

Interest items as positive and negative reinforcements: Effects of social desirability and extremity of endorsement

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Subjects were administered a visual discrimination task for which reinforcements were SVIB interest items. Reinforcers varied in extremity of endorsement (extreme and moderate) and social desirability (high and low). Significant performance gains were obtained attributable to extremity of endorsement (high). Awareness of reinforcing contingency mediated performance change. Results were interpreted as favoring a personal incentive (reinforcement) interpretation.

The fact that attitude statements can be substituted for traditional reinforcers and alter response probability was first shown by Golightly & Byrne (1964). Working within a reinforcement conception of interpersonal attraction, these investigators demonstrated that similar and dissimilar attitude statements, when made contingent upon a response in a visual-discrimination task, acted as positive and negative reinforcers, respectively. Since then, Byrne et al (1966) have shown that, under certain conditions, either similar or dissimilar attitude statements are effective reinforcers when used singly. Reitz et al (1968) demonstrated that under conditions of attitudinal homogeneity and relevancy, attitudinal reinforcement is as effective as traditional reinforcers (right-wrong).

In Staats's (1968) reinforcement conception of the "attitude-reinforcer-discriminative system," the definition of attitude is broadened to include any motivational stimulus, making the study of attitudes, in this broad context, the study of human motivation. In this conceptualization, attitudes are formed through classical conditioning. Once established, however, they take on an instrumental character and come to have a reinforcing function through higher-order conditioning. In the present paper, past work was extended to the area of interests. An essential concern herein is whether interest items will serve as reinforcers in a manner similar to traditional reinforcers.

Past research has demonstrated that the extremity of endorsement of attitude items is an effective index of magnitude of reinforcement.² As such, this variable was manipulated in the present study. In addition, past research with self-attitudes

and self-descriptive statements implicated social desirability as a potent determinant of reinforcing quality.² However, with the Strong Vocational Interest Blank (SVIB), social desirability has been found to play a minor role in affecting responding (Zytowski & Walsh, 1967). To shed light on this discrepancy, social desirability was also investigated. The role of awareness was investigated as well since this variable is an effective mediator of learning in many human learning situations (Eriksen, 1962).

METHOD

Social-desirability ratings for the first 280 SVIB items (male form) were obtained from 72 first- and second-year college men at the University of Western Ontario. Each item was rated on a 9-point Likert scale, ranging from "extremely socially undesirable" through "neutral" (neither desirable nor undesirable) to "extremely socially desirable." Means and standard deviations were computed for each item. The distribution of these means was normal, with a range from 2.2 to 7.7 with a mean of 5.15. The standard deviations were also quite normally distributed, ranging from 1.25 to 2.35. The 68 highest and the 68 lowest of the items were designated as defining the high- and low-desirability item conditions.

Subjects

Subjects were 48 males drawn from introductory psychology classes at the University of Western Ontario. They were administered the same first 280 items of the SVIB as above, with instructions altered so as to ask for extent of liking or disliking felt for the item content. Endorsement ratings were again on a 9-point Likert scale.

Answer sheets were inspected to find the high and low social-desirability items S had endorsed extremely or moderately. Each S was placed into one cell of a 2 by 2 experimental design depending on which experimental criteria he met. There were two levels of item social desirability (high and low) and two levels of extremity of endorsement (extreme and moderate). Extremely endorsed items were defined as ratings of 1, 2, 8, or 9, with moderately endorsed items defined as ratings of 3, 4, 6, or 7. A total of 16 items was used for each S.

Procedure

The learning task was a simple visual-discrimination problem as described by Golightly & Byrne (1964). Briefly, S sat in front of an apparatus consisting of a wooden frame containing a cardboard center with a window through which

stimulus cards were presented. The window was in the lower left-hand corner from the S's view, thus ruling out eye contact throughout the experiment. On each of the 96 trials, a card containing a circle and a square appeared on which one object was black and one was white, one large and one small, one on the left and one on the right. The large-small dimension was arbitrarily selected as the discrimination to be learned, with large correct for half the Ss and small correct for the other half. S was told that this was a learning experiment in which he was to select one of two objects in each trial and to state his choice aloud. Immediately thereafter, a card was presented through the same window opening which the S was to read aloud. In the extreme-endorsement/high social-desirability condition, a correct response was followed by a high-desirability item that S had endorsed with an 8 or 9, whereas an incorrect response was followed by a highly desirable item that S had endorsed with a 1 or 2. The procedure in the other three cells paralleled this procedure except for the necessity of changing either the desirability level of the reinforcing items or the extremity of endorsement as demanded by the experimental design. Following the learning aspect of the study, Ss were presented an awareness questionnaire to fill out. This questionnaire consisted of a series of statements regarding the reinforcement contingency, one of which was correct for a given S. S was asked to place a 1 beside the statement he felt took place during the study. If he was unsure of his choice, he should then place a 2 beside the statement of what he thought took place, and a 3 beside another item if he was not sure of his second alternative.

