months). Each age group consisted of 15 subjects of each sex, for a total of 30 subjects per group. The subjects were white, middle class persons. The first- and seventh-graders were obtained from suburban schools and the twenty-year-olds were students in an urban university.

Attribution Stories

Eight stories were acted out by peer models of the same age groupings as the subjects, and recorded on videotape. Four of the stories had positive outcomes, and four had negative outcomes. In four of the stories the actor, representing the subject, initiated the action, while in the remaining four stories the other person initiated the action. Each age group viewed those scenes in which the actors were similar in age to the subjects. In the instructions to the subjects, much emphasis was placed on the actor's similarity to the subject. This is a critical factor because ability to accurately determine causality decreases with increasing distance in age between persons, and with increasing interpersonal variability. The story formulas used were the following.

Subject's initiative: windows - positive outcome. The Other is indoors washing windows when the Actor approaches to request help

with a broken object. The Actor asks, "Will you help me with this?"
"I can't fix it myself." The Other refuses, saying, "I'm busy." The
Actor then says, "I really need you to help me with this." The Other
says, "OK," puts down equipment, and assists the Actor.

Subject's initiative: windows - negative outcome. The Other
is indoors, washing windows when the Actor approaches to request help
with a broken object. The Actor asks, "Will you help me with this?
I can't fix it by myself." There is no response from the Other, so
the Actor asks again, saying, "Will you help me with this?" The Other
refuses, saying, "I'm busy." The Actor persists, saying, "But I really
need you to help me with this!" The Other then explodes in anger,
shouting, "Just leave me alone! Quit bothering me!" and squirts glass
cleaner and throws sponges at the Actor.

Subject's initiative: towels - positive outcome. The Other
is indoors, folding towels when the Actor approaches to request help
with a stack of papers, asking, "Will you help me with this?" When
there is no response from the Other, the subject again asks, "Will
you please help me with this? I really can't figure it out." The
Other refuses, saying, "Not just now." The Actor asks once more,
saying, "I really need your help with this project." The Other says,
"OK," puts down the towels, and helps the Actor.

Subject's initiative: towels - negative outcome. The Other is
indoors, folding towels when the Actor approaches to request help
with a stack of papers, asking, "Will you help me with this?" When
there is no response from the Other, the subject again asks, "Will
you please help me with this? I really can't figure it out." The
Other refuses, saying, "Not just now." The Actor asks once more,

saying, "I really need your help with this project." The Other explodes in anger, shouting, "Just leave me alone! Quit bothering me!," and throws the pile of towels at the Actor.

Other's initiative: homework - positive outcome. The Actor is doing homework when the Other enters and offers to look over the Actor's work, saying, "I'd be interested in seeing what you're doing." The Actor says, "Sure!," and offers the work to the Other. The Other says, after looking over the work, "This looks really good. If you need any help, just ask me."

Other's initiative: homework - negative outcome. The Actor is doing homework when the Other enters and offers to look over the Actor's work, saying, "I'd be interested in seeing what you're doing." The Actor says, "Sure!" and offers the work to the Other. The Other says, after looking over the work, "That's not only wrong, that's the most stupid thing I've ever seen! I might have known you couldn't do any better."

Other's initiative: craft - positive outcome. The Actor is working on a craft project when the Other enters, and offers to look over the Actor's work, saying, "I'd like to see how you're coming along there!" The Actor says, "OK." The Other, after looking over the project, says, "This looks really good! If you need any help with it, just ask."

Other's initiative: craft - negative outcome. The Actor is working on a craft project when the Other enters, and offers to look over the Actor's work, saying, "I'd like to see how you're coming along there." The Actor says, "OK." The Other, after looking over the project, says, "That's not only wrong, that's the most stupid

thing I've ever seen! I might have known you couldn't do any better."

A representative series of scenes shown to a subject consisted of two scenes from Subject's Initiative and two scenes from Other's Initiative (e.g., Windows - Positive Outcome, and Towels - Negative Outcome, along with Homework - Negative Outcome and Craft - Positive Outcome). These stories were constructed to meet the criticisms of Guttentag and Longfellow (Note 1) that have been directed toward previous studies. The three major criticisms of previously constructed vignettes are (1) most of the stories have dealt with attribution to others (2) the stories, when used, were boring, confusing, and non-social and (3) insufficient distinction has been made between the child's cognitions of physical and social events. The present stories, which deal with attribution to the self, were social in nature. Further, the use of videotape, if not the story content itself, should reduce the factors of boredom and confusion.

Locus of Control

Rotter (1966) developed a widely used locus of control scale, but it has been criticized because of its relationship with social desirability, confounding of different types of locus of control, and difficult reading level. The locus of control measure developed by Nowicki and Strickland (1973) has corrected for these problems. Children's test scores are not related to social desirability and intelligence, but are correlated with achievement and GPA. High internality scores are related to higher occupational level of parents, especially for males, while high external scores are related to prejudice. The Nowicki-Strickland scale correlates highly with other measures of internal/external control. Test-retest reliabilities are .67 for

younger children, and .75 for older children. Estimates of internal consistency by the split half method corrected by the Spearman-Brown formula are r = .63 (third and fourth grade), r = .68 (sixth through eighth grade), r = .74 (9th through 11th grade) and r = .81 (12th grade). Since the test is additive and the items are not comparable, split half reliabilities tend to underestimate the true internal consistency of the scale.

