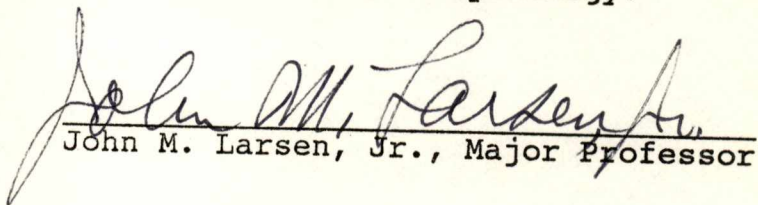
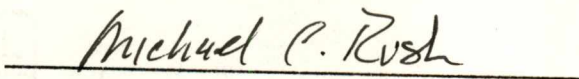


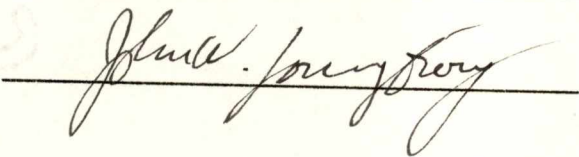
To the Graduate Council:

I am submitting herewith a thesis written by David Poe entitled "The Interaction of Social Influence and Observer Self-Image On Observer Task Goals." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Industrial and Organizational Psychology.

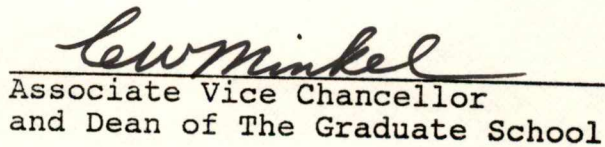

John M. Larsen, Jr., Major Professor

We have read this thesis
and recommend its acceptance:





Accepted for the Council:


Associate Vice Chancellor
and Dean of The Graduate School

THE INTERACTION OF SOCIAL INFLUENCE AND
OBSERVER SELF-IMAGE
ON OBSERVER TASK GOALS

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

David Poe

May 1991

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ABSTRACT

Higher model performance level will result in higher observer goals on an unfamiliar task (Rakestraw and Weiss, 1981). Little is known, though, about how a model influences observer goals. The experimenter, therefore, investigated how observer self-esteem and perception of a model's competence affect their goals on an unfamiliar task when performance standards are unknown. University of Tennessee undergraduates ($N = 258$) were classified into a low self-esteem group ($n = 71$) and a high self-esteem group ($n = 81$) based on their California Psychological Inventory Self-acceptance subscale scores. Experimental treatment subjects watched an apparently incompetently or competently behaving model perform a card-sorting task at a relatively high level. Control subjects were oriented to the task. The groups' perceptions of the model's competence, self-competence relative to the model, model performance level attainment expectancy, performance cause attributions, and task goals were compared by analysis of variance and the variable intercorrelations examined. The results tentatively showed that a model's behavior apart from performance level can influence an observer's goals. Higher goals were associated with higher expectations for reaching the model's performance level which were associated with

higher feelings of task competency relative to the model. More research may reveal that higher initial expectations for performance by new employees could come from assigning them to work with someone that they judge they can match in behavior and performance.

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CHAPTER I

INTRODUCTION

Almost two decades have passed since Locke espoused "the foundations of a theory of task performance" (Locke, 1968, 1970; Locke, Cartledge, and Knerr, 1970). In the laboratory, he repeatedly found task performance positively related to goal difficulty and specificity and that performance satisfaction was a function of the discrepancy between goals and achievement.

Since then, many researchers have revealed the intricacies of the relationship between task goals and performance. Difficult goals positively relate to performance to the extent they are accepted (Latham and Yukl, 1975; Locke, Shaw, Saari, and Latham, 1981) and negatively relate to performance when goals are unaccepted. We know that easy to moderately difficult goals are accepted more than extremely difficult ones (Mento, Cartledge, and Locke, 1980; Erez and Zidon, 1984). We also know that goal acceptance can be enhanced by participation in the goal-setting process and maximized when goals are self-set (Erez and Kanfer, 1983; Earley and Kanfer, 1985; Erez, Earley, and Hulin, 1985).

Locke (1978) argues that goal-setting pervades even the earliest theories and techniques of employee motivation.

For example, Taylor (1911) implicitly recognized goals in his time studies. This technique enabled experts to determine how much work should be accomplished by a carefully selected and trained worker using the most efficient methods. Locke (1978) felt that "since productive work requires purposeful action and since the setting of conscious purpose is a volitional process, all organizations face the necessity of persuading employees to set goals which will further organizational objectives" (p. 594). Outside of the lab, Latham and Locke (1979) demonstrated how effective the goal-setting technique can be for improving motivation and productivity in organizations.

Recently, Rakestraw and Weiss (1981) recognized the need for more work on how individuals come to set specific task goals for themselves. They acknowledged that expectancy theory constructs can help explain goal level choices. They recognized that aspiration levels are chosen as a function of the probabilities and incentive values of success (Lewin, Dembo, Festinger, and Sears, 1944; Mento, et al., 1980) and the frequency and magnitude of success and failure (Yukl and Latham, 1978; later Campion and Lord, 1982). Individuals undertake task goals at which they reasonably expect to succeed. They raise their goals after repeated success and lower them after repeated failure. Rakestraw and Weiss (1981) noted, however, that employees

often enter the work setting without task familiarity or knowing what success and failure are. They also realized that people learn reward and success contingencies by observing their co-workers (Bandura; 1974, 1977). Rakestraw and Weiss (1981), therefore, demonstrated that a model's performance serves as an anchor for an observer's goals. When they are unfamiliar with a task and do not know what constitutes good performance, individuals refer to others for appropriate achievement levels and set their performance goals according to the performance of these models. When model performance is high, the observer sets higher goals and attains higher performance than when model performance is lower. The model's achievement serves as a standard by which the observer sets his own goals and evaluates his performance (Rakestraw and Weiss, 1981).

Since then, little work has been done to further explain modeling effects on observer self-set goals with unfamiliar tasks and standards. Rakestraw and Weiss (1981) did suggest that a model (in general) may increase the observer's expectation of reaching more difficult goal levels. No research has clearly specified what aspects of a model might do this.

When the observer lacks knowledge of performance standards (Rakestraw and Weiss, 1981; Earley and Kanfer, 1985), it seems unlikely that model performance level,

without reference to its quality, would affect goal attainment expectancy. Observers would probably seek some indication of model performance quality before assessing their capability to achieve that level.

In keeping with social learning theory, an observer may judge the model's perceived competence (ability) as an indication of the quality of performance. Appearance, style, speech, etc., apart from observed good performance, may influence the observer's expectation that the model's performance achieves some level of quality. These expectations of model performance quality, in turn, may influence the observer's expectation of attaining that performance. The observer's assessment of his or her capability to achieve this level of performance is based on feelings of self-efficacy inherent in the observer's self-esteem. Therefore, a model's perceived competence, in conjunction with the observer's feelings of self-esteem, may influence the observer's expectation of attaining the model's performance level. This expectation would consequently affect goal level.

In summary, Rakestraw and Weiss (1981) demonstrated that an observer who is unfamiliar with a task will set higher goals and attain higher performance after observing high model performance than after observing lower model performance. Since then, very little research has been done

to further explain how a model influences an observer to set goals on an unfamiliar task when performance standards are unknown. The purpose in this study, therefore, was to expand goal-setting research by investigating how observers' self-esteem and perception of a model's competence affect the goals that they set on an unfamiliar task. The results from research of this kind could show employers how to best orient and train new employees so that they will have the highest possible initial expectations for their own performance.

The next chapter contains a description of previous research in this area in more detail and the hypotheses that were tested in this study. Chapter III contains a description of the methodology of the experiment. Chapter IV includes a description of the statistical analyses of the data and their results. Finally, chapter V contains a discussion of the meaning of the results, their importance, and the implications for future research.

CHAPTER II

LITERATURE REVIEW

Rakestraw and Weiss (1981) suggested that a model may increase the observer's expectation of reaching more difficult goals. They did not say, however, what aspects of the model other than its performance might do this. They did find that subjects observing a high-performing model on a card-sorting task sorted more cards than those watching a low-performing model. Furthermore, they did so because they set higher goals. The subjects did not know how well the models did compared to others who might perform the task. They also were unfamiliar with the task in that they had no experience with performing it. They did know how many cards the models sorted.

Rakestraw and Weiss likened this situation to new employees entering the workplace without knowing what their jobs entail or what is good performance on that job. They demonstrated that new employees may set their new task goals according to the performance of model co-workers performing the same task. When co-worker performance is high, the new employee sets higher goals and attains higher performance than when co-worker performance is lower. The co-workers' performance, at least, may increase the new employees' expectation for reaching higher goals.

Earley and Kanfer (1985) replicated some of what Rakestraw and Weiss discovered earlier. They found that subjects watching a high-performing model on a course scheduling task did better on the task than subjects who watched a low-performing model. As in Rakestraw and Weiss, the subjects did not know how well the models did relative to others. They did know how many schedules the models developed. Contrary to Rakestraw and Weiss, though, neither of the subject groups set significantly different goals. Earley and Kanfer, however, had demanded that subjects set "difficult but attainable goals" whereas Rakestraw and Weiss had not. The Earley and Kanfer treatment may have discouraged those who watched the low-performing model from setting lower goals than those who watched the high-performing model. Subjects watching the low-performing model may have set lower goals if they simply had been asked to set their goals without the "high but attainable goals" suggestion. Early and Kanfer also likened this situation to new employees entering the workplace without knowing what their jobs entail or what is good job performance. The experimenters also wondered what characteristics of a model co-worker affect the influence of model performance on new employee performance. If they had not demanded high goals, they might have reasonably asked

what model characteristics might affect the model performance influence on observer goals.

Bandura (1982) argued that when standards are known, seeing similar others perform successfully can raise an observer's expectation of doing as well. Bandura and Whalen (1966) found that children adopted the goals of low- to mediocre-achieving models because they thought they were within their reach. They set lower goals, however, than highly skilled models with lofty goals because they felt they could not reach them. Similarly, Brown and Inouye (1978) found that male college students lowered their expectations for performance on an anagram task after they saw someone, who they thought was similar to them in previous performance, fail at the task. Conversely, those who thought they were better performers on previous occasions, thought they could do better on the task than their models after seeing their model fail.

These findings suggest that it is not the model's performance level, per se, that directly influences the observer's goals on an unfamiliar task, but the observer's expectation of attaining that level of performance. The more certain observers feel they can do as well as the model, the higher they will set their goals. The model's, or co-worker's, performance level serves as a reference for the observers' goals (Rakestraw and Weiss, 1981). Even more,

model or co-worker performance level may serve as a reference against which the observers gauge their expectations for their own performance.

Let us consider what variables affect an observer's expectation of attaining the model's performance level. In their review of variables affecting goal commitment and goal level, Hollenbeck and Klein (1987) cite Rakestraw and Weiss (1981) and list others' performance levels as an influence on observer expectancy of goal attainment. But again, when the observer lacks knowledge of performance standards, as in the case of a new employee (Rakestraw and Weiss, 1981; Earley and Kanfer, 1985), it is unlikely that a model co-worker's performance level by itself would affect the new employee's goal attainment expectancy. The new employee would probably seek some indication of the quality of the model's performance level before assessing their capability to achieve that level of performance.

In keeping with social learning theory, an observer may judge the model's apparent competence (ability) as an indication of the quality of their performance level. Then, the observer would probably assess their capability to achieve that performance level. Bandura (1971), in fact, tells us that when an observer does not witness the rewards of a model's behavior, the model's perceived status, power, and competence influence the observer's expectation that the

model's behavior has been or will be rewarded. Later, Bandura asserted that without knowledge of the quality of the model's performance level, the observer relies on appearance, style, speech, signs of expertise, age, and socioeconomic success as indications of competence (Bandura, 1977). Therefore, it is likely that perceived model competence influences the observer's judgment of the quality of the model's performance level. Weiss (1977) also implies this. He found that subordinates used their supervisors as behavior models. The subordinates imitated the behavior of their supervisors when they judged that the supervisors' behavior achieved good performance levels. Weiss refers to competence as "the ability to determine the path for correct performance (p. 102)," but he measures subordinates' perceptions of this ability in their supervisors' in terms of the subordinates' judgments of the quality of their supervisors' performance levels. From this method, Weiss implies that the quality of the supervisors' performance level influenced the subordinates perception of their supervisors' competence. It is equally plausible that the subordinates' perception of their supervisors' competence, without evidence of the quality of the supervisors' performance level, could influence the subordinates' judgment of the quality of their supervisors' performance level. This logic could be applied to models, in general,

since the supervisors in Weiss' study served as models for their subordinates. Again, it is likely that the observer's perception of the model's competence, without evidence of the quality of the model's performance level, can influence the observer's judgment of the quality of the model's performance level.