RESULTS

Performance results were scored in terms of number correct in trial blocks of 16 (see Fig. 1). A 2 by 2 by 6 analysis of variance was computed. The variance component attributable to extremity of endorsement was significant ($F = 5.0, df = 1/44, p < .05$), and the component attributable to social desirability was not. Trials yielded a significant main effect ($F = 4.6, df = 5/220, p < .001$), indicating that interest reinforcement produced significant performance gains. Also, trials interacted with extremity of endorsement ($F = 4.4, df = 5/220, p < .001$). Figure 1 reveals that the performance of both groups in which extremely endorsed items were used as reinforcers consistently rose with trials, whereas the performance of the moderately

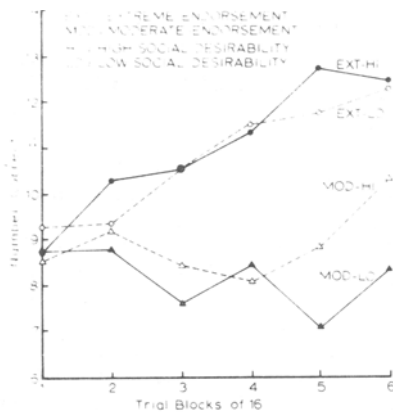


Fig. 1. Performance curves for the four experimental conditions.

reinforced groups remained at chance level, with level of social desirability being noninfluential in producing response changes.

Awareness

Each S was given a score on awareness ranging from 0 to 3. A 3 was scored when Ss gave the correct response contingency a rank of 1. A 2 was scored when a correct contingency was given a rank of 2, and a 1 was scored for ranking the correct contingency as 3. Finally, a 0 was scored if none of the Ss' responses was accurate.

A 2 by 2 analysis of variance was computed on the awareness scores. The only significant effect is again for extremity of endorsement, with extreme-endorsement groups higher in awareness than the moderate-endorsement groups ($F = 5.8$, $df = 1/44$, $p < .05$). Thus, performance gains were mediated by awareness.

DISCUSSION

The results demonstrate that interest items, when made appropriately contingent upon a response, result in performance increments in a manner similar to traditional reinforcers. Significant performance gains were evidenced over trials but differentially, depending upon extremity of endorsement.

The lack of any effect for the social desirability variable is consistent with Zytowski & Walsh's (1967) findings of a relative freedom (compared to typical personality item content) in the SVIB of social desirability response bias. This interpretation is further supported by the earlier findings of a social desirability effect on the reinforcing properties of personality items, both in item level³ and in person level.²

What performance gains did take place were mediated by awareness. This result is consistent with much recent past research in this variable. When, however, personal characteristics are varied as was done here, it becomes possible to interpret the emergence of awareness itself in terms of reinforcement effects. Since both performance changes and awareness were low in the moderate-endorsement groups, awareness (and performance change) can be seen as having come about due to the antecedent personal valency (reinforcement) of those particular interest items for which Ss indicated extreme liking or dislike. A similar inclusion of personality dimensions in studies investigating "demand characteristics" effects (cf. Page, 1968) would make possible differential predictions regarding proportion of Ss becoming aware and complying with demands. Ss in the present study were not specifically asked to indicate their intentions of complying. Compliance, however, would only be possible with awareness already present. As such, compliance would be high in the extreme-endorsement groups. Thus, in the absence of a personally valent incentive, neither awareness, compliance, nor performance change is to be expected. Under some conditions, awareness may develop without performance change, however. For example, people with a high need for cognitive structure or understanding might be expected to desire and to be reinforced for simply solving the problem of the reinforcement contingency. Once solved, however, the absence of a

personal incentive would mitigate against compliance. The act of compliance itself can also be differentially reinforcing depending on personal characteristics. These considerations suggest that in demand characteristics investigations, in order to rule out reinforcement or conditioning effects as well as for more complete assessment, it becomes necessary to include relevant personality characteristics in the experimental design.

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NOTES

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