

Children's Attributions for Success and Failure: Effects of Age and Attentional Focus

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This study was an assessment of how children's achievement attributions were influenced by their age, attentional focus, gender, and success or failure experience. Older and younger elementary school children performed a memory task under either self-focusing or task-focusing instructions. After performance, half of the children in each condition were given success feedback and the other half failure feedback. Attributions for performance were then obtained. In the success condition, children judged effort to be the most important cause of their performance, whereas children in the failure condition attributed their performance mostly to the difficulty of the task and their inability to remember the story. Older children in the self-focus condition attributed success more to internal causes than did older children in the task-focus condition. Younger children attributed both success and failure more to luck than did older children. Few sex differences in attributions were obtained.

Achievement attributions have significant consequences for subsequent achievement motivation and behavior; attributing success to one's ability and failure to lack of effort promotes positive achievement motivation and behavior, whereas attributing success to external factors such as task ease and failure to lack of ability has negative consequences (Weiner, 1979). Many researchers have assessed the development of children's attributions for achievement successes and failures (see Frieze, 1981, for a review). In general, these studies show that children under age 8 tend to confuse different causes such as ability and effort. By age 12 or 13, children's attributions seem quite similar to those of adults. Though we have learned much about general developmental changes in children's attributions, we know less about how different performance conditions influence children's attributions.

One performance condition that has greatly interested social and educational psychologists concerns how individuals focus their attention while doing a task. Duval and Wicklund (1972) distinguished between conditions of task focus and self-focus. *Task focus*, as the name implies, occurs when individuals direct their attention to the task at hand. *Self-focus* occurs when the person is made self-aware, as in evaluative situations or when performance is observed. Duval and Wicklund reasoned that self-focus usually results in negative self-evaluations because individuals see negative discrepancies between their performance and their aspirations for their performance. Ickes, Wicklund, and Ferris (1973) provided

empirical support for this position. More recently, however, Carver and Scheier (1981, 1986) proposed that although self-focus heightens individuals' self-awareness, it can produce either positive or negative self-evaluations, depending on whether performance outcomes are positive or negative.

Focus of attention influences adults' attributions for performance. Duval and Wicklund (1973) showed that subjects in a self-focus condition attributed both positive and negative outcomes more to personal factors than did subjects in a control group. Federhof and Harvey (1976), using a more involving task, showed that such effects are particularly likely for positive outcomes, but not for negative outcomes.

In this study I assessed how self- or task-focusing instructions influenced different-aged children's attributions for success or failure on a memory task, to determine whether there are developmental differences in how attentional focus influences children's attributions. Because older children appear to be more self-reflective than younger children (Harter, 1983), the focus of attention manipulation was expected to influence older children's attributions more. Attributions for both success and failure were obtained because focus of attention influences both kinds of attributions.

The attributions assessed were ability, effort, task difficulty, and luck (see Weiner et al., 1971), and also task interest, a cause that Frieze (1976) showed is given frequently by children and adults. A general version (e.g., "I did well because I'm smart in school") and a more task-specific version (e.g., "I did well because I'm smart at remembering stories") of each attribution question were asked. Earlier developmental studies have shown that younger children sometimes do not distinguish different causes such as ability and effort (see Frieze, 1981; Nicholls, 1978). We know less about how younger and older children distinguish specific and general versions of the same causal category. Last, sex differences in attributions were assessed because results of some studies suggest that girls make more negative attributions (e.g., attribute failure more to lack of ability) than do boys, whereas other

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researchers have not obtained such differences (for further discussion, see Dweck & Goetz, 1978; Frieze, 1981; Parsons, Meece, Adler, & Kaczala, 1982).

On the basis of the work just reviewed, the following predictions were made: The self-focusing instructions should lead children to make more internal attributions, particularly for success. The task-focusing instructions should lead children to make more external attributions, particularly for failure. These differences were expected to be stronger for older children. Children should attribute both success and failure more to specific than general causes because the specific causes relate to the particular task that they were doing. Last, children should make more internal attributions for success and more external attributions for failure.

Method

Participants

The 151 participants included 37 second graders, 34 third graders, 47 fifth graders, and 33 sixth graders. One child's responses to two manipulation check questions and one attribution question were lost; hence for those questions the sample size was 150. All children were assigned randomly to condition; the assignment was done separately for boys and girls. Thirty-eight children were assigned to the self-focus failure condition, 39 to the self-focus success condition, 37 to the task-focus failure condition, and 37 to the task-focus success condition.