The adult scale (LOCA) scores are not related to IQ or social desirability, and while this test may be used with adults possessing as little as fifth grade reading ability, it is still suited for more highly educated adults. Split half reliabilities vary between .74 and .86, with test-retest reliability r = .83. The construct validity for the scales consists of (1) significant correlation with Rotter's test (2) a significant relationship with Eysenck's Manifest Anxiety Scale (3) a significant difference between hospitalized schizophrenics, hospitalized non-schizophrenics, and staff workers and (4) a significant correlation with achievement, but the direction of this correlation is different for males and females (Nowicki and Duke, 1974).

A median split on the locus of control scale was used to categorize the subjects as internal or external. There are no published norms for first graders. For seventh graders the mean is 13.55, standard deviation 4.55; for college students the mean is 8.61, standard deviation 3.42. The seventh grade mean in this study was 18.73, the college mean 12.54. These means exceed those found by Nowicki and Duke (1974) but this is probably not of great importance, since locus of control was not found to be a significant factor.

Procedure

Each subject was seen individually by the experimenter in a small room equipped with a ½ inch VTR and TV monitor. The locus of control scale was administered first, after which the subject was introduced to the situation. Subjects were told to take the role of the actor in the film, that is, to be that person for the duration of the film. The subjects were told that the actor in the film "is a person who lives in a neighborhood similar to yours, and attends a school like your school." The experimenter requested each subject to attend closely to the film, because a few questions would be asked after each scene. Before the series of questions was asked, the subject was reminded again to take the part of the actor in the film; that is, to respond as if s/he were placed in that situation.

Four of the eight tapes appropriate for the subject's experimental condition were viewed in random sequence; two tapes had a positive outcome, the other two showed a negative outcome. In two of the tapes the actor representing the subject initiated the action, while in the remaining two the other person initiated the action. Half of the subjects saw a positive outcome tape first, while the other half were first presented with a tape with a negative outcome to control for order effects. Following each of the four tapes the subjects were asked the following questions.

(1) There is some reason for what happened in the film. Decide for yourself who was responsible for the outcome. If you feel that you, as the actor in the film, were totally responsible, circle number 1 on the scale. If you feel the other person was totally responsible, circle number 9. If you think neither you nor the other person were

totally responsible, circle a number between 1 and 9 corresponding to the degree of responsibility you would assign to each person.

(2) As the actor in the film, what were you thinking? What do you suppose the other person was thinking?

(3) As the actor in the film, what would you have said next? What would the other person have said next?

(4) What would you have done next? What do you suppose the other person would have done next?

(5) What would a stranger think about what happened in the film?

(6) Considering all four scenes, how would you rate yourself, as the actor, and the other person (on a 5 point scale) with respect to being nice, kind, considerate, and helpful?

Chapter III

Results

The analysis used was a 3 (age) x 2 (sex) x 2 (internal-external control) factorial ANOVA with repeated measures on the valence of outcome and initiator of action factors. The major dependent measure is the responsibility score, assigned by the subject. A kindness-consideration rating, and an identification rating were also obtained. Responses to the subjective questions were grouped into categories. Overall, the significant findings of this study with respect to the responsibility score (the measure of target attribution) were age and initiator of action main effects, and several interactions involving these two variables with sex of the subject and situation outcome.

Identification Ratings

Subjects were asked to rate the extent of their identification with the actor for each scene, and then assign an overall rating on a 1-5 scale for all scenes. Across all conditions, 88% of the subjects indicated a 5, or the highest level of identification with the actor while the remaining subjects rated their identification as 4. There were no significant differences in identification ratings for valence of outcome, $F < 1$, or initiator of action $F < 1$. The mean identification scores for males and females were the same regardless of sex of actor ($M = 4.80$). The identification scores for first- and seventh-graders were identical ($M = 4.90$), whereas college subjects gave slightly lower ratings ($M = 4.80$). The internals mean identification score was ($M = 4.90$), compared to ($M = 4.80$) for externals. The stimulus tapes were effective, since no difference in identification scores was

evidenced for age or sex.

Responsibility Ratings

On the 1-9 scale used to measure assessment of responsibility, or target attribution, one represented complete attribution to the self, whereas nine denoted complete attribution to the other. Table 1 shows the mean scores for this measure. The analysis of variance summary appears in Table 2. The mean score across ages, sex, and I/E scores, for all situations was 2.80. Females displayed slightly more target attribution than males (M = 2.70, M = 2.80), but this difference was not significant. The difference in target attribution between age groups was significant. The mean score for first graders (M = 1.70) was significantly lower than that of seventh graders (M = 2.70) or college students (M = 3.50). Across all subjects, situations with a negative outcome (M = 2.70) were attributed to the self slightly more than those situations having a positive outcome (M = 2.60) but the difference was not significant. However, sex of the attributor was a significant interaction factor. This interaction is presented in Figure 1. Simple effects analysis showed that females developed more target attribution with negative outcomes, whereas males had stronger target attribution scores for situations with positive outcomes. This sex difference was present for each age group (see Figure 2). Responsibility score was also influenced by the initiator of action. When the actor representing the subject initiated the action, all subjects attributed more responsibility to the self (M = 1.70) than when the other was the initiator (M = 3.50).

