

## Increased Performance with Increased Personal Control: A Self-Presentation Interpretation

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Past research has found that allowing people a choice of task materials sometimes increases performance on the task. A self-presentation interpretation for this effect was tested and supported in two experiments. In Experiment 1, subjects performed better on a paired-associate learning task when allowed to select some of the words for the test, but only when they believed the experimenter would know of their choice and their performance. In Experiment 2, subjects performed better on what they believed was a cognitive abilities test when allowed to select the test, but again only when they believed their performance would be known by those who were aware of the choice. It was concluded that providing increased control over a task often results in increased concern for self-presentation that may lead to a better performance on the task. © 1987 Academic Press, Inc.

Changes in the amount of personal control one perceives having in a given situation have been tied to a large number of affective and behavioral effects. For example, loss of perceived personal control has been proposed as an antecedent for depression (Seligman, 1975) and to affect reactions to stress (Glass & Singer, 1972). Increases in perceived personal control have been found to help overcome feelings of crowding (Rodin, Solomon, & Metcalf, 1978) and the debilitating effect of living in an old-age residence (Langer & Rodin, 1976).

Another phenomenon related to changes in perceived personal control is the effect of choice of task materials on subsequent performance of the task. In a series of investigations, Perlmutter, Monty and their colleagues (cf. Monty & Perlmutter, 1986; Perlmutter & Monty, 1977; Savage, Perlmutter, & Monty, 1979) have demonstrated that under certain conditions, allowing individuals to select some of the materials used in a task results in an increase in that person's performance on the task. Most typical of

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the research procedures used to illustrate this effect is allowing subjects to select some of the words used in a paired-associate learning task (e.g., Monty & Perlmutter, 1975). Typically subjects are allowed to select from a list of words the response word they would like to use in the memory task. Subjects are then given the stimulus word paired with the chosen word to be recalled during the test. Although some specific requirements for producing the effect have been identified (Savage et al., 1979), it has been found consistently that the subjects given this choice perform better on subsequent recall trials than subjects not given a choice of response words. In an interesting elaboration of this finding, White (1974, reported in Perlmutter & Monty, 1977) gave some fifth-grade students a choice of stories for a reading comprehension test. These students performed better on the task than other students who were simply assigned the stories to read.

How can these findings be explained? Perlmutter and Monty (1977) propose that the perception of a choice results in an increase in the person's feelings of personal control. Following those who have described a sense of personal control as satisfying a need to feel competent and masterful (e.g., de Charms, 1968; White, 1959), these researchers argue that the increase in feelings of control lead to a general increase in motivation, and thus an improved performance. In later research, Monty and Perlmutter (1986) have explored further some of the mediators between the perception of control and the subsequent increase in motivation they describe. These researchers also have been careful to provide evidence arguing against a simple associability interpretation. That is, one might argue that the subjects in the paired-associate task simply select words that for them are more easily associated with other words. In arguing against this, Monty, Rosenberger, and Perlmutter (1973) found that the increase in performance from perceived control extends even to pairs of words in the task for which the subject has not made a choice.

However, an examination of some recent findings in the perceived control literature suggests another mediator that may also be influencing this choice-performance effect. It has been demonstrated that people do not always have a positive affective response to increases in their feelings of personal control (Burger, Brown, & Allen, 1983; Miller, 1980; Rodin, Rennert, & Solomon, 1980). For example, Burger et al. (1983) found that subjects given a choice of tasks to work on during an experiment scored higher on measures of negative mood and lower on measures of self-esteem than those not given a choice. It has been suggested (Burger et al, 1983; Rodin et al., 1980) that these negative responses result because increases in perceived personal control cause several important reactions. Most notably, in addition to increases in feelings of general mastery and motivation, there is an increase in self-presentation concerns. That is, people who are given increased control over an event typically also are

perceived as having increased responsibility for the subsequent outcomes of the event. The executive in a large company might enjoy the feelings of control and mastery that come from moving into a position of power in the organization, but these are accompanied with increased concern for how he or she will look in the event of a poor performance. Consistent with this analysis, Burger et al. (1983) found that the increases in negative mood that resulted from a choice of task disappeared when subjects believed that their performance on the task was suddenly made anonymous.