Procedure

The experimenter administered the memory task individually to each child, in the child's school building. Each child was told that he or she would listen to a tape-recorded story and verbally recall it and that performance would be evaluated.

Children in the self-focus condition were then told (in accordance with Sarason's 1972 self-focusing manipulation)

Remembering is an important thing you have to do in school, and how well you remember the story is a good test of how well you do in school. So, as you are listening to the story, think about it like it is a test, like other tests you have in school that show how well you are doing. Any questions?

In the task-focus condition, children were told (in accordance with Brockner & Hulton's 1978 task-focusing manipulation)

Remembering stories can be kind of tricky, so I'd like you to concentrate very hard on the story at all times; other kids have said that this helped them as they were trying to remember. So just keep thinking about the story as much as possible. Any questions?

Children then completed the memory task and received the evaluative feedback. Half of the children in each condition were told that they had recalled the story well and half that they had recalled the story poorly. Because no child came close to achieving 100% recall, all children appeared to believe the feedback (see Results section). Children then made attributions for performance. They were told that there are different possible reasons for remembering stories well

(or poorly) and that they were going to rate the importance of several different reasons for their performance. Each attribution (ability, effort, difficulty, luck, and interest) was given separately, and a specific version (e.g., "because you tried hard to remember the story") and a more general version (e.g., "because you usually try hard in school") of each question were given. The experimenter read aloud each question and the five possible responses ("That is a very important reason why," "That is an important reason why," etc.) and recorded the child's responses on rating scales of 1 (*very unimportant*) to 5 (*very important*). Then children answered four other questions, one concerned with expectations for future success, one with future choice of easier or harder recall tasks, and one each on degree of self-focus and degree of task focus. The experimenter read each question aloud and recorded the children's responses on rating scales. These questions served as manipulation checks.

Children in the failure group recalled a second story. After recall, the experimenter assured children that they had done well on this story and that the first story was difficult for their age group.

Scoring

Children's attributions were scored from 1 to 5; higher scores indicated that the reason was more important. Responses to the "expectations for future success" and "task choice" questions also were scored from 1 to 5; higher scores indicated higher expectations and choosing a harder task, respectively. Children's responses to the self- and task-focus questions were scored from 1 to 4; higher scores indicated greater self-focus and greater task focus, respectively.

Analysis

Children's responses were analyzed in analysis of variance (ANOVA) and paired *t* tests. Because of the large number of possible effects, the .01 level of significance was adopted. The four grade levels were collapsed into a younger age group and an older age group because there were very few differences between second- and third-grade children's responses or between fifth- and sixth-grade children's responses. Two different ANOVAs were run. First, effects of success or failure, attentional condition, age, and sex on the responses to the manipulation check questions and attribution items were assessed. For the attributions, only the main effects of success/failure and its interactions with other factors were considered in this analysis. The other main effects and interaction terms are not meaningful because they involved summing over the two different kinds of attribution questions asked, those for failure and those for success. Second, the success and failure groups were analyzed separately in order to assess attentional condition, age, and sex effects on the attributions. Paired *t* tests were run to assess within-subject differences between specific and general versions of each attribution and also between internal and external attributions.

Results

Manipulation Check Questions

Children's responses to the four manipulation check questions were analyzed in a $2 \times 2 \times 2 \times 2$ (Success/Failure \times Attentional Condition \times Age \times Sex) ANOVA. On the "expectations for future success" question, children in the failure group

tations for future success" question, children in the success group ($M = 3.91$) had higher expectations for future performance than did children in the failure group ($M = 3.29$), $F(1, 135) = 19.34$, $p < .01$. Similarly, on the "task choice" question, children in the success group ($M = 3.58$) stated that they would prefer to do a harder task in the future than did children in the failure group ($M = 2.88$), $F(1, 135) = 23.51$, $p < .01$. These results show that the success/failure manipulation had its desired effects. No other significant effects were observed on these questions.

On the "degree of self-focus question," children in the self-focus condition ($M = 3.00$) reported focusing more on themselves than did children in the task-focus condition ($M = 2.64$), and the effect was nearly significant, $F(1, 134) = 6.16$, $p = .014$. On the "degree of task focus" question, there were no differences between the conditions; the means on this question tended to be quite high. However, younger children ($M = 3.89$) reported focusing more on the task than did older children ($M = 3.59$), $F(1, 134) = 9.82$, $p < .01$. No other significant effects were observed on these questions.

Children's Attributions

Success/failure effects. Significant main effects for success/failure were obtained on all but the two luck questions and the specific difficulty question. The means are presented in Table 1. For each significant difference, the means of the success group were higher, indicating that children in the success group endorsed the reason more strongly.