Hollenbeck and Klein (1987) also suggest a relevant personal factor bearing on goal attainment expectancy: observer self-esteem. Rosenberg (1965) describes self-esteem as the level of respect for oneself. He says individuals with high self-esteem consider themselves to be adequate in terms of personal standards for behavior, personality, occupation, abilities, achievement, etc. Those with low self-esteem consider themselves as inadequate in those terms. Korman (1966) similarly defines self-esteem as a sense of personal adequacy, or inadequacy, and a sense of having achieved (or not achieved) need satisfaction in the past. Gough (1975) similarly describes self-acceptance as sense of personal worth, self-acceptance, and capacity for independent thinking and action. Individuals with high self-esteem have higher expectations of success and set higher standards for themselves than do those with lower self-esteem (Rosenberg, 1965; Campbell, 1982; Hall and Foster, 1977). As Bandura (1982) might argue, the sense of self-efficacy inherent in an observer's self-esteem would

help determine their expectations of attaining a model's performance level.

Bandura (1982) might argue that an observer with high self-esteem would have a higher expectation of attaining the performance level of a high performing model than an observer with low self-esteem. Bandura would say that this is because the high self-esteem observer would feel more similar in competence to the high performing model than the low self-esteem observer would feel. Similarly, a high self-esteem observer might be more likely than a low self-esteem observer to have a high expectation of attaining the performance level of a model who they thought, but did not know, was performing at a high level due to the model's apparently competent behavior. Bandura might argue that this is because the high self-esteem observer would feel more similar to the high performing model's apparent competence than the low self-esteem observer would feel. Bandura might say that even when performance standards are unknown, seeing similar others perform apparently successfully can raise an observer's expectation of doing as well. A high self-esteem observer would expect to exceed the performance level of a low performing model because she would feel more competent than the model. Similarly, she might expect to exceed the performance level of a model who she thought, but did not know, was performing at a low level

due to the model's apparently incompetent behavior. A low self-esteem observer would expect to do as well as a low performing model because he would feel as competent as the model. Similarly, he might expect to do as well as a model who he thought, but did not know, was performing at a low level due to the model's apparently incompetent behavior.

In summary, when a task is unfamiliar and performance standards are unknown, observers may assess their capability to achieve a model's performance level based on assumptions of the quality of that performance level derived from perceptions of the model's competence. The observer's assessment of his or her capability to achieve a certain level of performance is based, in part, on feelings of self-efficacy inherent in self-esteem. Therefore, a model's competence perceived in conjunction with the observer's feelings of self-esteem may influence the observer's expectation of attaining the model's performance level. This expectation would consequently affect goal level.

Since Rakestraw and Weiss (1981) established the positive relationship between model performance level and observer goals on unfamiliar tasks when performance standards are unknown, here the experimenter did not seek to replicate Rakestraw and Weiss' results by varying model performance. The focus, in this study, is the influence of model behavior on an observer's expectation of attaining the

model's performance level and the effect of this expectation on the observer's performance goals on the unfamiliar task when performance standards are unknown. This influence is believed to be moderated through the observer's perception of the model's competence. The following hypotheses were tested. Figures 1, 2, and 3 illustrate the expected results for hypotheses 2 through 4:

Hypothesis 1. All subjects viewing a competently behaving/relatively high performing model were expected to perceive the model as more competent than the incompetently behaving/relatively high performing model (note that individual subjects in this study viewed only one of these two models, so comparisons are across groups).

Hypothesis 2a. High self-esteem subjects were expected to judge themselves more competent in relation to a model than low self-esteem subjects.

Hypothesis 2b. All subjects observing an incompetently behaving/relatively high performing model were expected to judge themselves more competent in relation to the model than subjects observing a competently behaving/relatively high performing model.

Hypothesis 2c. High self-esteem subjects observing an incompetently behaving/relatively high performing model

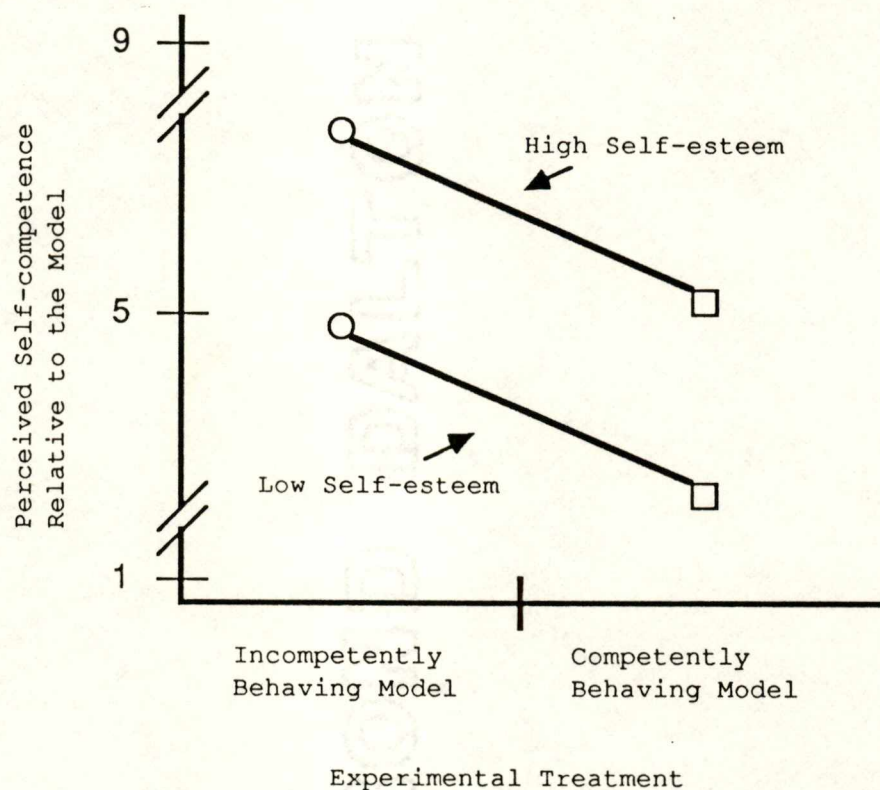


Figure 1. Expected results in hypotheses 2a through 2e for subjects' perceived self-competence relative to a model

Scale: where 1 = much less competent, 5 = equally competent, and 9 = much more competent).

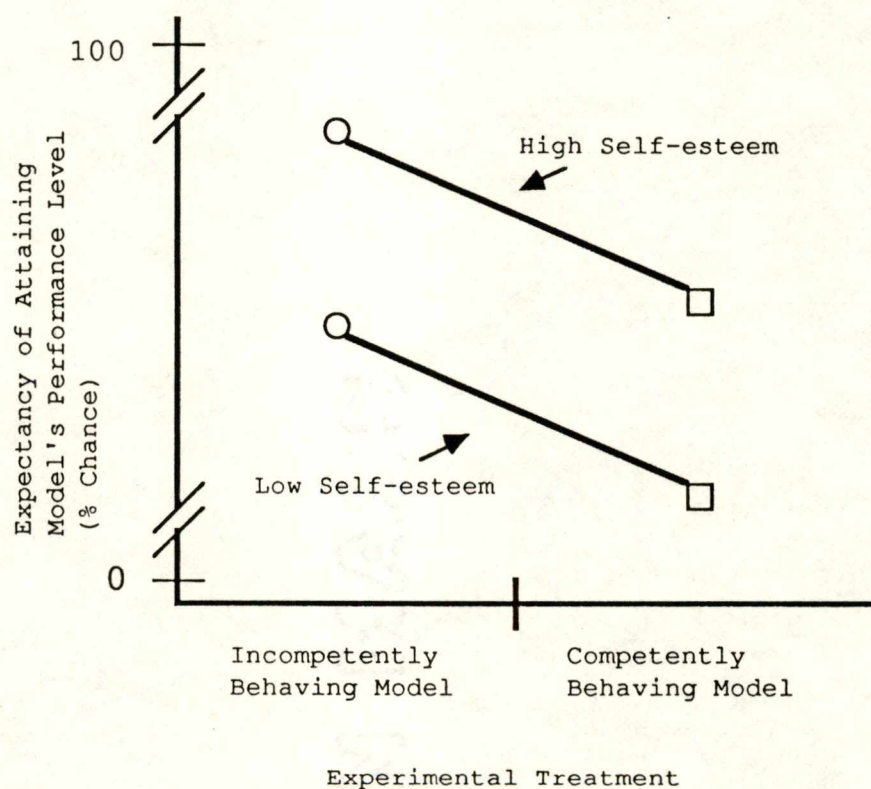


Figure 2. Expected results in hypotheses 3b through 3d for subjects' expectancy of attaining a model's performance level.

NOTE: Each score represents the percentage chance the subjects were expected to feel they had in achieving their models' performance level.

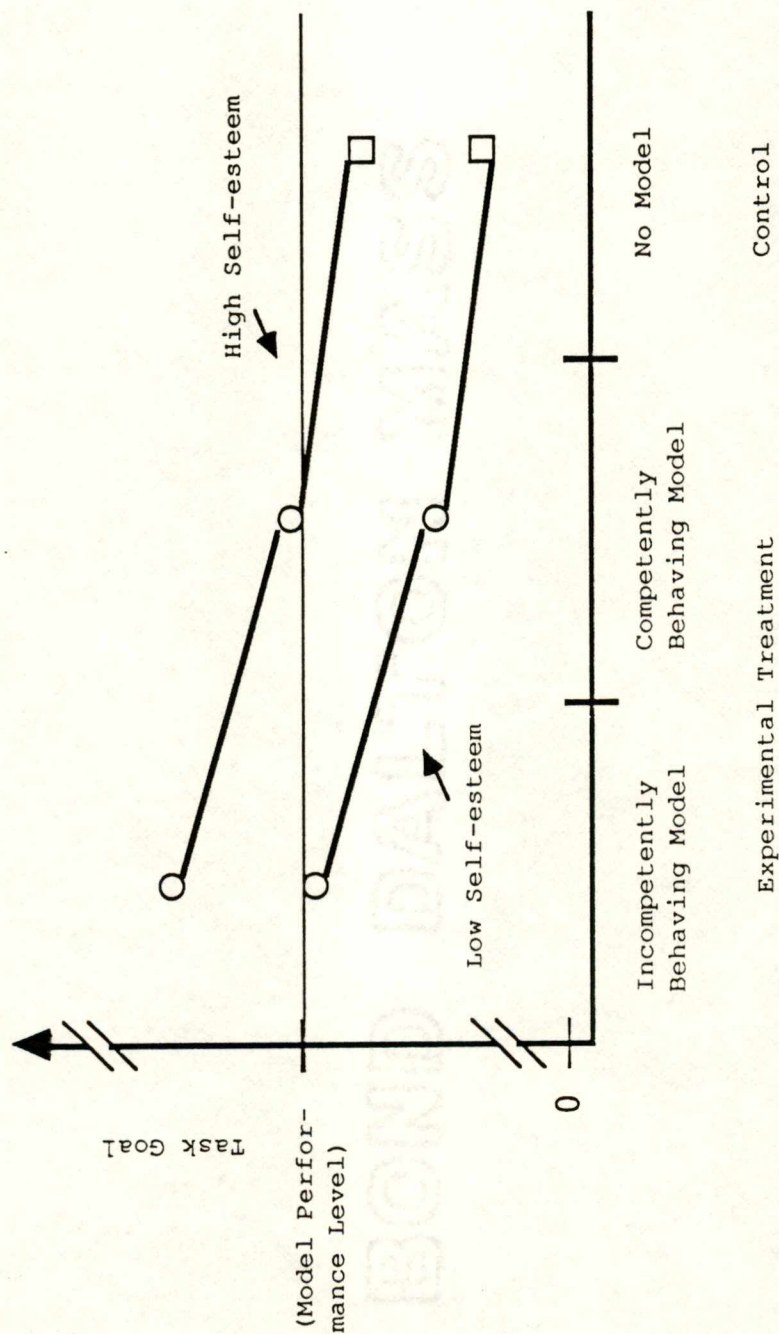


Figure 3. Expected results in hypotheses 4b through 4g for subjects' task goals.

were expected to judge themselves as more competent than the model.