The above reasoning suggests an alternate interpretation of the choice-performance findings. This self-presentation explanation (cf. Arkin 1981; Baumeister, 1982; Schlenker, 1980) proposes that subjects given a choice of materials for an upcoming task experience an increase in their concern for how they will be perceived by others. Selecting words for a paired-associate task, for example, is tantamount to making a public proclamation that one can perform best with these words. A poor performance on the subsequent task would therefore prove more of a threat to one's public image than a poor performance when no choice is made. This concern for self-presentation then leads to an increase in motivation to perform well on the task. With moderate levels of this self-presentation motive, performance on the subsequent task should improve. It is possible, of course, that very high levels of concern for self-presentation could interfere with performance on some tasks (Baumeister, 1984).

Two experiments were designed to examine the influence of self-presentation concerns on the choice-performance effect. In both experiments half of the subjects given a choice of task materials also were led to believe that their performance was to be evaluated by others in their presence, whereas the other half was led to believe that the performance would not be known by others, including the experimenter. In both investigations it can be predicted from the self-presentation position that choice of materials should increase performance on the task only when knowledge of the choice and the performance are made public. When performance is anonymous, and therefore concern for self-presentation is removed, no increase in performance with choice should be found.

## EXPERIMENT 1

The first experiment examined the self-presentation explanation within the basic paired-associate learning task utilized in much of Perlmutter and Monty's work. The self-presentation explanation predicts that choice will enhance performance when that choice and performance are to be known by others. However, if a general motivation follows simply from the perception of having a choice, as Perlmutter and Monty (1977) propose, then the presence or absence of public evaluation should not affect the performance on the task.

## Method

*Subjects.* Fifty-nine male and female undergraduates served as subjects in exchange for class credit for their introductory psychology course.

*Procedure.* Subjects participated in the experiment one at a time. Upon arriving at the experimental room they were greeted by a female experimenter who introduced the procedure. She explained that she was going to administer a memory test and then described to them the basic paired-associate learning procedure. When it was clear all subjects understood the paired-associate format, it was explained that each subject would be presented with 15 word pairs and would attempt to recall the pairs on each of three trials.

*Choice or no-choice manipulation.* Subjects were alternately assigned to either the choice or no-choice condition. It was explained to the subject in the *choice* condition that he or she would be presented with lists of 5 five-letter words via a slide projector. He or she was to read each word aloud and then select one to be used as the response word for the paired-associate task. After selecting each word, the experimenter presented the five-letter stimulus word for the chosen word via the slide projector and instructed the subject to also read this word aloud. This process continued until all 15 word pairs were selected. Subjects in the *no-choice* condition also were presented with the five choices for the response word. However, they were instructed merely to read the five words and were then told which of the five would be used in the test. This also was followed by the slide presentation of the stimulus word for each pair. The choice and no-choice subjects were yoked, such that the response words chosen by the choice subject were the ones given to the next no-choice subject.

*Public-private manipulation.* At the end of the selection of the 15 word pairs, a second female experimenter entered the room. She apologized for the interruption but explained that the supervising professor needed to see the first experimenter immediately. Subjects randomly assigned to the *public* condition heard the first experimenter introduce the second experimenter as someone also running subjects in this study. During the brief conversation that followed the subject was led to understand that the first experimenter would return and all three of them would go over his or her performance. If the subject was in the choice condition the first experimenter said when handing the word list to the second, "Here are the words that he/she chose."

Subjects in the *private* condition heard the second experimenter introduced as another research assistant. During the conversation the subject was led to understand that the second experimenter did not know anything about the experiment, that she would simply record the subject's responses and place the answer sheet anonymously in with several others in a nearby envelope. It was made clear to the subject that the first experimenter would not return and would not know how he or she performed on the test. In the choice-private condition no mention was made of the choice of words. Thus, in the private conditions any concern for performance in front of the first experimenter (who knew if the subject had chosen the words or not) should have been eliminated.

The second experimenter then administered the slide presentation of three trials of the 15 stimulus words, with the words presented in a different randomized order on each of the trials, and recorded the subject's response on each trial. Subjects were informed after each answer whether or not they were correct. If subjects did not give the correct answer after 10 s, the response was recorded as incorrect. When subjects' responses were incorrect the correct answer was given.

