

Dissonance arousal, task evaluation, and task performance¹

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The present study tests the proposition that differential paired-associate retention reported by Pallak, Brock, & Kiesler (1967) was mediated by initial re-evaluation of the task of copying paired-associates. All Ss were offered either High Choice (high dissonance) or Low Choice (low dissonance) to perform a dull copying task. Task evaluations were obtained Early (after six trials on the list), After Task (after 21 trials on the list), and After Recall (after the recall test). Incidental paired-associate retention was greater under High Choice than Low Choice, as predicted. Consistent with a dissonance avoidance hypothesis, there was no relationship between incidental retention and task evaluations.

Theoretically, the performance of behavior inconsistent with one's beliefs creates dissonance (Festinger, 1957). The greater the perceived volition in the performance of the inconsistent behavior, the greater the arousal of dissonance (Brehm & Cohen, 1962). One means of reducing dissonance is to change the belief so that it is consistent with the behavior. For example, when Ss are induced to perform a dull task with little justification, dissonance may be reduced by favorably re-evaluating the dull task (Freedman, 1963). Recently, Weick (1964) suggested that dissonance arousal may also lead to enhanced task performance. In this view, the S reduces dissonance by re-evaluating the task and then validates his re-evaluation by working harder at the task.

On the other hand, Pallak, Brock, & Kiesler (1967) suggested that Ss may avoid dissonance rather than reduce it via re-evaluation. In that study, dissonance was aroused by choosing to perform a dull paired-associate copying task. Presumably Ss sought to lessen the salience of the dissonant cognitions ("I chose to do this task," and "This task is dull and boring") by concentrating more fully on the task rather than changing one or both of the cognitions. In this view, dissonance arousal would produce increased concentration on the task (and consequently increased incidental retention) but no re-evaluation of the task. The data supported the hypothesis: High Choice (high dissonance) produced greater incidental retention than Low Choice (low dissonance) but no differential re-evaluation of the task.

More recently, Weick (1966) proposed that dissonance might be reduced by initial re-evaluation of the dull task leading to enhanced task performance. However, continued exposure to the task would force the conclusion that the task was dull and boring. Thus, enhanced performance would be obtained without evidence of favorable re-evaluation, if evaluation were measured at the end of the task. The obvious implication is that incidental retention reported by Pallak et al was mediated by initial, positive re-evaluation of the task but that this re-evaluation was obliterated by continued exposure to the task. The present research attempts to provide data relevant to the temporal relationship of task evaluation to paired-associate retention.

Subjects and design. A total of 108 female undergraduate summer students at Southern Connecticut State College participated in the study for \$1.50. One S elected to leave when offered the opportunity to do so, leaving a sample of 53 Ss in the High Choice conditions and 54 Ss in the Low Choice conditions. The study was conducted in groups of one to five Ss.

The design was 2 by 3 factorial with High and Low Choice varied orthogonal to the time at which the task evaluation measures were obtained.

Procedure. The present procedure is similar to that employed by Pallak, Brock, & Kiesler (1967) and is briefly summarized here. All Ss received a booklet containing, in order, a brief introduction to the task, a sample copying task, the choice manipulation, pages for the copying trials, and an anticipation-of-recall measure. The E elaborated briefly on the introduction and explained that Ss were in a control condition to provide baseline data for an overall study of verbal behavior.

The choice manipulation. After the sample copying task, all Ss turned to the next page of the booklet which contained the choice manipulation. All Ss

were told that the task was dull, and that people often asked if it was really necessary to do the copying task. In the High Choice condition Ss were told that they could leave since they had fulfilled their obligation by reporting for the study; that it was completely their choice to do the copying task or not; and that the S would be paid regardless of her decision.

In the Low Choice condition Ss were told that it was necessary for all Ss to complete the task; that Ss were "conscience-bound" to stay since they were being paid; and that, in fact, Ss had no choice in the matter. Ss in both conditions signed the manipulation form in the booklet.

The boring task. Following the choice manipulation, all Ss began the copying task. Ss copied each of the paired-associates as it was projected on a screen. The 10 paired-associates employed were paired consonant-vowel-consonant trigrams of 60-65% association value (Archer, 1960). Paired-associates were projected for 4 sec on each of 21 presentations with 1 sec between slides (the time to automatically change slides).