Ratings of Kindness/Consideration

Table 3 presents the mean scores for this measure. The analysis

Table 1

Mean Scores for Responsibility Rating

Subjects	Responsibility Score			
	Actor-Positive	Other-Positive	Actor-Negative	Other-Negative
First Grade				
Males	1.00	1.93	1.47	2.27
Females	1.33	2.80	1.13	1.67
Combined	1.17	2.37	1.30	1.97
Seventh Grade				
Males	1.07	3.40	2.47	4.80
Females	1.73	4.07	1.13	2.53
Combined	1.40	3.74	1.80	6.07
College				
Males	2.13	3.87	2.87	4.87
Females	2.67	5.60	1.93	4.33
Combined	2.40	4.74	2.40	4.60

Table 2

Analysis of Variance Summary Table

for Responsibility Ratings

| Source	df	MS	F	p<
Between Subjects				
Age	2	71.59151	26.166060	.000
Sex	1	.47632	.17409	.678
I/E	1	1.92274	.70275	.404
Age x Sex	2	5.0613	1.84943	.164
Age x I/E	2	1.88241	.68800	.506
Sex x I/E	1	10.43610	3.81430	.054
Age x Sex x I/E	2	4.93898	1.80515	.171
Error	78	2.73604		
Within Subjects				
Outcome	1	.07341	.08656	.769
Outcome x Age	2	.63969	.75431	.474
Outcome x Sex	1	69.72864	82.22189	.000
Outcome x I/E	1	1.63513	-1.92810	.169
Outcome x Age x Sex	2	3.83116	4.51759	.014
Outcome x Age x I/E	2	.02098	.02474	.976
Outcomt x Sex x I/E	1	.45303	.53420	.467
Outcome x Age x Sex x I/E	2	.80552	.94984	.391
Error	78	.84805		
Actor	1	249.08646	194.62914	.000
Actor x Age	2	13.33263	10.41774	.000
Actor x Sex	1	.66072	.51627	.475
Actor x I/E	1	1.00333	.78397	.379
Actor x Age x Sex	2	2.67657	2.09139	.130
Actor x Age x I/E	2	.45952	.35904	.699
Actor x Sex x I/E	1	3.99850	3.12432	.081
Actor x Age x Sex x I/E	2	.18256	.14264	.867
Error	78	1.27980		
Outcome x Actor	1	3.79524	4.11340	.046
Outcome x Age x Actor	2	.09441	.10232	.903
Outcome x Actor x Sex	1	4.13698	4.48379	.037
Outcome x Actor x I/E	1	.00183	.00198	.965
Outcome x Actor x Age x Sex	2	.00616	.00668	.993
Outcome x Actor x Age x I/E	2	.30189	.32720	.722
Outcome x Actor x Sex x I/E	1	.25638	.27787	.600
Outcome x Actor x Age x Sex x I/E	2	.90463	.98047	.380
Error	78	.92265		