Hypothesis 2d. Low self-esteem subjects observing a competently behaving/relatively high performing model were expected to judge themselves as less competent than the model.

Hypothesis 2e. Low self-esteem subjects observing an incompetently behaving/relatively high performing model and high self-esteem subjects observing a competently behaving/relatively high performing model were expected to judge themselves as equally competent as the model.

Hypothesis 3a. The subjects' expectations for attaining a model's performance level were expected to be positively related to their perceptions of their own competence in relation to the model.

Hypothesis 3b. High self-esteem subjects were expected to be more certain that they could attain a model's performance level than low self-esteem subjects.

Hypothesis 3c. All subjects observing an incompetently behaving/relatively high performing model were expected to be more certain that they could attain the model's performance level than subjects observing a competently behaving/relatively high performing model.

Hypothesis 3d. High self-esteem subjects watching a competently behaving/relatively high performing model

were expected to be equally certain that they could attain the model's performance level as low self-esteem subjects watching an incompetently behaving/relatively high performing model.

Hypothesis 4a. It was expected that observers, unaware of performance standards for an unfamiliar task, would set their performance level goals for the task in accordance with their expectation for attaining a model's performance level. The higher the subjects perceived their chances to reach a model's performance level, the higher they would set their goals.

Therefore, the subjects' task goals were expected to be positively related to their expectation of attaining a model's performance level.

Hypothesis 4b. Due to their generally more positive self-regard and expectations for self-achievement, high self-esteem observers were expected to set higher goals than low self-esteem subjects. Subjects who were also unaware of performance standards on the unfamiliar task but who did not view a model were also expected to set their goals at levels commensurate with their self-esteem. High self-esteem subjects in this control condition were expected to set higher goals than low self-esteem subjects in this control condition.

Hypothesis 4c. All subjects observing an incompetently behaving/relatively high performing model were expected to set higher goals than subjects watching a competently behaving/relatively high performing model.

Hypothesis 4d. Subjects' goals under the control condition were expected to be significantly lower than the goals of subjects' who observed the models (the experimental treatment conditions).

Hypothesis 4e. High self-esteem subjects watching an incompetently behaving/relatively high performing model were expected to set their goals higher than the model's performance level.

Hypothesis 4f. Low self-esteem subjects watching a competently behaving/relatively high performing model were expected to set their goals lower than the model's performance level.

Hypothesis 4g. High self-esteem subjects watching a competently behaving/relatively high performing model and low self-esteem subjects watching an incompetently behaving/ relatively high performing model were expected to set their goals at the level of their model's performance.

Hypothesis 5. All subjects were expected to set their goals at a level they reasonably expected to attain. Therefore, the subjects' personal goal attainment

expectancies were expected to be equivalent across all conditions.

For example, the experimenter expected low self-esteem subjects viewing an incompetently behaving/relatively high performing model to perceive themselves as similar in competence to the model and to feel reasonably certain that they could attain the model's performance level on the task. Their goals were expected to be near the level of the model's performance. High self-esteem subjects, on the other hand, were expected to perceive themselves as superior in competence to the incompetently behaving/relatively high performing model. They were expected to be so much more certain they could attain the model's performance level, that they would set their goals significantly higher than low self-esteem subjects observing this model.

The experimenter suspected that subjects viewing either model may have judged their own competence relative to the model only in terms of the task. If this were to occur, the hypotheses described above regarding the subjects' perceptions of their own competence in relation to the model were expected to hold only for task-relevant perceptions of competence. Thus, perceived self-competence relative to the model was measured in a second, task-relevant way similar to Ekpo-Ufot's (1979) Self-Perception of Ability Relevant to the Task (SPART). SPART entails subject self-estimates of

their capacity to perform a set of activities involving a group of abilities. Here, however, subjects compared their perceived ability to the apparent competence of the model.

Weiner (1974) describes a taxonomy of four causes attributed to success and failure: luck, effort, task difficulty, and ability. Since perceived model ability was expected to be influenced by the experimental treatments of model behavior, the following hypotheses were also tested:

Hypothesis 6a. The experimenter expected that the observers would attribute ability as having a significantly greater effect on the model's performance level than the other three causes.

Hypothesis 6b. It was also expected that no experimental treatment or control condition group would attribute any cause to performance level on the task significantly more than any other group.

Conceivably, though, high self-esteem observers may have thought the incompetently behaving/relatively high performing model luckily stumbled into apparent high performance. Even though the subjects did not know how well the model did, all observers may make assumptions concerning the model's relative level of performance. Similarly, though not expected, all subjects observing the incompetently behaving/relatively high performing model may have perceived him to sort fewer cards than he actually did.

Although it is not a principal hypothesis, the subjects' goal commitment was expected to be positively related to their expectation of attaining their model's performance level. The variable was measured primarily on the advice of Hollenbeck and Klein (1987). They recommended that goal commitment should be measured always in goal-setting research, even when the experimenter is not trying to test whether performance increases as commitment of the subject to difficult goals increases (Locke, 1968; Erez and Zidon, 1984; Locke, Frederick, Lee, and Bobko, 1984). Consistent with Locke, et al. (1981), they suggest that the variables affecting goal commitment can be categorized into the two major components of expectancy theory: attractiveness of goal attainment and expectancy of goal attainment. For example, they remind us that goal commitment generally increases as expectancy of goal attainment increases (Locke, et al., 1984; Mento, et al., 1980; among others earlier). They then cite factors affecting goal attainment expectancy. In doing so, primarily they list variables which have been shown to affect the choice of goal difficulty, such as others' performance (Rakestraw and Weiss, 1981; Lewin, et al., 1944) and self-esteem (Rosenberg, 1965; Campbell, 1982; Hall and Foster, 1977). They say, "...empirical evidence suggests that variables that are positively related to the level of

goal choice under self-set conditions are also related to commitment to assigned goals (Earley, 1985; Hollenbeck and Brief, 1987)" (p. 214). Hollenbeck and Klein (1987) interpret studies showing personal variables affecting goal-level choices as providing indirect evidence that those same variables would be related to goal commitment (Campbell, 1982). Therefore, the following hypotheses were also tested:

Hypothesis 7a. High self-esteem subjects were expected to be more committed to their goals than subjects low in self-esteem because they were expected to be generally more certain that they can attain their goals.

Hypothesis 7b. All subjects observing the incompetently behaving/relatively high performing model were expected to be more committed to their goals than all subjects observing the competently behaving/relatively high performing model because they were expected to be generally more certain that they could attain their model's performance level.

Hypothesis 7c. In general, the more certain subjects were of attaining their model's performance level, the more committed they were expected to be to their goals. Therefore, goal commitment was expected to be

positively related to model performance level attainment expectancy.

For example, low self-esteem subjects who watched the competently behaving/relatively high performing model were expected to be least committed to their goals since they were expected to be least certain that they could attain their model's performance level. High self-esteem subjects who watched the incompetently behaving/relatively high performing model were expected to be most committed to their goals since they were expected to be most certain that they could attain their model's performance level. High self-esteem subjects watching the competently behaving/relatively high performing model and low self-esteem subjects watching the competently behaving/high performing model were expected to be equally committed to their goals since they were expected to be equally certain that they could attain their models' performance level. These two groups' goal commitment was expected to be less than the goal commitment of the high self-esteem subjects watching the incompetently behaving/high performing model and more than the goal commitment of the low self-esteem subjects watching the competently behaving/high performing model since their model performance attainment expectancy was expected to be at the same level relative to the other groups.

It was tentatively believed that the subjects' goal commitment might be more positively related to their personal goal attainment expectancy than their model performance attainment expectancy. If this were true, then all subjects would have been expected to be equally committed to their goals since they were all expected to be equally certain that they could attain their own goals.

Women were included in this study. Rakestraw and Weiss (1981), however, used only male student subjects in their study. Though no mention is made in their method section, they probably attempted to control any variance in the results accounted for by gender, by limiting the sample to males. Locke, et al. (1981) admit, however, that although no study prior to their publication had tested gender as a moderator of goal setting behavior, goal setting has been shown to significantly increase the performance of males (Invancevich and McMahon, 1977; Latham and Yukl, 1975) and females (Latham and Yukl, 1976; Steers, 1975). It was reasonable to assume, therefore, that the results expected in this study would occur across both sexes.

CHAPTER III

METHOD

Design

The study involved a 2 x 3 factorial design composed of two between-group factors. Subjects were divided into two groups: those with low self-esteem and those with high self-esteem. These two levels of observer self-esteem were crossed with two experimental treatment levels of competence-related model behavior and one control level without a model to yield four experimental conditions and two control conditions. The model's competence-related behavior was varied as a treatment to influence the subjects' perceptions of model competence while holding model performance level constant. The two experimental treatment levels consisted of an incompetently behaving model condition and a competently behaving model condition. Model performance level was held constant at a relatively high level in both experimental treatment conditions.

Sample

With this and an expected moderate effect size of $d = .5$ in mind, 180 male and female undergraduate students from the University of Tennessee were planned for participation in the experiment affording statistical power of .77 at one-tailed $\alpha = .05$. A total of 258 students

from the 1987 Summer and Fall quarters participated. Each received extra credit in introductory psychology or management courses in which they were enrolled.

Procedure

The experimenter classified the total sample based on the scores of the first pool of 146 subjects. A delay to identify and pretest the remainder of the sample would have jeopardized the availability of this subject pool for inclusion in the rest of the study. These subjects had to be assigned to a condition and complete their participation in the short period of time before their classes disbanded. Organized participation would have been impossible at that point. Therefore, the classification cutoff scores were based on this significant majority of the total sample.

As part of a regular class meeting, subjects completed a pre-treatment questionnaire (Appendix 1) that assessed their self-esteem. The cutoff scores established from the first 146 subjects were also applied to the remaining 112. Individuals scoring greater than one standard error of measurement ($SE = 2.06$) above the mean self-esteem raw score for the first 146 subjects ($M = 23.51$) were classified into the high self-esteem condition ($n = 81$). Those scoring greater than one standard error of measurement below the mean were classified into the low self-esteem condition

($\underline{n}$ = 71). The hypotheses were tested on these 152 subjects which included subjects from the first 146 tested and the last 112 tested. The middle bands of subjects were retained as potential comparison groups. Those subjects scoring one standard error of measurement or less above the mean comprised one middle group and those scoring one standard error of measurement or less below the mean comprised the other. Neither middle group was significantly higher in self-esteem than the low self-esteem group nor significantly lower in self-esteem than the high self-esteem group. All totaled, there were twelve potential sample cells.

Later, the classified subjects from each pool were randomly assigned to one of the two experimental treatment conditions or the control condition, until each of the twelve cells had an equal number of subjects (projected $\underline{n}$ = 15). In a later class session, subjects were informed of their assignment ("1, 2, or 3") and scheduled themselves on a sign-up sheet for participation in the remainder of the study. They were constrained to certain blocks of time based on their assignment. Uneven cell sample sizes resulted from no-shows, cancellations and scheduling difficulties. Table 1 shows the cell sample sizes and pretest cutoff scores.

Table 1
Pretest Cutoff Scores and Cell Sample Sizes

Observer Self-esteem	Cutoff Score	Experimental Treatment		Control	
		ICBM ^a	CBM ^b	No Model	Marginal Total
HIGH	Sa > 25	n=28	n=35	n=18	(81)
	Sa = 24,25	n=19 (47)	n=17 (52)	n=15 (33)	(51) (132)
LOW	Sa = 22,23	n=16	n=16	n=23	(55)
	Sa < 22	n=24 (40)	n=29 (45)	n=18 (41)	(71) (126)
		(98)	(107)	(86)	(258)

^aIncompetently behaving model

^bCompetently behaving model

Note:

1. Sa stands for the Self-acceptance subscale of the California Psychological Inventory.
2. Cutoff scores are based on the Sa mean and standard error of measure (s.e.) (23.51 and 2.06, respectively) for the first 146 subjects.
3. Subjects scoring within plus or minus one s.e. of the Sa mean (22 - 25) composed a middle band of subjects which were retained as a potential comparison group. They were divided into two groups at the mean with the top-scoring group allotted to the HIGH self-esteem condition and the low-scoring group allotted to the LOW self-esteem condition.