The interaction of Success/Failure \times Condition \times Age on the specific ability question was significant, $F(1, 135) = 7.96$, $p < .01$; the means are presented in Table 2. Older children attributed success more to ability in the self-focus condition than in the task-focus condition, and they attributed failure to lack of ability similarly across conditions. Younger children

Table 1
Means, Standard Deviations, and Univariate F Test Results for the Success and Failure Groups on the Attribution Questions

Attribution	Success group ($n = 76$)		Failure group ($n = 75$)		MS_E	$F(1, 135)$
	M	SD	M	SD		
Specific ability	3.57	0.87	3.21	1.05	0.71	4.92*
General ability	3.55	1.14	2.56	1.04	1.47	32.52**
Specific effort	4.43	0.88	2.13	1.27	0.81	169.97**
General effort ^a	3.92	1.13	1.84	1.10	1.14	130.47**
Specific difficulty	3.59	1.12	3.36	1.16	1.09	1.59
General difficulty	2.92	1.13	2.29	1.23	1.63	8.88**
Specific luck	2.24	1.47	2.36	1.44	1.76	0.69
General luck	2.28	1.33	2.07	1.35	1.29	0.74
Specific interest	3.92	1.15	2.73	1.29	1.41	33.85**
General interest	3.53	1.29	1.87	1.11	1.61	74.91**

Note. Scores range from 1 to 5; higher scores indicated that the reason was rated more highly.

^a $n = 74$; F test dfs were 1, 134.

* $p < .05$. ** $p < .01$.

Table 2
Means and Standard Deviations for the Specific Ability Question as a Function of Success/Failure, Condition, and Age

Condition	Age					
	Younger			Older		
	n	M	SD	n	M	SD
Success						
Self-focus	18	3.22	0.94	21	3.86	0.79
Task focus	19	3.68	0.75	18	3.44	0.92
Failure						
Self-focus	18	3.67	1.03	20	2.95	1.19
Task focus	16	3.13	1.09	21	3.14	0.85

credited success more to their ability in the task-focus condition than in the self-focus condition, and they attributed failure more to lack of ability in the self-focus condition than in the task-focus condition. This interaction supported the prediction that the self-focus manipulation would influence older children's internal attributions for success more than younger children's. No other significant interactions of success/failure with other effects were observed.

Paired t tests were run on the means of each pair of internal and external attributions (ability-difficulty, ability-luck, effort-difficulty, effort-luck, interest-difficulty, and interest-luck) to determine whether children made more internal or external attributions following success or failure. In the success group, five of the six comparisons were significant ($ps < .01$), and all five showed that children attributed success more to internal factors. The only nonsignificant comparison was between specific ability and specific difficulty. For the general attributions, all six comparisons were significant ($ps < .01$), and all showed that children made more internal attributions for success.

In the failure group, for both the specific and general attributions, two of the comparisons showed that children attributed failure more to external factors (difficulty vs. effort, difficulty vs. interest), and one showed that children made more internal attributions for failure (ability vs. luck; all $ps < .01$). The other three comparisons were not significant.

Condition differences. As mentioned earlier, the success and failure groups also were analyzed separately in $2 \times 2 \times 2$ (Attentional Condition \times Age \times Sex) ANOVAs because of the different kinds of attribution questions. There were no main effects for condition in either the success or failure group. Three interactions of condition with other factors emerged, and the means and standard deviations are presented in Table 3. On the general ability question, the Condition \times Sex interaction was significant, $F(1, 68) = 6.79$, $p = .01$. This interaction indicated that girls attributed success more to ability in the task-focus condition than in the self-focus condition, whereas boys did just the opposite. On the general effort question, the Condition \times Age interaction was significant, $F(1, 68) = 6.74$, $p = .01$. Older children attributed success more to general effort in the self-focus condition than in the task-focus condition, whereas younger children's attributions were quite similar in both conditions. On the general

Table 3
Means and Standard Deviations for the Two-Way
Interactions on the Attribution Questions: Success Condition

Attribution	Self-focus			Task focus		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
General ability						
Female	18	3.06	1.11	18	4.17	1.15
Male	21	3.62	0.97	19	3.37	1.12
General effort						
Younger	18	4.00	1.14	19	4.37	0.76
Older	21	4.10	1.14	18	3.17	1.15
General interest						
Younger	18	3.39	1.33	19	3.89	1.15
Older	21	3.81	1.11	18	2.94	1.35

interest question, the Condition \times Age interaction was nearly significant, $F(1, 68) = 5.95, p = .02$. Older children attributed success more to general interest in the self-focus condition, whereas the opposite pattern occurred for younger children.