Fig. I
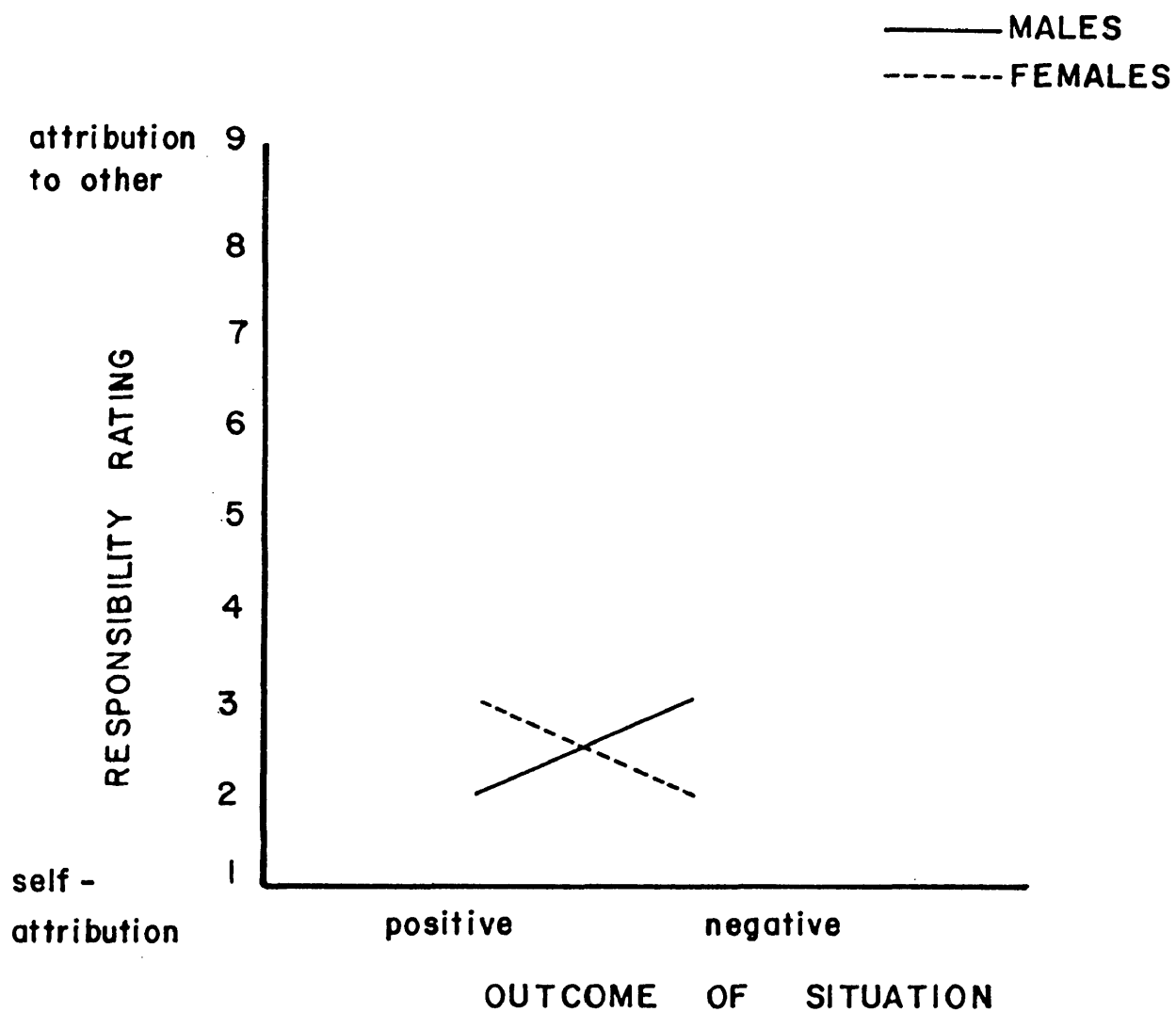
Target attribution as a function of sex and situation outcome
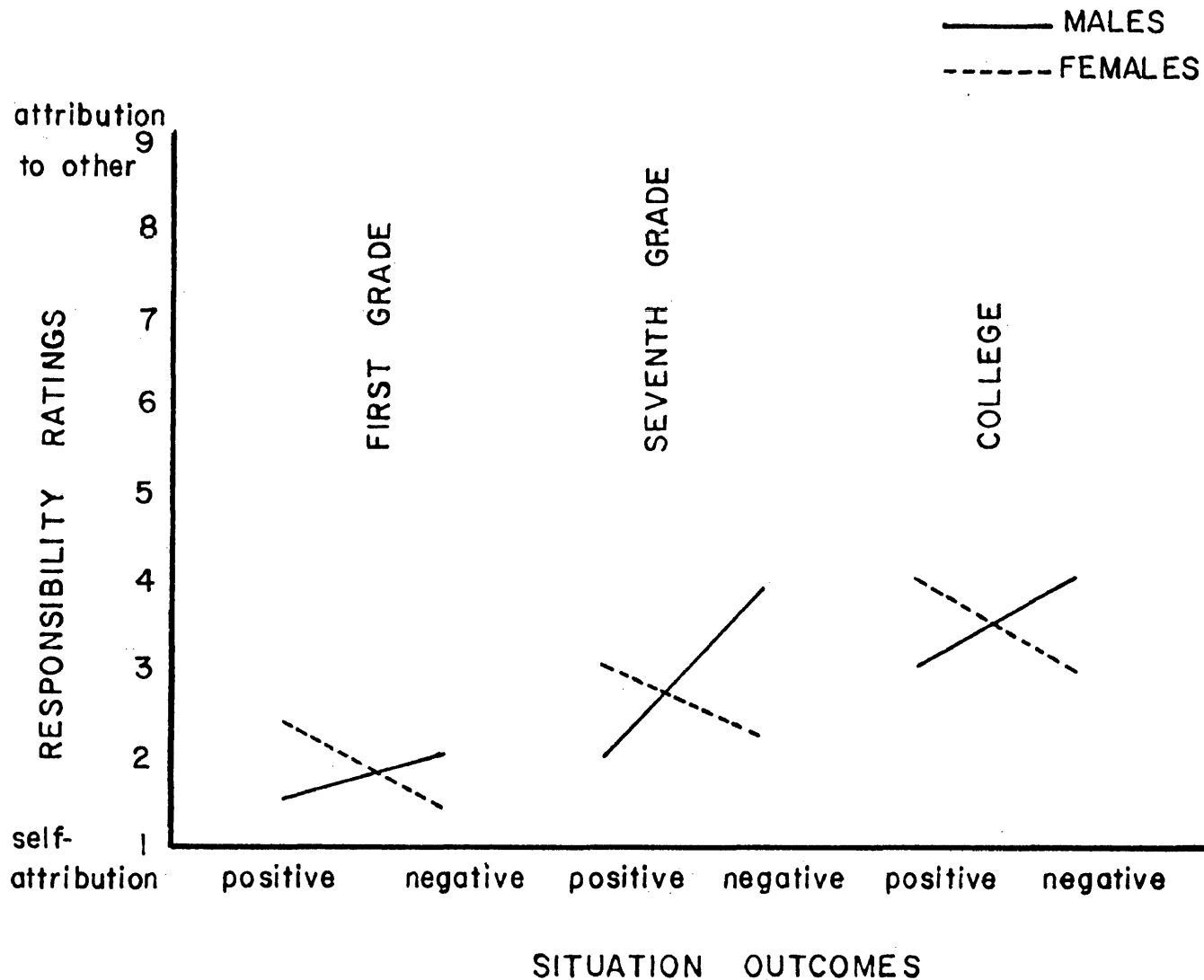
Fig. 2