At their scheduled time, groups of two to fifteen participants assigned to the same condition, reported to the behavioral laboratory operated at the University of Tennessee in the College of Business Administration. They were told they were participating in a pilot test of a training method for industrial tasks. Subjects assigned to each of the two experimental treatment conditions were told that they were about to observe a training film of an individual performing a card-sorting task. He was described as a student who had been filmed through a two-way mirror while he worked on the task during an earlier phase of the research. They were told that he had five minutes to sort as many cards as he could and that they would have a chance to do the same. The experimenter assured them that they would not be filmed. The videotape was described as an example of the behaviors involved in performing the task. The subjects in the experimental treatment conditions were then given written instructions for the task.

The written instructions described the task in the same way as the model had to perform it but with no references to the model (see Experimental task below). The instructions gave the subjects the impression that they would perform the task. The experimenter included two subtle references to this task in an administrative setting to add plausibility.

The subjects did not have access to the task materials while they were reading the written instructions.

After the subjects in the experimental treatment conditions read the instructions, the experimenter escorted them to a demonstration area where he showed them how to use the task materials for five minutes. The subjects were allowed to handle the materials. This orientation only reminded them of the task requirements to prevent any misunderstanding. It also added plausibility to the suggestion that the procedure was a pilot test of training procedures.

After handling the task materials, subjects in the experimental treatment conditions were placed two to a cubicle containing a video monitor. They no longer had access to task materials at that time. They were shown a 5-minute videotape of a model performing the card sorting task. Since high performance is the level most worthy of attaining in work settings, the model sorted a reasonably high number of cards in both experimental treatment conditions. The model in each condition produced equally on the task in order to hold performance level constant. Since the subjects of interest represented new employees that are naive to performance standards, the subjects had no experience with performing the task and were not told how well the model performed compared to others who might

perform the task, as in Rakestraw and Weiss (1981) and Earley and Kanfer (1987).

Since the subjects in the experimental treatment conditions were two to a cubicle, they were asked not to comment on the videotape while viewing. Subjects in the incompetently behaving model condition observed the incompetently behaving/high performing model, while subjects in the competently behaving model condition observed the competently behaving/high performing model.

After watching the videotape, subjects in the experimental treatment conditions were asked to "answer a few questions before (they) perform(ed) the task." They completed a post-treatment questionnaire that assessed their goals for the task, goal commitment, personal goal attainment expectancy, expectancy of attaining the model's performance level, perceived self-competence relative to the model (global and task-relevant), perception of model performance level, and perception of model competence, effort, luck, and task difficulty. In Appendix 2, the questionnaire is annotated showing the constructs assessed in the items. They were asked not to collaborate on the questions.

After the experimenter distributed the questionnaire, he told the subjects in the experimental treatment conditions that he needed to set up the cubicles where they

would sort the cards. He continued by saying, "I'm running low on card packets, so I'm only going to give you as many as you plan to use. To save you any embarrassment and so I'll know how many packets to set out for you, write down your name and how many cards you plan to sort on this card." This additional verbal item served as a reliability check on the written personal goal report. The scenario was plausible since running more than one subject simultaneously could have limited the number of cards per subject. The experimenter distributed index cards, collected the responses, and told the subjects to answer the questions while he set up the other cubicles. He left the subjects momentarily and returned to field any questions on the post-test. He left again, presumably to set up the other cubicles. He returned again five minutes later and asked the subjects to let him know when they were ready.

As the subjects in the experimental treatment conditions finished, they were escorted to the demonstration area unbeknown to the other unfinished subjects. They were informed that they did not have to sort cards and were asked to wait for a debriefing with all the subjects. When all were through, they were thanked for their participation and debriefed as to the full intent of the study. Those who desired were given the opportunity to perform the task.

At their scheduled time, control group subjects reported to the same behavioral laboratory in groups of two to fifteen. They were also told that they were participating in a pilot test of a training method for industrial tasks. The experimenter told them that they would have five minutes to sort as many cards as they could on a card sorting task. They were given the same written instructions and orientation for the task as the experimental treatment subjects received. After handling the task materials, They were also seated two to a cubicle where they asked to "answer a few questions before (they) perform(ed) the task." They were also asked not to collaborate on the questions. They completed a separate questionnaire consisting of only the goal level, goal commitment, and personal goal attainment expectancy measures (Appendix 3). A variation of the causal attribution measures was included to add plausibility to the procedure since very little "training" took place. Before they started answering the questionnaire, the experimenter told them that he needed to set up the cubicles where they would perform the task and that he was running low on card packets, just as he had with the subjects in the experimental treatment conditions. He also asked them to write the number of cards they planned to sort on an index card, collected the responses, and told the subjects to

answer the questions while he set up the other cubicles. He left the subjects momentarily and returned to field any questions on the post-test. He left again, presumably to set up the other cubicles. He returned again five minutes later and asked the subjects to let him know when they were ready.

As the subjects in the control condition finished, they were escorted to the demonstration area unbeknown to the other unfinished subjects. They were informed that they did not have to sort cards and were asked to wait for a debriefing with all the subjects. When all were through, they were thanked for their participation and debriefed as to the full intent of the study. Those who desired were given the opportunity to perform the task.

Materials

Experimental task. The task, used successfully in Rakestraw and Weiss (1981), required the model to sort cards with specific patterns of punched holes onto vertical spikes on a sorting board. The task was chosen for the same reasons Rakestraw and Weiss (1981) used it. Since cards can fit only on the correct spike configuration, they cannot be sorted incorrectly. Performance level, therefore, can vary only in terms of quantity, an easily observable dimension.

Each card contained information on the gender, age (20 years and under, 21-22, and 23 years and over), and state

residency (resident, non-resident) of an individual printed across the top. The information was represented by the 3 punched holes in the cards. With 12 possible configurations (2 gender x 3 age x 2 residency) of 3 holes for each card, the model was provided with a sorting board containing 12 corresponding configurations of 3 spikes. The model had to place each card on the appropriate set of spikes, according to one of the 12 possible classifications.

Separate packets of ten cards were attached to a "feedback" clipboard suspended from the wall within reach of the model and the view of the observer. The packets were hung in two rows of six packets each. As the model worked on the task, he removed one packet at a time, beginning at the upper left hand corner and proceeding across the first row and then through the second. As each packet was removed for sorting, the board displayed, in increments of ten, the number of cards the model had sorted (e.g., removal of the third packet revealed the number 3 for 30 cards).

When the experimenter oriented the subjects to the task, he pointed out the three holes on several cards. He demonstrated the orientation of a card when properly sorted on to a set of three spikes but did not actually place the card on the spikes. The subjects were advised to ignore the hole on each card used to hang it on the "feedback" board.

They handled card packets stored on the feedback board and examined individual cards and the sorting board.

Videomodeling. The videotape showed an oblique view of the model performing the card-sorting task. Subjects could see over his right shoulder as he sorted the cards. After 15 seconds of a full view of the subject and the task, the camera panned in for a close-up of the cards sliding onto the proper spikes. The camera maintained this view for 15 seconds and panned back out for a full view again. The subject was seated and could be seen from head to knees during the full view.

Independent Variables

Competence-related model behavior. The competence-related behavior of the model was varied through the models dress and appearance, manner of performance, and speech style and content as a way of influencing perceived model competence. The same professional actor served as the confederate model in the two modeling conditions. He was hired from a local professional theater company and paid for his "performances." In both experimental conditions, he was instructed to sort 75 cards: one standard deviation above the mean number of cards sorted by pilot-tested subjects ($c = 17$, $M = 59$, $SD = 16$, range = 34 - 90). In the incompetently behaving model condition, he actually sorted 76 cards. In the competently behaving model condition, he

actually sorted 74 cards. Neither of these performances were significantly different from 75 ($t(16) = .26$ and $-.26$, respectively, both n.s.). In the incompetently behaving model condition, at the request of the experimenter, he displayed characteristics which would indicate less apparent competence than in the competently behaving model condition. He scratched his head and looked puzzled over sorting decisions. He sighed heavily as if frustrated with the task. He asked himself "now where does this go?," and several times, he attempted to put a card on the wrong spike configuration. He corrected these "false starts" without damaging the cards involved. He twitched his leg nervously during the performance and had difficulty removing card packets from the sorting board. His clothing and hair were slightly disarrayed. He worked at the same pace in both performances, however.

Four seven-point Likert-type items were used in the post-treatment questionnaire to check the success of the treatment on the subjects' perception of the models' competence. Item responses were averaged into a composite score for each subject. The reliability (Cronbach's Alpha) computed for this perceived model competence composite was .93. A two-way analysis of variance was expected to reveal that subjects perceived the model in the manipulated competence condition as significantly lower in competence

than the straight model. Perceived competence was not expected to differ across level of self-esteem.

Self-esteem. A pre-treatment questionnaire (Appendix 1) composed of Rosenberg's (1965) ten-item Self-esteem scale and Gough's (1975) Self-acceptance (Sa) subscale of the California Psychological Inventory (CPI) was used to assess self-esteem and group the participants. Rosenberg's scale has shown good convergent validity with other measures of self-esteem, correlating from $r = .56$ to $r = .83$ (Robinson and Shaver, 1973). Silber and Tippet (1965) reported a two-week test-retest reliability of .85. Internal consistency has been reported from $\alpha = .75$ (Weiss, 1977) to .82 (Knight and Nadel, 1986). Gough's Sa subscale assesses sense of personal worth, self-acceptance, and capacity for independent thinking and action. He cites test-retest reliabilities of $r = .71$. He also cites a representative study of discriminant validity where high school students nominated by their principals as most self-accepting differed significantly ($p < .01$) in Sa subscale scores from students nominated as least self-accepting. Korman (1966, 1970) measures global self-esteem with the Self-assurance scale of Ghiselli's (1971) Self-Description Inventory (SDI) but does not report scale data. Ghiselli (1959) reports reliability of only $r = .56$ but a validity correlation of $r = .66$ with supervisor ratings of

self-assurance for 12 insurance agents. Dipboye (1977) questions Korman's conceptualization and operational definition of chronic self-esteem and the construct validity of the self-assurance scale. Therefore, the SDI subscale was not included in the pre-treatment questionnaire.

The experimenter pilot-tested the CPI Self-acceptance (Sa) subscale and the Rosenberg (1965) Self-esteem scale on the first pool of 100 subjects. This group was used for practical reasons as explained earlier. The Self-acceptance raw scores more nearly approximated a normal distribution for this pool. The Sa mean and standard deviation also were similar to those values for a composite sample of college students ($\bar{M} = 22.2$, $SD = 3.9$ for 3103 males and 2000 females)(Gough, 1974). Table 2 shows the means, standard deviations, and ranges for each of the two scales, the self-acceptance standard scores, and the raw totals of both scales. The more nearly approximate normality of the Self-acceptance subscale's score distribution was confirmed on the first 146 subjects (see Table 2). Therefore, the experimenter used the self-acceptance mean and standard deviation of this significant majority of the sample to classify all subjects into low and high self-esteem groups (see Procedure above). The Cronbach Alpha reliability computed for the self-acceptance scale was .69.

Table 2
Classification Sample Parameters for Pre-test Scales

Scale	Mean	Standard Deviation	Range
Self-esteem (SE) ^a (<u>n</u> = 100)	41.36	5.44	26 - 50
Self-acceptance (Sa) ^b (<u>n</u> = 100)	23.69	3.97	15 - 32
(<u>n</u> = 146)	23.50	3.83	14 - 32
Self-acceptance (standardized) ^c (<u>n</u> = 100)	60.83	11.24	39 - 84
Total SE and Sa raw scores (<u>n</u> = 100)	65.05	7.56	51 - 79

^aRosenberg (1965).

^bGough (1974).

^cThe scale is the standardized scores for Gough (1974) sample.

Dependent Measure

Goal level. Observer goals were assessed with two items: one written and one verbal. On the post-treatment questionnaire, subjects simply were asked how many cards they planned to sort. As a reliability check, they were asked verbally the same question before they were given the questionnaire. Responses to the two items correlated .99. The two answers were averaged together for all subsequent analyses. Several minutes passed between the time they answered the verbal item and the time they answered the written item. During that time, they answered questionnaire items that did not refer to their goal level. Memory of their first response was controlled for by the equivalent time span and quantity of other items between goal level responses. All subjects had to write their name, condition assignment number, and date and time on the questionnaire between the goal level responses. Between the two responses, subjects in the experimental treatment conditions also answered six relatively lengthy items referring to their perceived self-competence relative to the model. Between the two responses, subjects in the control condition answered fifteen short items referring to possible causes of performance level on the task.