Upon completion of the third trial, subjects were given a short questionnaire to complete. Included on the questionnaire was an item asking subjects to indicate on an 11-point scale the extent to which they were concerned with what the experimenter would think of their performance. Subjects then were debriefed and dismissed.

### Results and Discussion

The number of word pairs subjects recalled correctly on each of the three trials was summed for an overall performance score. This score was then examined within a 2 (choice-no choice)  $\times$  2 (public-private) ANOVA. As shown in Table 1, a significant main effect for the choice variable was uncovered,  $F(1, 55) = 10.45, p < .002$ . Subjects given a choice of response words recalled significantly more of the items than did the no-choice subjects, thus replicating the choice-performance effect. More interesting, however, is the near significant interaction that emerged on this measure,  $F(1, 55) = 3.61, p < .06$ . As seen in Table 1, the tendency to perform better with choice is found for the public subjects ( $p < .05$ ), but not for the private subjects, Newman-Keuls test. There was no significant main effect for the public-private variable.

An examination of the performance on each of the three trials, shown in Table 1, finds that the same general pattern is found throughout the three trials, albeit generally weaker than for the overall performance score. The main effect for choice is found on all three trials: Trial 1,  $F(1, 55) = 6.64, p < .02$ ; Trial 2,  $F(1, 55) = 7.23, p < .01$ ; Trial 3,  $F(1, 55) = 6.54, p < .02$ . Although a significant interaction effect does not emerge on any of the trials, there is a near significant tendency for the interaction on Trial 2,  $F(1, 55) = 3.17, p < .08$ , and Trial 3,  $F(1, 55) = 3.88, p < .054$ . No significant main effect for the public-private variable is found on any of the three trials.

Subjects also indicated the extent to which they were concerned with how they would look in front of the experimenter. A significant interaction was found for this measure,  $F(1, 55) = 7.69, p < .01$ . A Newman-Keuls test found that subjects in the choice-public condition reported significantly greater concern ( $p < .05$ ) than did choice subjects in the private condition. Subjects in the two no-choice conditions did not differ significantly on this item, and did not differ significantly from subjects in the choice-private condition. Thus, as expected, it was the combination of making a choice and having the experimenter aware of this choice that produced the higher level of concern.

Another way of assessing the increased self-presentation mediator of the effect is to examine the within-cell correlations between the overall performance score and the concern for appearance measure. Each of the correlation coefficients from this analysis was in the predicted positive direction, although with so few degrees of freedom none reached the traditional level of statistical significance: choice-public, .21; choice-private, .33; no choice-public, .11; no choice-private, .26. Thus, the greater the concern for what the experimenter thought of them, the better subjects performed on the task.

The findings thus lend support to the self-presentation interpretation

TABLE I  
DEPENDENT MEASURE MEANS: EXPERIMENT 1

	Public		Private	
	Choice	No choice	Choice	No choice
Number of correct answers				
Trial 1	4.87	3.47	4.20	3.43
Trial 2	9.13	6.87	7.73	7.29
Trial 3	11.73	9.60	10.33	10.07
Total	25.73	19.93	22.27	20.79
Concern about experimenter	8.00	6.40	6.07	7.29

*Note.* Concern measure from an 11-point scale, with 1 = *Very Little* and 11 = *Very Much*.

of the choice-performance effect. Subjects who were given a choice of task materials performed better on the memory task than subjects not given a choice. However, this effect was largely limited to the condition in which the subject's choice and performance were to be made public. When the subject believed that his or her score on the test would remain anonymous, the effect of choice weakened considerably. This suggests that the tendency demonstrated in earlier research for people to perform better when given a choice may be at least partly the result of increased concerns for public evaluation that come from selecting task materials. In essence, choice subjects in this experiment were stating that they would perform better on the selected items. Thus, a poor performance on the test would threaten their positive public impression more than for those who were merely assigned the response words.

However, a closer examination of the procedures used in Experiment 1 suggests a possible alternate interpretation of the findings. Not only did the subjects in the private conditions believe that their performance would not be known by the experimenter, they also understood that they would have no way of knowing themselves how well they performed. In addition, because the experimenter who did not know about the study placed their response sheet in among a pile of many others, subjects might also have seen their performance as less important or the task as less valid than did those who did not receive this manipulation. Thus, it is possible that the inability to obtain feedback and/or a sense of lowered importance might have resulted in lower motivation for the choice-private subjects. This, then, rather than a lack of self-presentation concerns, may have been responsible for the poorer performance on the task. Experiment 2 was designed to examine the influence of self-presentation concerns upon the choice-performance effect in another situation and without the confound that clouds the interpretation of the first experiment.