Target attribution as a function of sex and situation outcome by age groups

Table 3

Mean Scores for Kindness/Consideration Rating

Subjects	Kindness/Consideration Rating		
	Actor	Other	Combined
First Grade			
Males	3.81	2.60	3.20
Females	3.23	2.91	3.07
Combined	3.52	2.76	3.14
Seventh Grade			
Males	4.00	2.72	3.36
Females	2.81	3.64	3.23
Combined	3.41	3.18	3.30
College			
Males	4.52	2.30	3.41
Females	2.60	4.00	3.30
Combined	3.56	3.15	3.36

of variance summary appears in Table 4.

The significant effects were initiator of action and interactions of this variable with sex of subject and age. On a five point scale, with 5 representing very kind/considerate/nice, the actor representing the subject received a more positive rating than the other, but there was considerable variation between groups, as evidenced by the interaction between initiator of action, sex, and age (see Table 4 and Figure 3). Among first graders, both sexes assigned higher ratings to the actor than the other, although boys ($\underline{M}$ = 3.70) rated the actor slightly higher than girls ($\underline{M}$ = 3.30). Boys also rated the other slightly lower ($\underline{M}$ = 2.50) than girls ($\underline{M}$ = 2.90). In the two other age groups, males rated the actor (themselves) higher than the other, while females scored the other as nicer than themselves. These differences were more pronounced in the college group than in the seventh grade group (see Figure 3 and Table 3).

Locus of Control Scores

A Pearson correlational analysis was applied to the locus of control scores and the dependent measures of identification, kindness/consideration and responsibility scores. For each age group, the number of internals and externals between the sexes was fairly even, differing only by one or two cases. Using LOCC/LOCA as a measure of locus of control, I/E scores were not correlated with target attribution scores, or with ratings of identification or kindness/consideration. Internals' and externals' attribution ratings did not differ significantly due to initiator of action nor valence of outcome. Values ranged from .00 to .07, $\underline{p}$ < .05.