Process Variables

Performance level attainment expectancies. Two ten-point items were used to assess the observers' expectation of attaining the model's performance level in terms of the subjects' estimation of their probability of success. These items were averaged together for all subsequent analyses. The coefficient alpha for these two items was .96. Two similar ten-point items were used to assess the observers' expectation of attaining their personal goals. They were also averaged together and had a coefficient alpha of .86.

Perceived self-competence relative to the model. This construct was assessed with six nine-point items: three for global competence and three for task-relevant competence, as defined above. The three global items were averaged together and the three task-relevant items were averaged together for all subsequent analyses. Their coefficient alphas were .87 and .90, respectively.

Goal commitment. Goal commitment was measured using two 7-point variations of one of Earley and Kanfer's (1985) three 5-point goal acceptance items. One variation is exactly like one of Earley and Kanfer's items except that it has a 7-point scale instead of a 5-point scale. It simply asks how committed the subject is to his or her goal. The other item asks how serious the subject is about sorting

that many cards. These items were averaged together for subsequent analyses. The coefficient alpha computed for the two items was .87.

Locke, et al., (1981) define goal commitment as the determination to try for a goal. Commitment implies an extension of effort, over time, toward accomplishing an original goal and emphasizes an unwillingness to lower the goal (Campion and Lord, 1982). Hollenbeck and Klein (1987) distinguish goal acceptance from commitment, as referring to the initial use of a goal assigned by another person as a referent. Although, in assigned goal conditions, goal acceptance does not necessarily imply that the individual is bound to the standard, in the self-set goal conditions in this study, the distinction can be blurred. Hollenbeck and Klein (1987), in fact, acknowledge the substantial overlap in the constructs. Two of Earley and Kanfer's original items, however, referring to taking and accepting the goal, were dropped from consideration, so as to fully distinguish between goal commitment and goal acceptance.

Causal Attributions and Manipulation Checks

Several items on the post-treatment questionnaire assessed the causes of performance level that the subjects in the experimental treatment conditions attributed to the model (Appendix 2). Subjects were asked what effect personal qualities of the model (ability, etc.), situational

characteristics (task difficulty, etc.), and other factors (luck, etc.) had in determining the model's performance level. Two seven-point items were used to assess each of the causal attributions related to ability (items 19 and 30), luck (items 27 and 32), and task difficulty (items 25 and 31). One item (21) was used for effort. All of these items were used for further confirmation of the influence of the experimental treatment on the subjects' perception of the models' competence. They were also indicative of the results of the cognitive processes of the observers.

Subjects also were asked how many cards the model sorted. This was to confirm that the observers perceived the model's performance level accurately.

CHAPTER IV

RESULTS

Two subjects were dropped from the analyses because they did not mark the experimental condition in which they were participating on their questionnaire as instructed. Two subjects were dropped from the analyses because they did not complete the questionnaire. Six subjects were dropped from the analyses based on their goal reports. These observations fell outside the 95% confidence interval for their cells' mean goal (see Table 3).

General Analyses

Separate two-way analyses of variance were performed on perceived self-competence relative to the model (one for global and one for task-relevant) and model performance level attainment expectancy. The data were not collected from the control group subjects because the data sought were not relevant to their group. Means for perceived self-competence relative to the model and model performance level attainment expectancy are presented in Table 4. Another series of two-way analyses of variance was performed on personal goal attainment expectancy, task goal, and goal commitment. These analyses included the control groups. Means for these variables are presented in Table 5. Results of all the analyses of variance are presented in Table 6.

Table 3

Cell Means and 95% Confidence Intervals for Subjects' Goals
Before Outlying Observations Dropped

Self-esteem	Treatment condition		
	Incompetently behaving model	Competently behaving model	No model
High	82.89 $\pm$ 25.92	78.59 $\pm$ 18.35	67.50 $\pm$ 53.21
Low	76.46 $\pm$ 23.34	76.55 $\pm$ 29.84	63.47 $\pm$ 65.71

Table 4

Means for Perceived Self-competence Relative to the Model
(Global and Task-relevant)^a and Model Performance Level
Attainment Expectancy^b Composite Items

Self-esteem	<u>Experimental treatment</u>	
	Incompetently behaving model	Competently behaving model
Perceived self-competence relative to the model (global)		
High	6.60	5.67
Low	5.78	5.47
(task-relevant)		
High	6.29	5.57
Low	5.68	5.21
Model performance attainment expectancy		
High	8.27	8.44
Low	8.15	8.00

^aThese variables each were measured by three items which were averaged together for a composite score. Each item was on a nine-point scale where 1 = much less competent, 5 = equally competent, and 9 = much more competent.

^bThis variable was measured by two ten-point items which were averaged together for a composite score. Each score represents the percentage chance (in units of ten percentage points) the subjects felt they had in achieving their models' performance.

Table 5

Means for Task Goal^a, Personal Goal Attainment Expectancy^b,
and Goal Commitment^c Composite Items

Self-esteem	<u>Treatment condition</u>		
	ICBM ^d	CBM ^e	No model
Goal			
High	82.92	77.25	67.50
Low	77.61	74.82	63.47
Personal goal attainment expectancy			
High	8.08	8.33	8.72
Low	8.07	8.07	8.06
Goal commitment			
High	5.56	5.55	6.08
Low	5.85	5.52	5.86

^aThis variable represents the average of responses to two questions asking the subjects how many cards they planned to sort in five minutes.

^bThis variable was measured by two ten-point items which were averaged together for a composite score. Each score represents the percentage chance (in units of ten percentage points) the subjects felt they had in achieving their own goal.

^cThis variable was measure by two seven-point items which were averaged together for a composite score.

^dIncompetently behaving model

^eCompetently behaving model

Table 6

Two-Way Analyses of Variance for Perceived Self-competence
Relative to the Model (Global and Task-relevant), Model
Performance Level Attainment Expectancy, Personal Goal
Attainment Expectancy, Task Goal, and Goal Commitment with
Self-esteem (S-esteem) and Experimental Treatment (Model)

Dependent variable	Factor	df	MS	F
Perceived self-competence relative to the model (global)	S-esteem	1	7.08	9.52**
	Model	2	5.21	14.00***
	S-esteem X Model	2	1.35	3.62 [#]
Perceived self-competence relative to the model (task-relevant)	S-esteem	1	6.29	7.83**
	Model	2	4.84	12.03***
	S-esteem X Model	2	0.23	0.58
Model performance attainment expectancy	S-esteem	1	2.09	0.86
	Model	2	0.00	0.00
	S-esteem X Model	2	0.35	0.29
Goal	S-esteem	1	534.80	1.99
	Model	2	2336.82	8.71***
	S-esteem X Model	2	28.47	0.11
Goal commitment	S-esteem	1	3.41	2.51
	Model	2	1.05	0.77
	S-esteem x Model	2	1.11	0.82

[#]p<.05, one-tailed
*p<.05
**p<.01
***p<.001

One-tailed F tests were used when the two-tailed tests were not significant and the hypotheses specified differences in means in a particular direction. When unexpected interactions were present, special main effect contrasts were performed separately within each of the levels of the other factor (e.g. - special experimental treatment main effect contrast comparing incompetently and competently behaving model conditions within the high self-esteem group). within each of the levels of the other factor (e.g. - special experimental treatment main effect contrast comparing incompetently and competently behaving model conditions within the high self-esteem group). The various conditions were dummy coded and the critical F statistics adjusted using Bonferroni tests for post-hoc contrasts. Each set of special main effect contrasts for one factor on one variable were considered separate families of tests. They were separately Bonferroni-protected from false rejection of the null hypotheses. These special main effect tests are indicated as post-hoc contrasts in the results sections pertaining to the variable being tested.

In the following sections, results are not stated in the same order as the original hypotheses. All hypotheses are discussed.

Manipulation Checks

Judging from the responses on the posttest questionnaire, the experimental treatments were marginally effective. With few exceptions, the subjects reported observing the model sort the same number of cards as he actually sorted. Subjects in the incompetently behaving model condition reported a mean of 75.53 cards sorted compared to the actual number of 76 cards ($t(48) = 1.51$, n.s.). Subjects in the competently behaving model condition reported a mean of 74.13 cards sorted compared to the actual number of 74 cards ($t(60) = -1.43$, n.s.).

Hypothesis 1 states that all subjects viewing the competently behaving model were expected to judge him more competent than the subjects viewing the incompetently behaving model were expected to judge their model. As expected, subjects in the incompetently behaving model condition judged their model to be apparently less competent ($M = 4.53$) than the subjects in the competently behaving model condition judged their model ($M = 5.14$). A two-way analysis of variance on these ratings revealed a significant main effect for treatment condition in the expected direction ($F(1,108) = 12.06$, $p < .001$). A significant interaction, however, was also obtained ($F(1, 105) = 2.60$, $p < .055$, one-tailed). A special experimental treatment main effect contrast within the low self-esteem condition

revealed that subjects observing the incompetently behaving model did not judge him less competent than the subjects in the competently behaving model condition judged their model ($\bar{M} = 4.72$ and 5.04 , respectively; $F(1, 105) = 1.6$, n.s.). There was, obviously, a significant difference between the competence judgments of the high-esteem subjects in the incompetently and competently behaving model conditions ($\bar{M} = 4.34$ and 5.23 , respectively; $F(1, 105) = 14.10$, $p < .05$). Also, the high self-esteem subjects watching the incompetently behaving model judged him to be less competent than the low self-esteem subjects watching the competently behaving model judged their model ($F(1, 105) = 8.12$, $p < .05$, Bonferroni). Within each experimental treatment condition, there were no differences between the self-esteem groups. These two special self-esteem effect contrasts were considered a family of post-hoc contrasts and were protected from false rejection of the null hypotheses by Bonferroni adjustment of the critical F statistic. Only the high-esteem subjects appear to have responded to the treatment.

Perceived Self-competence Relative to the Model

Hypotheses 2a states that high self-esteem subjects were expected to judge themselves more competent in relation to a model than low self-esteem subjects. Hypotheses 2b states that all subjects observing the incompetently

behaving model were expected to judge themselves more competent in relation to the model than subjects observing the competently behaving model. As expected, there were significant main effects in the hypothesized direction for both self-esteem group and experimental treatment condition on the global and task-relevant ratings. Figures 4 and 5 show the results for each cell compared to the expected results.

Unexpectedly, the global rating showed a marginal interaction. Contrary to hypotheses 2a, the low self-esteem subjects in the competently behaving model condition did not rate themselves less competent relative to the model on the global rating than the high self-esteem subjects in the same condition. Hypothesis 2d states that low self-esteem subjects observing the competently behaving model were expected to judge themselves as less competent than the model. The experimenter performed *t* tests on the differences between the subjects ratings and a rating of 5 (equally competent). The low self-esteem subjects in the competently behaving model condition on average rated themselves as slightly more competent than the model on the global item ($t(27) = 3.24, p < .01$) but equally competent on the task-relevant item ($t(27) = 1.35, n.s.$). Contrary to hypothesis 2b, there were no differences on the global

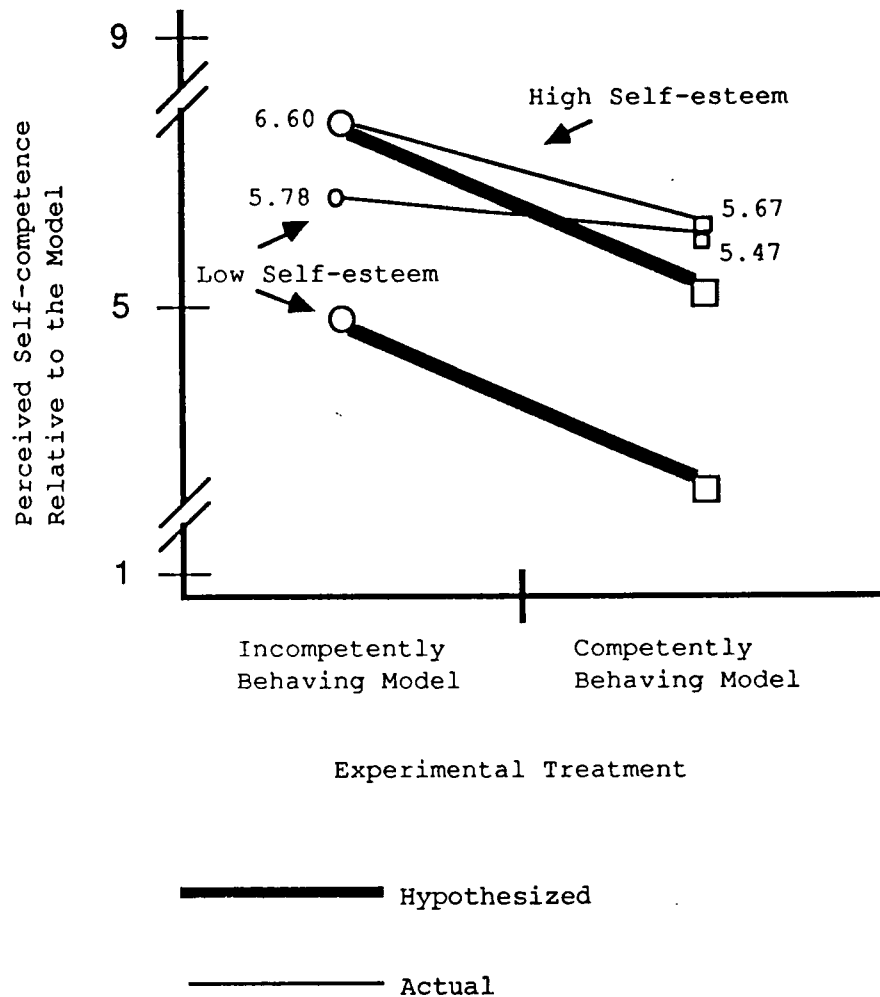


Figure 4. Group means for subjects' perceived self-competence relative to the model (global) versus the hypothesized mean levels.