## EXPERIMENT 2

This experiment was designed as a conceptual replication of Experiment 1. Perlmutter and Monty (1977) describe an experiment in which providing fifth-graders with a choice of stories improved performance on a reading comprehension test. In Experiment 2, undergraduate students were presented with what they believed to be an aptitude test. Some of the subjects received a choice of test to perform, others were merely assigned one of the tests. In addition, half of the subjects were led to believe that their choice and performance was to be known to others, whereas other subjects believed their responses were to be known only to them. It was predicted from the self-presentation explanation that choice would enhance performance on the test when the performance was to be made available to others who also were aware of the choice.

*Method*

*Subjects.* Fifty-five male and female undergraduates served as subjects in exchange for class credit for their introductory psychology course.

*Procedure.* Subjects participated in the experiment in groups of three or four. The experimenter explained that the study concerned the measurement of some specific cognitive abilities. It was explained that the test was short and that there would be enough time to provide the subjects with feedback about their performance on the test.

Alternating groups of subjects were assigned to either the choice or no-choice condition. All subjects were told that three different aptitudes were being measured, but that each subject would be taking only one of the three tests. Subjects in the *choice* condition were told they would have a choice of which of the tests they wanted to work on. Subjects in the *no-choice* condition were told they would be randomly assigned one of the tests.

The experimenter then read a description of three different tests, and wrote the name of each test on the chalkboard. The three tests were identified as follows: The Symbol Perception Test ("tests your ability to quickly perceive and discriminate between symbols . . . (to) quickly and easily see patterns and relationships between objects and . . . discriminate between, for example, words that look alike at first glance"); The Spatial-Verbal Manipulation Test ("tests your ability to take objects and rearrange them in your own mind to form new objects . . . for example, . . . (to) picture in your own mind what a puzzle piece would look like if turned a different way"); and The Reading Aptitude Test ("an indicator of your ability to read quickly and accurately . . . (and to) understand what you have read").

Subject groups also had been randomly preassigned to either the *public* or *private* condition. Following the description of the three tests, subjects in the *public* condition were told they were to put their name at the top of the test. The experimenter explained that he or she would quickly grade each subject's test and read aloud the subject's name, score and percentile ranking. Subjects in the *private* condition were told to write a three-digit code number at the top of their test. The experimenter explained that he or she would read the test feedback through the code so that no one, not even the experimenter, would know which subject received which score.

At this point subjects in the choice condition were asked to indicate which of the three tests they wished to work on. Subjects in the no-choice condition were given one of the tests. These subjects were yoked to the choice subjects, so that they were administered the same tests as those selected by the previous group of choice subjects. The test booklet

TABLE 2  
PERFORMANCE AND REPORTED CONCERN FOR JUDGMENTS OF OTHERS

	Public		Private	
	Choice	No choice	Choice	No choice
Number of anagrams solved	19.50	14.86	14.92	15.36
Concern for others' judgments	8.43	6.07	7.08	6.43

*Note.* Subject scores on the Concern measure are from an 11-point item, with 1 = *Very Little* and 11 = *Very Much*.

consisted of a cover sheet which described the test in the same general terms that the experimenter had used earlier. The specific instructions for each of the three tests followed, and were identical for all of the tests. Subjects read that they would be working on an anagram test. The concept of anagrams was explained, and subjects read that they would have 2 min to solve as many anagrams as possible from the 50 on the next page. They also read a few sentences explaining in general terms that an anagram test was a good measure of whatever each of the tests was supposed to be measuring. Subjects were seated far enough apart so that they could not see other subjects' tests and thereby discover that the tests were, in fact, identical. Subjects were reminded to put either their name or a three-digit code number at the top of the page.

Subjects then were given 2 min to work on the list of 50 four-letter anagrams. When this was completed, subjects were given a short questionnaire to complete. Included on this questionnaire was an item asking subjects to indicate on an 11-point scale the extent to which they were concerned about what others would think of their performance. At this point subjects were debriefed and dismissed.