Table 4

Analysis of Variance Summary Table for

Kindness/Consideration Ratings

| Source	df	MS	F	p<
Between Subjects				
Age	2	.37165	.99377	.375
Sex	1	1.04279	1.81281	.182
I/E	1	.09848	.17120	.680
Age x Sex	2	.01585	.02755	.973
Age x I/E	2	.04150	.07215	.930
Sex x I/E	1	.00307	.00533	.942
Age x Sex x I/E	2	.04881	.08484	.919
Error	78	.57323		
Within Subjects				
Actor	1	.05969	4.73949	.033
Actor x Age	2	.90266	.47222	.625
Actor x Sex	1	47.69109	24.94913	.000
Actor x I/E	1	1.88091	.98398	.324
Actor x Age x Sex	2	6.55682	3.43014	.037
Actor x Age x I/E	2	.00829	.00433	.996
Actor x Sex x I/E	1	.03770	.01972	.889
Actor x Age x Sex x I/E	2	.23598	.01972	.884
Error	78	1.91153		
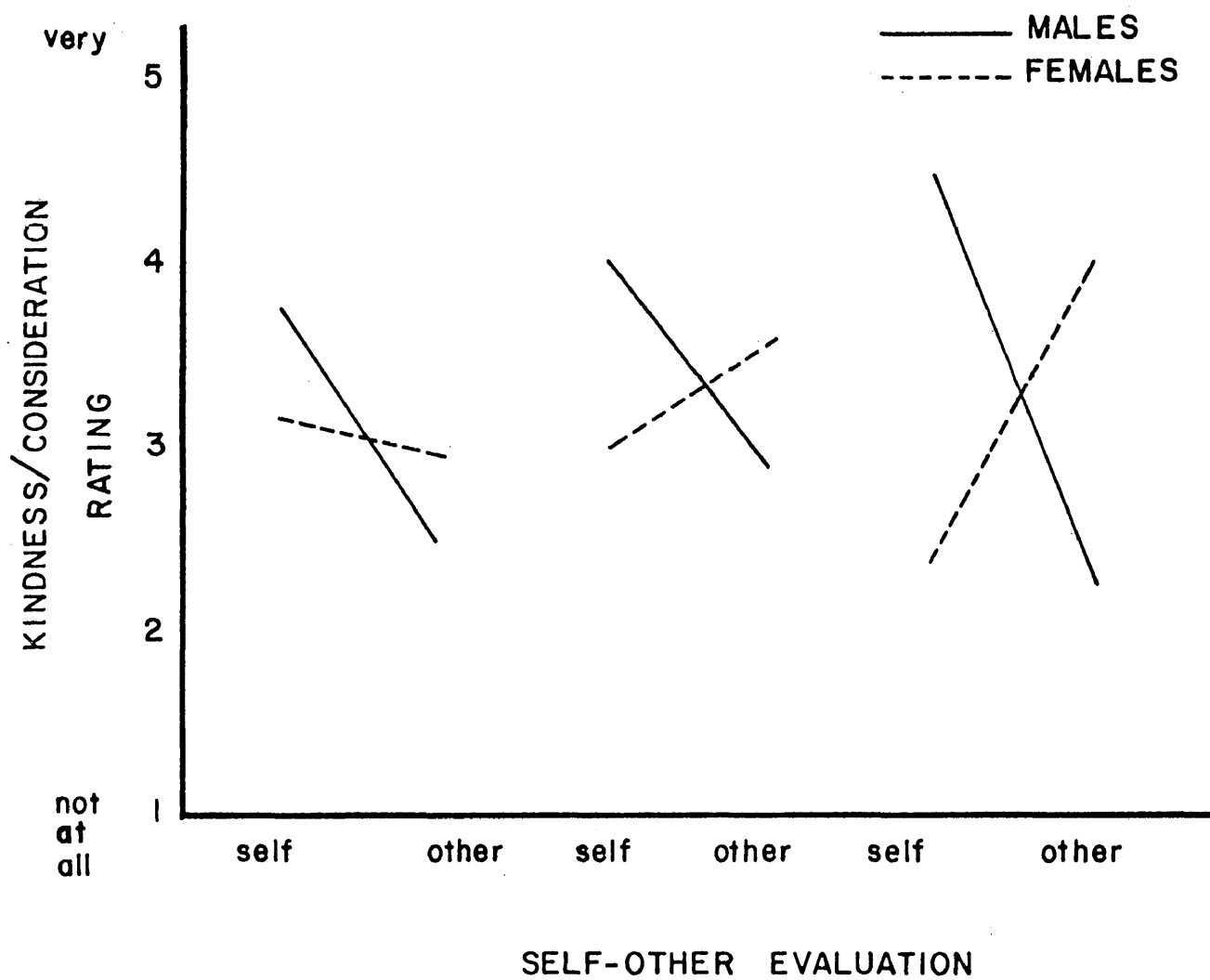
Fig. 3

Kindness / Consideration rating of self and other by sex and age group

Content Analysis of Interview Questions

A content analysis of the responses to the open-ended questions following each scene produced the following patterns. A Chi square analysis was used to assess differences among the various experimental conditions.

Age

Actor - positive scene. When asked what they were thinking, the most common answer given by first- (26.7%) and seventh- (36.7%) graders was, "If I didn't keep asking, he wouldn't have helped me"; among college subjects (23.3%) the modal answer was, "I shouldn't have bothered him so much." When asked what they would have said next, most first graders didn't know (50%), whereas seventh graders and college students said they would thank the person for their help (66.7% and 56.7%). When asked what they would have done next, first graders said they would thank the person (43.3%), while the seventh grade and college subjects would just accept the help (40% each). When asked what a stranger would think about the interaction first- (26.7%) and seventh- (36.7%) graders said someone else would think they wouldn't have received help if they didn't keep asking for it. College subjects (33.3%) said it would seem they were responsible for getting help.

Other - positive situation. On question 1, most first graders and seventh graders said they thought the other was being nice (56.7% and 30.0%). The modal response for college subjects was, "I don't know" (23.3%). When asked what they would have said next, first graders didn't know (40.0%), and seventh graders and college students would have said, "thank you" (40.0% and 50.0%). The first graders said what they

would do next, however, was express appreciation (56.7%), as did the seventh graders (50.0%). College subjects said they would keep on working (43.3%). A stranger would think they were doing a good job, according to the first graders (60.0%), and college subjects believed the stranger would think the other was being nice (46.7%). The seventh graders were evenly divided between these choices (43.3% and 43.3%).

Actor - negative scene. For this situation, first graders said they were thinking, "It was all my fault" (23.3%), seventh graders said, "Well, I tried" (23.3%), and college subjects were split between, "It was all my fault" and "He's a real grouch" (26.7% to 26.7%). When asked what they would say next, the modal answer for all subjects was, "I'm really sorry" (40.0%, 43.3%, 43.3%, respectively). Asked what they would have done, first graders said they would apologize again (40.0%), while seventh graders and college students would try to talk it over (30.0%, 36.7%). All groups agreed a stranger would think they were too pushy (43.3%, 43.3%, 46.7%, respectively).