Scale: 1 = much less competent, 5 = equally competent, and 9 = much more competent.

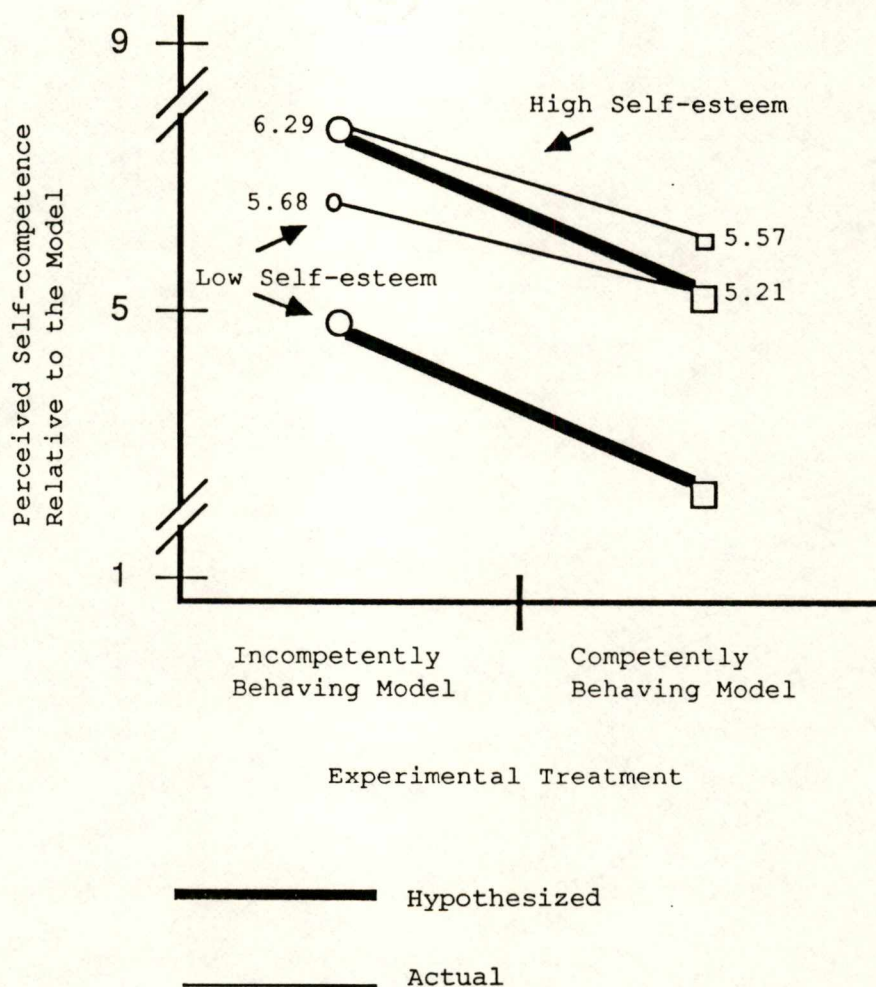


Figure 5. Group means for subjects' perceived self-competence relative to the model (task-relevant) versus the hypothesized mean levels.

Scale: 1 = much less competent, 5 = equally competent, and 9 = much more competent.

rating between the low self-esteem subjects in the two experimental treatment conditions.

Hypothesis 2c states that high self-esteem subjects observing an incompetently behaving model were expected to judge themselves as more competent than the model. The t tests on the differences between the subjects ratings and a rating of 5 (equally competent) revealed that all subjects in the incompetently behaving model condition on average rated themselves more competent than the model ($t(25) = 8.62$ and 6.49 , $p < .0001$ and $.0001$ for global and task-relevant ratings, respectively, of high self-esteem subjects; $t(32) = 4.38$ and 4.01 , $p < .0001$ and $.001$ for global and task-relevant ratings, respectively, of low self-esteem subjects).

Hypothesis 2e states that low self-esteem subjects observing the incompetently behaving model and high self-esteem subjects observing the competently behaving model were expected to judge themselves as equally competent as their respective models. As expected, there were no differences between the two groups. Unexpectedly, the former group on average rated themselves more competent than the model ($t(22) = 4.36$ and 3.48 , $p < .001$ and $.01$ for global and task-relevant ratings, respectively).

Model Performance Level Attainment Expectancy

Hypothesis 3b states that high self-esteem subjects were expected to be more certain that they could attain a

model's performance level than low self-esteem subjects. Hypothesis 3c states that all subjects observing an incompetently behaving model were expected to be more certain that they could attain the model's performance level than subjects observing a competently behaving model. Contrary to the hypotheses, there were no significant main effects on the subjects' expectation of achieving the model's performance level, nor was there an interaction. All groups estimated at least an 80% chance of attaining the model's performance. The general linear model, itself, was not significant. Hypothesis 3d states that high self-esteem subjects watching the competently behaving model were expected to be equally certain that they could attain their model's performance level as the low self-esteem subjects watching the incompetently behaving model. This hypothesis was confirmed.

Hypotheses 3a states that the subjects' expectations for attaining a model's performance level were expected to be positively related to their judgments of their own competence in relation to the model. The hypothesis was supported by a .34 ($p < .001$) correlation between perceived self-competence relative to the model and model performance level attainment expectancy.

Task Goal

Figure 6 shows the results on task goals compared to the hypotheses. Hypothesis 4d states that subjects' goals under the control condition were expected to be significantly lower than the goals of subjects' who observed the models. As originally expected, there was a significant main effect for treatment condition on the subjects' goals for the task. Subjects in each experimental treatment condition set significantly higher goals than the control group subjects ($F(1, 140) = 16.88, p < .0001$ for the incompetently behaving model condition; $F(1, 140) = 9.37, p < .01$ for the competently behaving model condition).

Hypothesis 4c states that all subjects observing an incompetently behaving model were expected to set higher goals than subjects watching a competently behaving model. Since no differences were detected between the experimental treatment groups' expectations for attaining their models' performance level, differences between these groups' goals would no longer be expected. This, in fact, was the case. The subjects' goals in the two experimental treatment conditions were not significantly different.

Hypothesis 4b states that high self-esteem subjects were expected to set higher goals than low self-esteem subjects. The hypothesis was not supported since no main effect for self-esteem was detected.

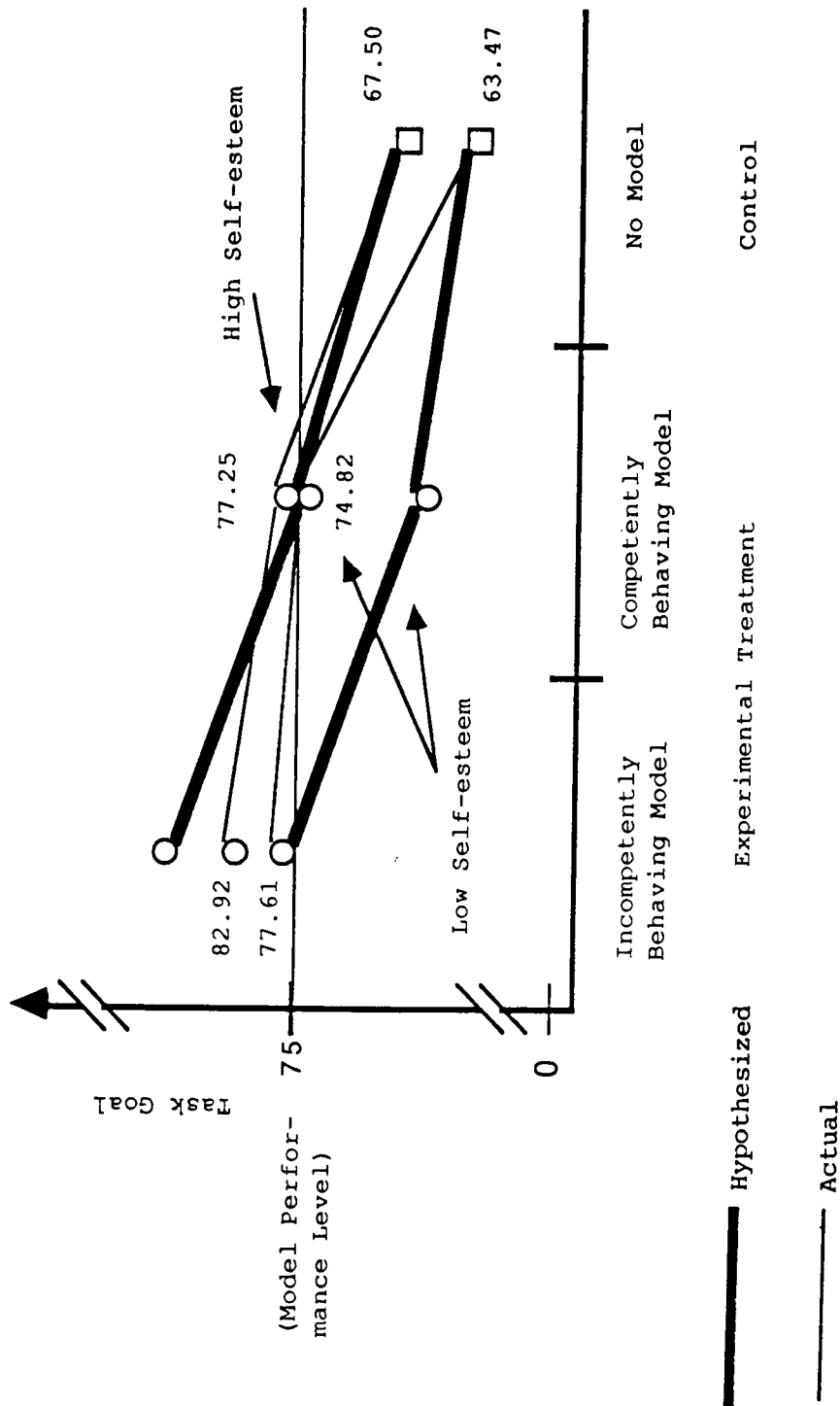


Figure 6. Group means for subjects' task goals versus the hypothesized mean levels.

Hypotheses 4a states that subject task goals were expected to be positively correlated with their expectation for attaining their model's performance level. As expected, subjects' goals correlated .34 ($p < .001$) with model performance level attainment expectancy.