Age differences. Age main effects occurred on several of the attribution questions. Older children ($M = 3.90$) attributed success more to task ease than did younger children ($M = 3.27$), $F(1, 68) = 6.29, p = .01$. On the specific and general luck questions, younger children ($M_s = 2.97$ for specific luck, 3.00 for general luck) attributed success more to luck than did older children ($M_s = 1.54$ for specific luck, 1.59 for general luck); each age effect was highly significant, $F(1, 68) = 21.69, p < .01$, for specific luck and $F(1, 68) = 29.49, p < .01$, for general luck. Similarly, younger children attributed failure more to luck on both the specific and general questions ($M_s = 3.29$ for specific luck, 3.03 for general luck) than did older children ($M_s = 1.59$ for specific luck, 1.27 for general luck); again, each age effect was highly significant, $F(1, 67) = 36.10, p < .01$, for specific luck and $F(1, 67) = 50.91, p < .01$, for general luck.

General versus specific attributions. Paired *t* tests were performed on the means of the specific and general attributions (see Table 1 for the means) with separate analyses for success and failure groups. In the success group, children's ratings for specific effect, difficulty, and interest were significantly higher than their ratings of general effort, difficulty, and interest (all $p_s < .01$). In the failure group, children attributed failure significantly more to the specific version than to the general version of each attribution (all $p_s < .01$). These results support the hypothesis that children would rate the specific attributions as more important than the general attributions.

These analyses also were performed separately for the younger and older groups. For the younger group, the only differences were in the failure condition. Children rated specific ability and difficulty as more important reasons for failure than general ability and difficulty (both $p_s < .01$). For the older group, results exactly paralleled those for the whole sample. These analyses indicate that older children distinguished more between the specific and general versions of the attributions than did the younger children.

Sex differences. Few significant sex differences in attributions were obtained. Boys ($M = 3.88$) attributed success

more to task ease than did girls ($M = 3.18$), and the effect was nearly significant, $F(1, 68) = 5.76, p < .02$. Boys ($M = 2.14$) also attributed failure more to lack of general interest in school than did girls ($M = 1.61$), $F(1, 68) = 6.96, p = .01$, though neither group rated this attribution very highly.

Discussion

Results of this study show that children's attributions varied, depending on the conditions under which they were made. Success or failure experience had the strongest impact. In the success condition, children judged effort (particularly task specific effort) to be the most important cause of their performance, as found in other studies (Harari & Covington, 1981; Parsons et al., 1982). Because effort is observable, it may be easier for children to judge their level of effort, and so they emphasize effort when explaining success. Ability, interest, and task ease were all rated as moderately important reasons for success, though there were some changes in the ordering of their importance across specific and general categories. Luck was judged to be less important, especially by older children. The paired comparisons of internal and external attributions showed that as predicted, children emphasized internal causes (effort, ability, and interest) to explain success, as has been found in other studies (Miller & Ross, 1975; Whitley & Frieze, 1985).

In the failure condition, only task-specific ability and task-specific difficulty were judged as somewhat important causes of failure, and the paired comparisons of internal and external attributions showed fewer differences. These results (which are contrary to predictions) are dissimilar to those of studies showing that adults deny responsibility for failure by attributing it more to external causes (Miller & Ross, 1975). However, they are similar to findings reported by Harter (1985) that many elementary school-aged children take some responsibility for their failures. As suggested by Harter, perhaps children do not engage as much as adults do in the ego-protective strategy of attributing failure to external causes.

Children in the failure condition also did not endorse lack of effort as an important reason for failure. Frieze, Snyder, and Fontaine (1978) obtained similar results with children, but studies with adults often show that they prefer to attribute failure to lack of effort rather than to lack of ability (e.g., Covington & Omelich, 1979). Indeed, according to self-worth theory (Covington, 1984), students try to maintain self-worth by attributing failure to lack of effort. This may be possible when students are working individually without much supervision. However, when student's performance is closely monitored, as it was in this study and may be in many classrooms, attributing failure to lack of effort may not be plausible. In such situations, students must adopt other strategies to maintain self-worth in the face of failure.

What might such strategies be? Other results reported here showed that students attributed failure more to task-specific causes (e.g., poor recall ability) than to their general characteristics (e.g., low ability in school). This strategy should limit failure's impact on students' general self-concepts (see Abramson, Seligman, & Teasdale, 1978). Older children made the

specific-general distinction more than did younger children, which suggests that they may be adopting this self-worth maintenance strategy more.