### *Results and Discussion*

The major dependent variable was the number of anagrams solved within the 2-min test period. This score was examined within a 2 (choice-no choice)  $\times$  2 (public-private) ANOVA. A significant main effect for both the choice variable,  $F(1, 51) = 5.93, p < .02$ , and the public-private variable,  $F(1, 51) = 5.07, p < .03$ , were found. As shown in Table 2, subjects performed better when they were given a choice than when not, and they performed better in the public than private condition. More important, however, was the significant interaction that emerged in this analysis,  $F(1, 51) = 8.24, p < .01$ . As shown in the table, subjects in the choice-public condition performed significantly better on the test ( $p < .05$ ) than did subjects in the other three conditions, who did not differ from one another, Newman-Keuls test.

An examination of the item asking subjects how concerned they were about others' evaluation of their performance revealed a similar, but weaker, pattern. As shown in Table 2, the choice-public subjects reported the greatest amount of concern, but the interaction fell short of statistical significance,  $p < .17$ . There was, however, a significant main effect for



choice on this measure, with choice subjects expressing more concern than subjects in the no-choice condition,  $F(1, 51) = 6.01, p < .02$ .

Once again, within-cell correlation coefficients were calculated between the performance score and the reported concern for what the others would think of them. As in the first experiment, positive, but nonsignificant correlations were found within each of the cells: choice-public, .23; choice-private, .12; no choice-public, .30; no choice-private, .08.

The results thus lend additional support for the self-presentation interpretation of the choice-performance effect. As in the earlier research, subjects given a choice of test materials performed better on the subsequent test. However, this effect was limited to the condition in which subjects believed the experimenter and the other subjects who knew they had made a choice would know how they performed on the test. As explained by the self-presentation position, these choice subjects experienced an increase in their concern for how they would be evaluated by the others. A poor performance on the test following its selection would be more damaging to their public image than failure on a test to which they were assigned. When this concern for public evaluation was removed through the anonymity procedure, the increased performance with choice disappeared. Unlike the subjects in the first experiment, subjects in the private conditions of this study still believed they would be given feedback about their performances. Thus, the results cannot be explained in terms of the no-feedback confound identified in Experiment 1.

### GENERAL DISCUSSION

The findings from these two experiments provide additional information about the effects generated from changes in a person's level of perceived personal control. As proposed by other researchers (e.g., Burger et al., 1983; Miller, 1980; Rodin et al., 1980), along with some of the positive aspects of perceived control—such as feelings of mastery and the ability to reduce or avoid aversive stimuli—come some negative effects. People in positions of increased control also may experience an increase in their feelings of personal responsibility for the outcomes of the situation and an increase in their concern for public evaluation following the outcomes. In the two experiments reported here, subjects appeared to become increasingly concerned with how they would look in the eyes of the experimenter and/or other subjects when they publicly selected materials that they presumably could do well on. This increased concern for their subsequent performance led to an increased motivation on the test and an improved performance.

It is important to note that the present findings do not necessarily mean that the motivation from perceived control described by Perlmutter and Monty (1977) does not also result in increases in performance with choice under certain conditions. Indeed, as Tetlock and Manstead (1985)

have argued, it is difficult to eliminate what they term "intrapyschic" explanations with a public-private manipulation, in part because intrapyschic effects often result from the manipulation. Instead, it is argued here that self-presentation concerns, in addition to many other variables operating in the setting, have an influence on the choice-performance relationship. It is possible, for example, that too much concern for one's public image will result in a decrease, rather than an increase, in performance (Baumeister, 1984). It also is very possible that an increase in motivation that comes from perceived control might be powerful enough even in some anonymous situations to result in a noticeable increase in performance. It can be speculated that perhaps situations in which the task is under that control of intrinsic, rather than extrinsic, motives (cf. Lepper & Greene, 1978) and those that are highly involving are the most likely to produce this effect even without public scrutiny.

In conclusion, the research reported here serves to illustrate that the effects of changes in a person's level of perceived personal control are complex. Many factors tied to perceived control—such as changes in affect, changes in feeling of mastery, and changes in concern for self-presentation—no doubt combine to produce changes in that person's performance. As such, predicting the effects of choice on the performance of students or employees requires an understanding of the many variables that are set in motion when offering the worker a choice of what job he or she wants to do.

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