Hypothesis 4e states that high self-esteem subjects watching the incompetently behaving model were expected to set their goals higher than the model's performance level. Hypothesis 4f states that the low self-esteem subjects watching the competently behaving model were expected to set their goals lower than the model's performance level. Hypothesis 4g states that low self-esteem subjects watching the incompetently behaving model and high self-esteem subjects watching the competently behaving model were expected to set their goals at their model's performance level. A series of t tests were performed on the differences between the subjects' goals and their models' performance level to see if they were significantly different from zero. As expected, high self-esteem subjects in the incompetently behaving model condition planned to sort more cards than their model sorted ($t(25) = 3.34$, $p < .01$). Also as expected, the low self-esteem subjects in the same condition did not plan to sort a significantly different number of cards than the model sorted ($t(22) = .77$, n.s.). Unexpectedly, though, the high self-esteem

subjects in the competently behaving model condition planned to sort more cards than their model sorted ($t(32) = 2.53$, $p < .05$). Also unexpectedly, the low self-esteem subjects in the same condition did not plan to sort significantly fewer cards than the model ($t(27) = .38$, n.s.). The control group subjects did not plan to sort fewer cards than the models sorted ($t(17) = -1.26$, n.s. for high self-esteem subjects; $t(17) = -1.57$, n.s. for the low self-esteem subjects).

Personal Goal Attainment Expectancy

Hypothesis 5 states that the subjects' personal goal attainment expectancies were expected to be equivalent across all conditions. As expected, there were no significant main or interaction effects for the subjects' expectations for attaining their own goals. All subject groups said they had a 80-90% chance of attaining their goal.

Goal Commitment

Hypothesis 7a states that high self-esteem subjects were expected to be more committed to their goals than low self-esteem subjects. Hypothesis 7b states that all subjects watching the incompetently behaving model were expected to be more committed to their goals than the subjects watching the competently behaving model because they were expected to be more certain that they could attain their model's performance level. Contrary to the

hypotheses, there were no significant main effects on goal commitment, nor was there an interaction. All subjects, in general, responded as very committed to their goals.

Hypothesis 7c states that goal commitment was expected to be positively related to model performance level attainment expectancy. These two variables were correlated .65.

Causal Attributions

Some of the responses on the causal attribution measures were suspected to be inaccurate since 32 of the 110 subjects in the experimental treatment conditions inexplicably did not mark the level of the causal factor but marked the degree of effect. It is difficult to say whether they were answering with respect to level or effect of the causes. These subjects were therefore dropped from the causal analyses.

Hypothesis 6a states that the experimental treatment subjects were expected to judge ability as more a factor in determining performance level on the task than task difficulty, effort, or luck. A series of t tests on the causal attribution measures revealed that the subjects judged intellectual ability ($\bar{M} = 4.45$) as being less a factor in determining performance level on the task than task difficulty ($\bar{M} = 5.18$) and effort ($\bar{M} = 5.72$) ($t(75) = -4.07, p < .0001$ and $t(75) = -8.17, p < .0001$, respectively).

Luck ($\bar{M} = 3.61$) was seen as being less a factor than intellectual ability ($t(75) = -3.70, p < .001$). When another item was added to the measurement of intellectual ability, task difficulty, and luck, and averaged with the first score, the same pattern of results was obtained. The second items were more general, asking about some quality of the person, situation, or other factor judged to be unrelated to level of performance as determinants of performance level. The coefficient alpha reliabilities for these two-item measures were uniformly low. Alpha was .24 for the intellectual ability and personal quality composite, .30 for the task difficulty and situation quality composite, and .48 for the luck and other factors composite. The effort attribution was measured with one item in both sets of analyses.

Overall, on both the single-item and composite measures, subjects in the experimental treatment conditions rated luck as a less-than-moderate factor in determining performance level on the task, intellectual ability as a moderate factor, task difficulty as a strong factor, and effort as a very strong factor. The same was true when control subjects were included.

Hypothesis 6b states that no group was expected to attribute any cause to performance level on the task more than any other group. Mean scores for the ability, task

difficulty, effort, and luck composites are presented in Table 7. Means for the more specific one-item component of these composites are also presented there. Two-way analyses of variance were performed on each of these composites and the most specific component of the composites across all groups. Their results are presented in Table 8. As expected, there were no significant main or interaction effects for the intellectual ability, luck or effort composites. However, the low self-esteem subjects did attribute task difficulty/some quality of the situation significantly more than the high self-esteem subjects. On the specific components, there was a significant treatment main effect on luck, a treatment main effect for intellectual ability, and a self-esteem effect for task difficulty. There was not a self-esteem main effect for luck. On the intellectual ability specific component, subjects in the two experimental treatment conditions rated intellectual ability as more a factor than the control group but were not different themselves ($F(1, 106) = 3.08, p < .05$, one-tailed for the incompetently behaving model condition; $F(1, 106) = 4.87, p < .05$ for the competently behaving model condition).

On the other variables, the majority of the treatment effects were nonsignificant except for those on luck. On the luck specific measure, subjects in both experimental

Table 7
Means for Causal Attribution
Composite^a and Specific Component^b Scores

<u>Self-esteem</u>	<u>Treatment condition</u>		
	<u>Incompetently Behaving model</u>	<u>Competently Behaving model</u>	<u>No model</u>
Intellectual ability			
High	4.43 4.10	4.35 4.65	4.19 4.11
Low	4.61 4.67	4.53 4.41	4.17 3.56
Task difficulty			
High	4.73 5.19	4.83 4.95	4.97 4.89
Low	5.03 5.11	5.15 5.53	5.25 5.61
Effort			
High	5.52	5.60	5.89
Low	5.78	6.06	5.44
Luck			
High	3.24 3.19	3.50 3.40	3.31 2.89
Low	3.92 4.17	3.82 3.82	3.11 2.61

Note. The scores are on a seven-point scale representing the subjects' judgment of the degree of effect that the cause had in determining performance on the task (where 1=no effect at all and 7=very strong effect).

^aComposite scores are the average of two items; a specific component asking directly about the cause and another item asking about some quality (of the person, situation, or other factor unrelated to level of performance) which can encompass the specific cause.

^bSpecific component scores for each composite score are printed below the composite score.

Table 8

Two-Way Analyses of Variance for Causal Attribution
Composite^a and Specific Scores with
Self-Esteem and Treatment (Trtmnt) Condition

Dependent variable	Factor	df	MS	F
Intellectual ability composite	Self-esteem	1	0.35	0.35
	Treatment condition	2	1.16	1.19
	Self-esteem X Trtmnt	2	0.13	0.14
Intellectual ability specific component	Self-esteem	1	0.15	0.08*
	Treatment condition	2	4.91	2.70*
	Self-esteem X Trtmnt	2	3.18	1.75
Task difficulty composite	Self-esteem	1	2.45	3.06*
	Treatment condition	2	0.49	0.61
	Self-esteem X Trtmnt	2	0.01	0.01
Task difficulty specific component	Self-esteem	1	4.62	3.14*
	Treatment condition	2	0.11	0.08
	Self-esteem X Trtmnt	2	1.73	1.17
Effort	Self-esteem	1	0.22	0.22
	Treatment condition	2	0.36	0.35
	Self-esteem X Trtmnt	2	2.04	2.00
Luck composite	Self-esteem	1	2.02	1.26
	Treatment condition	2	2.12	1.32
	Self-esteem X Trtmnt	2	1.79	1.12
Luck specific component	Self-esteem	1	3.90	1.46**
	Treatment condition	2	9.83	3.68**
	Self-esteem X Trtmnt	2	3.68	1.38

* $p < .05$, one-tailed
** $p < .05$

^a The Effort attribution was measured with one item comparable to the specific component for the other variables.

treatment conditions said luck was more a factor than did the control subjects ($F(1, 106) = 5.06, p < .05$ for the competently behaving model condition; $F(1, 106) = 6.03, p < .05$ for the incompetently behaving model condition).

There was no difference on luck between the incompetently and competently behaving model conditions. As expected, the high self-esteem subjects in the incompetently behaving model condition did not attribute luck to performance level more than the other subjects attributed luck to performance level.

CHAPTER V

DISCUSSION

The purpose in this study was to expand the knowledge of how individuals set specific task goals for themselves. The results demonstrated that a model can influence an observer's goals by more than just level of performance when the observer is not familiar with the task. At least with high self-esteem individuals, a model's behavior apart from performance level, can influence the observers perceptions of their own task competence in comparison to the model. Hypothesis 1 stated that all subjects watching a competently behaving/relatively high performing model were expected to judge him more competent than subjects watching the incompetently behaving/relatively high performing model were expected to judge their model. The high self-esteem subjects in the incompetently behaving model condition judged their model less competent than the high self-esteem subjects in the competently behaving model condition judged their model. They also perceived themselves as more task competent relative to their model than the high self-esteem subjects in the competently behaving model condition. This result helped confirm hypothesis 2a which stated that subjects watching the incompetently behaving model were expected to judge themselves more competent in relation the

the model than subjects watching the competently behaving model. Hypotheses 4c stated that subjects watching an incompetently behaving model were expected to set higher goals than subjects watching a competently behaving model. Hypotheses 4e and 4f stated that high self-esteem subjects watching the incompetently behaving model were expected to set their goals higher than the model's performance level and low self-esteem subjects watching the competently behaving model were expected to set their goals lower than the model's performance level. Although the high self-esteem subjects watching the incompetently behaving model did not set higher goals than the high self-esteem subjects in the competently behaving model condition, they did set higher goals than the model's performance level. By comparison, low self-esteem subjects in the competently behaving model condition saw themselves as less competent relative to the model than the high self-esteem subjects watching the incompetently behaving model. They also set their goals at the same level as the model's performance. Although it was not hypothesized, higher goals were associated with higher feelings of task competence in relation to the model ($\bar{r} = .64$) and lower perceptions of model competency ($\bar{r} = -.26, p < .01$).

It is fairly safe to say that these effects occurred as a result of the experimental treatments because the

subjects' goals under these conditions were distinctly different from the control subjects' goals. This confirmed hypothesis 4d which stated that the control subjects' goals were expected to be lower than the experimental treatment subjects' goals. The separate influence of self-esteem and model competence-related behavior can not be distinguished, however. Contrary to hypotheses 4c, the high self-esteem subjects did not set different goals in the two experimental treatment conditions which makes it difficult to suggest that the models' competence-related behavior can be associated with goal differences. Additionally, there were no goal differences within any of the conditions between subjects with distinctly different self-esteem. Hypothesis 4b stated that high self-esteem subjects were expected to set higher goals than low self-esteem subjects. Thus, there is no support for saying that the observers' self-image can be associated with goal differences. Some mutual influence of both self-esteem and model competence-related behavior on goals is likely since high self-esteem subjects in the incompetently behaving model condition set their goals higher than the model's performance level and low self-esteem subjects in the competently behaving model condition set their goals at the model's performance level.

Hypotheses 3b and 3c stated that high self-esteem subjects and subjects watching the incompetently behaving

model condition were expected to be more certain that they could attain their model's performance level than low self-esteem subjects and subjects watching the competently behaving model, respectively. The competence-related behavior of the models did not appear to affect the observers' expectation for reaching the models' performance level since there were no main or interaction effects on model performance level attainment expectancy. However, the subjects' expectation for reaching the models' performance level was related to their perceptions of the competence-related behavior of the models since model performance level attainment expectancy was positively correlated with perceived model competence ($r = .24$, $p < .01$). Higher expectations for reaching the model's performance level were associated with higher perceptions of model competency. Hypothesis 3a stated that the subjects' expectations for reaching the models' performance level were expected to be positively related to their feelings of task competence in relation to the model. Model performance level attainment expectancy was positively correlated with perceived task competence relative to the model ($r = .34$). Higher expectations for reaching the models' performance level were associated with higher feelings of task competence in relation to the model. These feelings of task competence in relation to the model were related to the

subjects' perceptions of the competence-related behavior of the models. Although it was not directly hypothesized, perceived self-competence relative to the model was negatively correlated with perceived model competency ($r = -.28, p < .01$). Higher perceptions of model task competency were associated with lower feelings of task competency in relation to the model. Finally, the subjects' expectation for reaching the models' performance level was related to their task goals. Hypothesis 4a stated that subjects' task goals were expected to be positively related to their expectation of attaining a model's performance level. Model performance level attainment expectancy was positively correlated with task goal ($r = .34, p < .001$). In summary, higher goals were associated with higher expectations for reaching the model's performance level which were associated with higher feelings of task competency relative to the model.

Bandura (1982) argued that when standards are known, seeing similar others perform successfully can raise an observer's expectation of doing as well. The results of this study support that argument. Higher expectations for reaching the model's performance level were associated with higher feelings of task competency relative to the model. This means that, within the group of subjects who felt less competent than the model, as subjects' feelings of task

competence increase to the level of the model's perceived competence, their expectations for attaining the model's performance level increases. It also means that, within the group of subjects who felt more competent than the model, as their feelings of superiority in task competence increase, their expectations for attaining the model's performance level increases.