The attentional focus manipulation was partly successful, as indicated by children's responses to the "degree of self-focus" question. However, all children indicated a high level of task focus. Perhaps telling children that they were going to be evaluated made them all think it important to focus on the task. In future studies researchers should attempt to manipulate task focus without including evaluative instructions.

The effects of the attentional focus manipulation on children's attributions provided support for some of the hypotheses, but not for others. In regard to failure, as predicted, children in the task-focus condition attributed failure more to task difficulty than did children in the self-focus condition, though this effect was only marginally significant. This finding suggests that task focus may allow children to interpret failure more positively by attributing it to an external cause (see Weiner, 1979).

In the success condition, there were no main effects associated with attentional condition. However, the interactions of success/failure, condition, and age on the specific ability question and of condition and age on the general effort and general interest questions all showed that older children in the self-focus condition made more internal attributions for success than did the older children in the task-focus condition and the younger children in the self-focus condition. These results support the prediction that self-focus would foster internal attributions more for older children than for younger children, though the fact that these interactions did not occur on all the internal attributions qualifies their strength. They also support Carver and Scheier's (1981, 1986) and Federhof and Harvey's (1976) contention that self-focus heightens positive self-evaluations after success.

Though attributing success to internal causes generally is viewed as positive (Weiner, 1979), promoting self-focus may not be the best way to increase internal attributions for success. As students move through school, there is an increasing emphasis on evaluation, competition, and social comparison, which may increase students' tendency to focus on how they are doing rather than on mastering material (see Eccles, Midgley, & Adler, 1984). This increase in self-focus should pose few motivational problems for students who continue to do well, but for those doing less well, it may lead to the negative discrepancy between level of performance and aspirations that Duval and Wicklund (1972) discussed, resulting in negative self-evaluations and possible decreases in student motivation. Future researchers could assess the effects of self- and task focus on children's attributions and motivation during the secondary school years to test these possibilities.

For younger children, the attentional focus manipulation produced some findings opposite to predictions; younger children made more internal attributions for success in the task-focus condition (on the specific ability, general effort, and general interest questions), and attributed failure more to lack of specific ability in the self-focus condition. Younger children tend to be less self-reflective than older children (Harter,

1983). They also may not distinguish between different causal categories in the same way that older children do (Nicholls, 1978). Thus for the younger children, the self-focus instructions may not have promoted the ego-enhancing pattern of attributing success to internal attributions found in the older children (and adults in other studies) or the more ego-protective strategy of not attributing failure to lack of ability. Future researchers could more fully explore third- through fifth-grade children's attributions to determine when self-focusing instructions begin to increase internal attributions for success. Also, in such studies researchers could examine how children's self-esteem might interact with attentional focus (and age) to influence attributions, insofar as Brockner and Hultón's (1978) work with adults shows that the effects of attentional focus differ for individuals with high or low self-esteem.

Younger and older children's attributions differed in several other ways. Older children attributed success more to task ease, probably because the task was indeed easier for older children. Younger children attributed both success and failure more to luck than did older children. Weisz (1984) also reported that young children do not adequately distinguish between outcomes contingent on skills from outcomes resulting from chance or other noncontingent factors. Children in the upper elementary grades were able to make such distinctions in Weisz's studies, as they seemed to in this study. Last, as mentioned earlier, older children distinguished more between the specific and general versions of each cause. Previous work has shown that younger children do not always distinguish different causes such as ability and effort (see Nicholls, 1978); results of this study show that younger children do not clearly distinguish specific and general versions of the same causal category.

Gender differences in attributions were few. Boys made somewhat more negative attributions than did girls, attributing success more to task ease and failure more to lack of interest in school. In addition, boys attributed failure more to lack of specific ability than did girls, but this effect was only marginally significant. The memory task has close ties to reading, a subject that girls prefer and excel in during elementary school, which could explain why boys' attributions were somewhat more negative than those of girls. These findings and results of other studies (Parsons et al., 1982) suggest that sex differences in attributions are less pervasive than once believed. In particular, the view that girls tend to attribute failure more to lack of ability must be qualified; certain tasks may lead boys to be more likely to attribute failure to lack of ability.

To summarize, the results show that children's attributions differed after success or failure. For older children, self-focus enhanced certain internal attributions for success, whereas task focus did so for younger children. Older and younger children also differed in their ratings of the importance of task difficulty and luck for success and failure and in distinguishing between specific and general causes of behavior. These findings suggest that developmental differences in attributions will be better understood when a more complete understanding of situational influences on children's attributions is obtained.

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