The timing manipulation. The Ss in the Early Condition were interrupted after six presentations of each slide and filled out the task evaluation measures. Ss in the After-Task Condition filled out the measures after all 21 copying trials on the list, while After-Recall Ss filled them out after the recall test (the latter two cells represent the replication of Pallak et al.). After completion of all copying trials, Ss filled out the anticipation-of-recall measure which required each S to write "what you think the purpose of this experiment has been."² The recall test which followed consisted of a second booklet which presented the first trigram with instructions to complete each pair from memory.

The task evaluation measures. All Ss filled out the following series of 101-point a priori Likert-type scales: Task Enjoyment ("How much did you enjoy the copying task?"); Task Boredom ("How boring was the copying task?"); Performance Satisfaction ("How satisfied are you with the way you have performed the copying task?"); and Further Participation ("How willing are you to participate further in a similar experiment without pay if it could be arranged for you?"). In addition, all Ss filled out a similar measure to assess the effectiveness of the choice manipulation: "Considering that you volunteered for this experiment, how much choice did you feel that you had to complete the copying task or to leave without completing it?"

Results. As the data in Table 1 indicate, the choice manipulation effectively communicated the option to leave ($F = 136.18$, $df = 1/101$, $p < .001$). In addition, High Choice Ss retained more paired associates than Low Choice Ss ($F = 12.86$, $df = 1/101$, $p < .001$). Neither the timing of the task evaluation measures ($F = 1.36$) nor the interaction of choice and timing ($F < 1.00$) affected paired-associate retention.

There were no significant effects on any of the evaluation measures except on Performance Satisfaction. Ss in the After-Recall Condition were less satisfied with their performance of the copying task than Ss in the Early- or After-Task conditions ($F = 8.09$, $df = 2/101$, $p < .001$). This result seems reasonable since the After-Recall Ss had information concerning the number of paired associates successfully recalled.

Table 1
The Effects of Choice and Timing of Task Evaluations on
Paired-Associate Retention and Perceived Choice
(the larger the mean, the greater the perceived choice
and the more paired associates retained.)

	Early	After-Task	After-Recall
High Choice			
Perceived choice	79.39	85.65	78.28
Paired associates	5.61 (18)	6.18 (17)	4.78 (18)
Low Choice			
Perceived choice	32.94	24.83	22.89
Paired associates	3.50 (18)	4.11 (18)	3.44 (18)

Note. Cell Ns are in parentheses.

In addition, analysis of the Task-Enjoyment measure indicated a weak main effect for timing of the task evaluations ($F = 2.23$, $df = 2/101$, $p < .12$). This effect indicated that Early-Condition Ss enjoyed the copying task slightly more than After-Task or After-Recall Ss. This reflects the fact that Early-Condition Ss had performed only six copying trials before filling out the measure.

Discussion. The paired-associate data clearly replicated the results reported by Pallak, Brock, & Kiesler (1967). Consistent with the dissonance avoidance hypothesis, High-Choice Ss retained more paired associates than Low-Choice Ss. The data also indicated that High and Low Choice did not affect evaluations of the copying task and that task evaluations did not vary during the task. Most importantly, in the Early Condition, there were no differences in task evaluation between the High- and Low-Choice conditions. In addition, the effects obtained on the Performance-Satisfaction and Task-Enjoyment measures in the present research, as well as data reported by Pallak, Brock, and Kiesler, indicated that the evaluation measures were reliable and reflected evaluation differences when they occurred.

Clearly, incidental retention was not mediated by task evaluations in the manner suggested by Weick (1964; 1966). However, the present research does not unequivocally rule out a dissonance reduction interpretation of these data for several reasons. For example, Cottrell (1967) suggests that increased effort or concentration on a task per se may reduce dissonance. Similarly, Brehm and Cohen (1962, p. 114) suggest that modes of dissonance reduction might not be reflected in evaluation data. While these alternatives clearly suggest lines of further research, the present study allows us to eliminate the alternative that differential task evaluation over time mediated paired-associate retention.

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NOTES

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2. Analyses indicated no systematic effects for Anticipation of Recall. A total of five Ss in the High-Choice and eight Ss in the Low-Choice Condition expected some form of recall test. These Ss are included in all the data analyses reported, although it should be noted that the effect of choice on paired-associate retention is somewhat stronger if these Ss are excluded. Anticipation of recall had no effects on any of the task evaluation measures.