Hypotheses 7a and 7b stated that high self-esteem subjects and subjects watching the incompetently behaving model were expected to be more committed to their goals than low self-esteem subjects and subjects watching the competently behaving model, respectively. Model competence-related behavior and observer self-esteem did not appear to affect goal commitment since there were no main or interaction effects on goal commitment. Hypothesis 7c, however, stated that subjects' goal commitment was expected to be positively related to their expectation for attaining the model's performance level. As expected, goal commitment was positively correlated with model performance level attainment expectancy ($r = .65$). It was also positively correlated with perceived task competence relative to the model ($r = .24$, $p < .01$). Higher expectations of reaching the model's performance level and higher feelings of task competence in relation to the model were associated with higher goal commitment. This provides further evidence that

variables which affect goal level choices are also related to goal commitment since expectations of reaching the model's performance level and feelings of task competence relative to the model were also positively related to goal level choice. It was tentatively hypothesized that goal commitment might be more related to personal goal attainment expectancy than model performance level attainment expectancy. Personal goal attainment expectancy was just as positively related to goal commitment ($r = .66$) as model performance attainment expectancy. This provides further evidence that goal commitment increases as expectancy of goal attainment increases.

The causal attribution analyses served to explain only what we already know. Hypothesis 6a stated that subjects were expected to attribute ability as having a greater effect on the model's performance level than task difficulty, effort, or luck. For this particular group of subjects, task difficulty, and particularly effort, were judged stronger factors in determining performance level on the task. This may help explain why varying competence-related model behavior to influence perceived model ability was successful only with the high self-esteem subjects. Hypothesis 6b stated that no group was expected to attribute any cause to performance level on the task more than any other group. It could have been expected of low

self-esteem subjects that they would judge the difficulty of the task as more a factor than the more confident high self-esteem subjects. The remainder of the causal analysis results do not help much. It is reassuring that luck only was judged overall as having a less-than-moderate effect on performance level.

More research is necessary to explore observers' expectations of attaining a model's performance level and the effect of those expectations on unfamiliar task goals. More variance in the observers' perception of the models' competence may be achieved if the competently behaving model were to act more competent rather than simply performing the task straightforwardly. This could vary perceived self-competence relative to the models to a larger extent and possibly reveal differences in model performance level attainment expectancy. Tharenou and Harker (1982) and Bandura (1977) demonstrated that task specific self-esteem may be a better predictor of work behavior than global self-esteem. Grouping subjects by task specific self-esteem may increase variance in perceived self-competence relative to the model and reveal differences in model performance level attainment expectancy which could be related to goals. Less orientation to the task than in the present study may also reveal group differences in model performance level attainment expectancy.

At a minimum, the results from this study confirmed Rakestraw and Weiss' (1981) finding that a model's performance level can serve as a reference for observer goals. Individuals will set higher goals on an unfamiliar task after observing a model perform the task than they would if they did not observe a model. Employers would benefit from higher initial task goals of new employees in training if they assigned them to work with someone performing the same job. Further, since the high self-esteem subjects did respond to the experimental treatment in this study, employers might get even higher initial task goals from new employees if they selected those with a relatively high level of self-esteem. This would maximize the chance that those new employees might think they could outperform their models and therefore set goals higher than the modeled performance level.

More research along this line could more clearly define how a model influences observer goals on unfamiliar tasks. Such knowledge could eventually help employers decide how to best train, orient, or otherwise initiate new employees. New research may reveal that higher initial expectations for performance by new employees could come from assigning them to work with someone that they judge they can match in behavior and performance.

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APPENDIXES

Appendix 1

Pre-treatment Questionnaire

Name _____ Sex _____ Age _____ Instructor _____

Self-Acceptance Scale of the California Psychological Inventory

Instructions: This inventory contains a series of statements. Read each one, decide how you feel about it, and then circle your answer at the beginning of the statement. If you agree with a statement, or feel that it is true about you, answer TRUE. If you disagree with a statement, or feel it is not true about you, answer FALSE. If you find a few questions which you cannot or prefer not to answer, they may be omitted.

1. T F I looked up to my father as an ideal man.
2. T F When in a group of people I usually do what the others want rather than make suggestions.
3. T F My daily life is full of things that keep me interested.
4. T F I doubt whether I would make a good leader.
5. T F It is hard for me to start a conversation with strangers.
6. T F I sometimes pretend to know more than I really do.
7. T F Women should not be allowed to drink in cocktail bars.
8. T F I would disapprove of anyone's drinking to the point of intoxication at a party.
9. T F Most of the arguments or quarrels I get into are over matters of principle.
10. T F I must admit that I often do as little work as I can get by with.
11. T F I would like to see a bullfight in Spain.
12. T F When in a group of people I have trouble thinking of the right things to talk about.

Appendix 1 (continued)

- 13. T F I set a high standard for myself and I feel others should do the same.
- 14. T F I was a slow learner in school.
- 15. T F I seldom or never have dizzy spells.
- 16. T F I would like to wear expensive clothes.
- 17. T F I never make judgments about people until I am sure of the facts.
- 18. T F I am certainly lacking in self-confidence.
- 19. T F When I work on a committee I like to take charge of things.
- 20. T F I would rather go without something than ask for a favor.
- 21. T F I often do whatever makes me feel cheerful here and now, even at the cost of some distant goal.
- 22. T F Once in a while I laugh at a dirty joke.
- 23. T F Before I do something I try to consider how my friends will react to it.
- 24. T F I have frequently found myself, when alone, pondering such abstract problems as free-will, evil, etc.
- 25. T F At times I have worn myself out by undertaking too much.
- 26. T F It is hard for me to find anything to talk about when I meet a new person.
- 27. T F A person does not need to worry about other people if only he looks after himself.
- 28. T F When a man is with a woman he is usually thinking about things related to her sex.

Appendix 1 (continued)

29. T F In school I found it very hard to talk before the class.
30. T F Sometimes I rather enjoy going against the rules and doing things I'm not supposed to.
31. T F It is hard for me to act natural when I am with new people.
32. T F I think I would like to belong to a motorcycle club.
33. T F I would like to be an actor on the stage or in the movies.
34. T F Police cars should be especially marked so that you can always see them coming.

Rosenberg (1965) Self-esteem Scale

Instructions: The purpose of this next inventory is to obtain a picture of the traits you believe you possess, and to see how you describe yourself. There are no right or wrong answers, so try to describe yourself as accurately and honestly as you can.

Indicate, in the space provided, the degree to which you agree with the following statements, where 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree.

37. ____ I feel that I'm a person of worth, at least on an equal basis with others.
38. ____ All in all, I am inclined to feel that I am a failure.
39. ____ I feel that I have a number of good qualities.
40. ____ I feel I do not have much to be proud of.
41. ____ I am able to do things as well as most other people
42. ____ I wish I could have more respect for myself.
43. ____ I take a positive attitude toward myself.

Appendix 1 (continued)

44. ____ I certainly feel useless at times.
45. ____ On the whole, I am satisfied with myself.
46. ____ At times, I think I am no good at all.

Appendix 2 (continued)

5. Compared to the person in the video, how able are you to determine the path to correct performance on this task?

1	2	3	4	5	6	7	8	9
much				equally				much
less				able				more
able								able

6. Compared to the person in the video, how able are you to determine the path to correct performance on a task?

1	2	3	4	5	6	7	8	9
much				equally				much
less				able				more
able								able

Goal level

7. How many cards do you plan to sort in 5 minutes?

Model performance check

8. How many cards did the person in the video sort?

Goal commitment

Circle your answers to the following questions on the scale from 1 to 7 provided below each item.

9. How committed are you to attaining the goal you set?

1	2	3	4	5	6	7
completely						completely
uncommitted						committed

10. How serious are you about sorting that many cards?

1	2	3	4	5	6	7
not serious						very serious

Circle your answers to the following questions on the scale from 1 to 10 provided below each item.

Expectancy of attaining personal goal

11. What are your chances of attaining your goal?

[illegible]

12. What is the probability that your effort will lead to attaining your goal?

[illegible]

Appendix 2 (continued)

Expectancy of attaining model performance

13. What are your chances of sorting as many cards as the person in the video?

1	2	3	4	5	6	7	8	9	10
10%									100%

14. What is the probability that your effort will lead to sorting as many cards as the person in the video?

1	2	3	4	5	6	7	8	9	10
10%									100%

Competence manipulation check

On the scale from 1 to 7 provided below each question, circle your answer to items 15 through 18.

15. To what extent did the person in the video appear to know what he was doing?

1	2	3	4	5	6	7
to a very small extent			to a moder- ate extent			to a very large extent

16. To what extent did the person in the video appear to be able to determine the path to correct performance on the task?

1	2	3	4	5	6	7
to a very small extent			to a moder- ate extent			to a very large extent

17. How competent at the task was the person in the video?

1	2	3	4	5	6	7
hardly competent			moderately competent			extremely competent

18. To what extent did the person appear to be effective at dealing with the task?

1	2	3	4	5	6	7
to a very small extent			to a moder- ate extent			to a very large extent

2

of a
deter

below
rated

Appendix 2 (continued)

28. Nature of the WORK ENVIRONMENT 1 2 3 4 5 6 7

(helpful: 3--2--1: harmful)

29. Other _____ 1 2 3 4 5 6 7

30. In general, what effect did some personal quality or characteristic of the individual have in determining his performance level?

1 2 3 4 5 6 7
NO EFFECT AT ALL VERY STRONG EFFECT

31. In general, what effect did some quality or characteristic of the situation have in determining his performance level?

1 2 3 4 5 6 7
NO EFFECT AT ALL VERY STRONG EFFECT

32. In general, what effect did some other factor(s) unrelated to the level of performance (e.g., good or poor luck, something beyond anyone's control) have in determining his performance level?

1 2 3 4 5 6 7
NO EFFECT AT ALL VERY STRONG EFFECT

Appendix 3

Control Group Post-treatment Questionnaire

Name _____ Asgmt # _____ Date/Time _____

Instructions: Before you perform the task, please answer the following questions to the best of your ability.

Causal attributions

In your opinion, how much of an effect would each of the following factors have in determining the performance level of a person performing this task. **Circle the level of EFFECT of the factor on the scale from 1 to 7.**

	1	2	3	4	5	6	7
	NO EFFECT AT ALL					VERY STRONG EFFECT	
1. His/her intellectual ABILITY	1	2	3	4	5	6	7
2. Her/his specific TASK KNOWLEDGE	1	2	3	4	5	6	7
3. Her/his level of EFFORT	1	2	3	4	5	6	7
4. His/her level of TASK INTEREST	1	2	3	4	5	6	7
5. His/her WORK ATTITUDE	1	2	3	4	5	6	7
6. His/her personal WORK STANDARDS	1	2	3	4	5	6	7
7. Level of TASK DIFFICULTY	1	2	3	4	5	6	7
8. Clarity of TASK REQUIREMENTS	1	2	3	4	5	6	7
9. Her/his LUCK	1	2	3	4	5	6	7
10. Nature of the WORK ENVIRONMENT	1	2	3	4	5	6	7
11. Other _____	1	2	3	4	5	6	7
13. In general, what effect would some personal quality or characteristic of the individual have in determining his/her performance level?							
	1	2	3	4	5	6	7
	NO EFFECT AT ALL					VERY STRONG EFFECT	

VITA

David Phillip Poe was born in Winston-Salem, North Carolina on October 26, 1959. As an Army "brat", he attended elementary schools in North Carolina, Georgia, and Texas. He graduated from Leilehua High School in Wahiawa, Hawaii in June 1977. The following September he entered Davidson College on a four year ROTC Scholarship and received a Bachelor of Arts degree in Psychology in May 1981. As a Distinguished Military Graduate, he was commissioned a Second Lieutenant in the Regular Army and served in the Adjutant General Corps for nearly five years. He resigned his commission as a Captain in October 1985.

In the fall of 1985, he accepted a research and teaching assistantship at the University of Tennessee and began study toward a Doctor of Philosophy degree in Industrial/Organizational Psychology. In the fall of 1987 he completed the data collection for a Master's degree thesis but temporarily suspended his research to serve as a Regional Organizational Development Manager for Food Lion, Incorporated. He completed his thesis research in the Fall of 1990 and received the Master of Science degree with a major in Industrial/Organizational Psychology in May 1991.

Mr. Poe is a member of the American Society for Training and Development and serves as the Training and Development Coordinator for Konica Manufacturing U.S.A., Incorporated.