Other - negative situation. All age groups said they thought maybe they were doing a bad job (60.0%, 30.0%, 30.3%), and would say next, "Is it really that bad?" (46.7%, 40.0%, 46.7%). There was also agreement in what to do next; 36.7% of the first and seventh graders, 33.3% of the college subjects would talk with the other about ways of improving. Most subjects in all groups said a stranger would think they did a bad job (63.3%, 40.0%, 36.7%).

Overall, the older the subject group, the more members of that group speculated about the motives and intentions of others. When young subjects were asked to do this, they tended to rephrase their own feelings and ascribe these to others and their motivations. Young

subjects generated a more limited range of answers for each question, and showed greater uniformity of responses. Older subjects were more suspicious and aggressive, but also showed more ability and willingness to negotiate and reconcile differences. The younger subjects' answers overwhelmingly revolved around themselves, in both positive and negative situations.

Sex

Actor - positive situation. Among the females, most frequent answers were, "I shouldn't have been such a bother" (26.7%), and "He was nice to help me" (26.7%). Males most frequently stated "I got him to help me" (26.7%). When asked what they would said next, females would apologize (55.6%), and males would make no response (46.7%). Females would next thank the other (55.6%), but males would accept the help without thanks (44.4%). As to what a stranger would think, females were divided between "I was bothering him" (24.4%), and "don't know" (24.4%). Males divided their answers between "he wouldn't have helped me if I weren't persistent" and "I was responsible for getting help"(27.6% each).

Other - positive scene. Females thought that the other was really being nice (31.1%), while males thought they must have been doing a good job (51.1%). Both sexes would have said next, "thank you" (females 44.4%, males 42.2%). Females would have tried to repay the compliment (37.8%), while males would just keep on working (46.7%). A stranger would think the other is nice, according to the females (55.6%), but the males said the stranger would think they were doing a good job (55.6%). This scene also elicited suspicion from some males (17.8%), who believed the other was being friendly only because

he wanted something from them. Other than trying to repay the compliment, the next largest group of females (33.3%) would make self-depreciating remarks such as, "Oh, it's nothing, really" or "He's probably nice to everyone." Female subjects were much more likely to ask the other for suggestions and further approval (31.1%, males 11.1%), and indicate they would take the other's advice (24.4%, males 8.9%).

Actor - negative situation. The modal answer among females to "What were you thinking?" was, "It was all my fault" (37.8%); males said "He was a real grouch" (28.9%). When asked what they would have said next, females said, "I'm sorry" (71.1%), males swore and demanded to know why the other was acting that way (44.4%). In response to what they would have done next, female subjects said they would try to talk it over (37.8%); male subjects said they would punch the other or hit him with something (28.9%). Females predicted a stranger would think they were too pushy (62.2%); males said that the other would be seen as overreacting (47.4%).

Other - negative scene. Both male and female subjects felt they were doing a bad job (males 31.1%, females 51.1%), although females asked what they could do to improve their performance (60.0%), and males responded with profanity and threats (37.8%). When asked what they would do next, females would try to discuss the situation with the other (57.8%), while males would plan revenge (31.1%), or completely ignore the other (26.7%). Both sexes felt a stranger would think they were doing a bad job (females 64.4%, males 35.6%), but males added the stranger would also think the other was being obnoxious (28.9%), while females predicted the stranger would feel sorry for them (22.2%).

In general, females tended to give answers that would suggest more self-doubt, and a willingness to conciliate and communicate with the other, even when the other was being negative. They also speculated about the intentions and motives of others, and made more psychological inferences. Males gave a narrower range of answers, that tended toward extreme statements, aggression, and less introspection.

Internal/External

There were no significant differences between locus of control score and responses to these questions.

Chapter IV

Discussion

The major hypotheses of this study were confirmed; namely, that target attribution is an interpersonal process expressed to some degree in both children and adults, and that its strength as a determining variable decreases with the age of the subject. The hypothesis with respect to locus of control and target attribution was not supported. Sex of subject alone was not a significant variable, but sex was an interacting factor with initiator of action and situation outcome. A final hypothesis, that females would attribute to themselves more strongly when situation outcomes were negative, was confirmed.

Despite very large sex differences in self- and other-evaluations, the main dependent variable, target attribution scores, did not vary between the sexes. Neither males nor females, saw themselves as more responsible for events. Although sex of the subject was an interaction factor with outcome, age, and actor, the ω^2 value for these interactions ranged from 6.5% for outcome to .30% for outcome and actor. Age, as a main effect accounted for 13% of the variance. However, the interactions involving age and actor accounted for only 2.3% of the variance. The interactions involving sex and age showed that the sex effect was fairly constant across age groups, indicating that the increase in attribution was largely the result of age.

As a group, the subjects in this study tended to attribute everything that happened, under all conditions, to themselves. This finding supports Heider's (1976) largely untested hypothesis concerning the phenomenon of target attribution; that is, persons believe they are

the causal agent in all interpersonal events concerning them. The fact that, as the age of subject groups increased, amount of target attribution decreased, could be accounted for in several ways. If it is the case that attribution to others involves inferences about their motives and intentions, Whiteman (1967) has shown that ability to make these judgments increases with increasing age. Given that it is simpler to assess one's own behavior than that of another, it may be, as Snodgrass (1976) says, that young children do not have the cognitive ability to make complex judgments. The reduction of self-attributional statements in older children may be due to nothing more than exposure to life experiences, and the realization that the world does not revolve around oneself. It would be interesting to note the differences between only children and those with siblings, particularly younger siblings, on target attribution. It may be that only children or youngest children in a family would have higher target attribution scores for a greater length of time.

All subjects showed stronger target attribution when the initiator of action was the model representing them, rather than when it was initiated by the other. At first glance this does not seem surprising. It is likely we will see ourselves as responsible for an act when we, rather than someone else, have initiated it. What is remarkable is the fact that when the other clearly originated the action, subjects still saw themselves as responsible, although to a slightly less degree. Sex differences in target attribution were in the direction forecast by Deaux (1976) and Guttentag and Longfellow (Note 1). Males attribute to themselves in situations with positive outcomes, whereas negative outcomes result in greater self-attribution in females. Age does

not seem to affect this sex effect in either direction. This could
be related, at least in part, to the dynamic of negative self-evaluation
among females. Expecting that they are less able and more prone to
failure, females accept blame for negative results much more readily
than males, who see failure as an isolated phenomenon.

The kindness/consideration ratings bridge variables of age and
sex in an interesting fashion. Over all subject groups, the actor
representing the subject was judged more positively than the other.
Guttentag and Longfellow's assertions (Note 1) that females judge
themselves more harshly than males, and that this becomes more pro-
nounced with age, were confirmed. In each age group males rated them-
selves as better than the other, and this rating increased with increas-
ing age. The ratings of the other became more negative in successively
older groups. Among females, only first graders gave themselves a
slightly better rating than the other; the two older groups of females
rated themselves much more negatively than they rated the other, and
this effect was stronger in the 18-year-olds than in the 12-year-olds.
It is possible this is due to the progressive influence of socialization
and cultural learning, or to the more positive image of women generated
in the last few years.

None of the subjects expressed difficulty in identifying with
the actor in the tapes, even when that actor was of the opposite sex.
This identification occurred independently of the subject's positive
or negative evaluation of the actor's behavior, and without reference
to their target attribution ratings. This may be due to the pervasive
influence of motion pictures and television (an observation spontane-
ously offered by some subjects in each age group). As recent research

suggests, videotape presentations, particularly using models in the subject's age group, are perceived as actual occurrences, much more real than a narrative or still pictures of the same events (Costanzo, Coie, Grumet, & Farnill, 1973; Rybash, Sewall, Roodin, & Sullivan, 1975).

There are two primary theories about the behavior of internally vs. externally controlled persons, and it was undetermined at the beginning of the study which would prevail. The one supported by Gilman and Minton (1974) and Sosis (1974) was that internals would attribute successful outcomes to themselves and failure to their environment, while externals would have the opposite reaction. Rotter (1966) and Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum (1972) maintain that internals will attribute all outcomes to themselves, while externals will attribute all successes and failures to factors outside themselves. Neither position was supported or refuted by this study. There was no correlation between target attribution scores and the I/E scores of individual subjects, or of groups of subjects. Controlling for each variable and considering all possible combinations of each variable failed to produce results.

Subjects' answers to the subjective questions lend support to the above findings, and are generally in accord with other research. As Snodgrass (1976) noted, with increase in age, one's ability to make more complex inferences about motives and traits also increases. The younger subjects also seemed to have difficulties in ascertaining covert intent of others, as noted by Whiteman (1967). As Shantz (1976) demonstrated, young children rely on memory or self-description when attempting to describe the feelings and reasons of another. The

highest percentage of self-attributed statements were found in the youngest age group.

When analyzed by sex, the answers fall into a familiar pattern, with males taking a more active role, being more aggressive, less verbal, more extreme and less self-reflective. Congruent with the Guttentag and Longfellow's study (Note 1), males expected to do well, and believed their successes were due to their ability. Females, they found, had less self confidence and credited any successes to transient factors. Statements of males and females in the present study were reflective of these patterns. Females gave more varied and richly verbal answers, were better negotiators, and made many more spontaneous psychological inferences to explain the behavior of others.

In summary, the findings of this study showed that persons ranging in age from six years to early adulthood attribute to themselves the responsibility for certain events, even when there is no reason for them to assume responsibility, but this tendency for self-attribution is stronger in younger children.

Further Research Possibilities

The area of target attribution is open to further research in many areas. In the present study, the variables of sex and age, positive and negative story outcome, initiator of action, and the relationship to locus of control were examined. A more basic question concerns the mechanism of target attribution, or its basic dynamics. How are need for attention, for validation, or for self-importance involved? One might also ask if target attribution is as strongly evident in adults. The relationship between target attribution and other variables

such as personality traits, cross-cultural factors, socioeconomic status, religion and race needs to be investigated. Does target attribution continue to decline with increasing age? Does it increase later in the life cycle? Would it be stronger in developmentally disabled adults? What is the relation between target attribution and intelligence? How is it related to paranoia, or other clinical disorders? Do only children self-attribute to a greater extent, and/or for a greater length of time? It is quite evident that much research needs to be done in this area of attribution.

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