
The Effect of Ego-Involvement on Learning

CHARLES L. SHEDD and HENRY R. ANGELINO,
University of Oklahoma, Norman

Ego-involvement has come to occupy an important place in learning experiments. Sherif and Cantril (12) have reviewed a number of studies in which the learning situation was conceived as being differently organized for the individual whenever he felt that he was somehow involved. It was pointed out that this organization, this interest determination, affected what the individual learned and how learning took place.

According to Mowrer (10) an individual may be considered to be ego-involved experimentally whenever he is placed in a position in which he is emotionally involved. Underwood (13) feels that whenever the individual's status or role is a threat to self esteem we may infer that the subject is ego-involved. These threats are viewed by Underwood as instigating anxiety. And anxiety being unpleasure serves as a drive. It would follow that by ego-involving an individual experimentally we might alter his drive level and consequently affect his performance on learning a task. We would expect, in other words, for an individual to be more highly motivated when ego-involved than when non-ego-involved.

In addition to an increase in performance the experiments of Alper (1) Zillig (15), Levine and Murphy (6), Wallen (14), and others, suggest that ego-involvement during learning situations increases habit strength.

However, in none of these experiments was a standardized learning test used, i.e. one which would enable the experimenter to observe the effect of different ego-drives on levels of learning and retention.

Kausler (5) compared the level of performance and the degree of learning of ego-involved and task-involved groups using a standardized learning test in an attempt to discover the effects of different levels of ego-involvement on performance and learning. He found that the ego-involved group was superior at the 0.2 level to the task-involved group in performance. No significant difference in learning for the two groups was obtained. He concluded that the increased drive brought about by the ego-involvement enhances performances, but is unrelated to the development of habit strength. There was a difference between the means of the two groups on the recall

test, but these differences were not significant. Kausler feels that these differences may be due to difference in drive strength and are unrelated to habit strength.

While this study is commendable for its general approach, the results are somewhat questionable. It must be observed that the difference between task-involvement and ego-involvement is one of degree not kind, *i. e.* it is always a matter of more or less ego-involvement. The lack of clear-cut task-orienting instructions seems to have produced little difference between the two groups.

This view is supported by Alper (1) who has presented some experimental data on the subject. She finds that when a subject is told that materials are being studied not the subject, different learning and retention data are obtained than when the instructions emphasize that the subject is being studied. We find in Kausler's study that the task-involved group was not told that it was being studied, but there was no emphasis on the material. In this experiment the subject was not assured that the task would not involve any threat to his self esteem. Alper points out that frequently in this case the task-orienting instructions arouse ego-tensions rather than task-tensions. Lewis and Franklin (7) found that task-tensions were aroused only by explicitly orienting instructions: instructions which could not spell out task-orientation aroused ego-tensions even in the absence of an objective threat. From all evidences this is what occurred in Kausler's experiment.

Alper (1) also points out that if the population is not independent of the tasks involved the subject may become involved regardless of the orientation and regardless of the particular tasks used. Since Kausler presented a learning task to a psychology class studying learning we might expect ego-involvement rather than task-involvement.

The purpose of the present study was to rerun Kausler's experiment exercising greater control in the delineation of the task-involved and the ego-involved groups.

SUBJECTS AND APPARATUS

Fifty high school seniors were used as subjects. The groups were selected by a table of random numbers. The odd numbers were placed in the task-involved group and the even numbers in the ego-involved group. High school students were used to eliminate any effect that a knowledge of psychology might have. The random number table was employed to eliminate any variables that might be involved in class groupings.

The group learning test was the Dubois-Bunch Learning Test.

The subjects' task was to recognize which of four key figures, labeled A, B, C, D appeared twice in a pattern and to mark the answers, A, B, C, D on the answer sheet. The degree of learning consisted of how well the individual had learned the label for the key figures.

PROCEDURE

The task-involved subjects were given a standard form of the Dubois-Bunch Learning Test which was entitled "Task Material". They were told, "We are planning some experiments and would appreciate your help in finding out something about the materials we want to use. You are kind of preliminary guinea pigs who will tell us something about these materials. Just do the tasks we have prepared so that we can find out about them. You see, of course, that this isn't at all a test of you. It's a test of the tasks. You are in no sense 'on the spot'."

The ego-involved groups were given a booklet entitled "Intelligence Test". The directions were: "These tasks have been developed by the

Institute of Intelligence and have been found to be very reliable indices of intelligence. The school has asked that the tests be given to you so that a record of your intelligence may be placed on your permanent record."

The Dubois-Bunch Learning Test was divided into three sections, Problems 1—30 served as practice material; 30-150 as the test material, and problems 151-300 as the recall material. The recall material differed from the practice and test material in that the key for solving the problems had been clipped from the top of the page. All of the subjects were given problems 1—30 and informed that they were practice problems which they were to complete as fast and accurately as possible. Upon completion they were to record the time in minutes which was necessary for them to complete the tasks. The time was written on a blackboard by the experimenters. As soon as everyone had finished, the materials and answer sheets were collected. The subjects were then given problems 30—150. Ten minutes were allowed for the test period. The material and answer sheets were again collected. The recall material was then handed out. Five minutes were allowed for the recall period.

TREATMENT OF DATA

The number of problems answered correctly during the practice period divided by the time yielded the performance rate. The number of problems attempted during the ten minute test period was Level of Performance I, the number of problems answered correctly was Level of Performance II, the number of problems attempted during the recall period was Level of Retention I, the number correct was Level of Retention II. The *t* test for the significant difference was used.

RESULTS AND DISCUSSION

TABLE I

t-ratios Between Means for E-I and T-I.

| <i>n/t</i> | LOP I | LOP II | LOR I | LOR II |
|------------|-------|--------|-------|--------|
| 3.7 | 4.5 | 7.3 | 6.5 | 2.7 |

The ratios indicate that the task-involved group was superior to the ego-involved group at the .01 level of confidence or below for both performance and retention. We must therefore reject the hypothesis that an increased drive is brought about in this test situation by ego-involvement. There are significant differences between the means on both the performance and the recall tests. The results would also tend to point out that there is no increased habit strength with increased drive due to ego-involvement. This experiment seems to bring into question the notion of a simple positive relationship between drive level, ego-involvement and habit strength. It would also tend to substantiate some of Alper's findings (1) in which subjects did better under non-ego-motivating conditions than under ego-motivating conditions.

These experiments would appear to be more in line with the experiments of Oldroyd (11) and others in which an optimum tension level for a given task was found to be positively related to habit strength, while intense levels tended to reduce both performance and habit strength. High degrees of ego-involvement or anxiety have been demonstrated by Jacobson (4), Malmö and Shaglass (9), Luria (8), Arnold (2) and others, to lead to a disintegration of the organized pattern of response. It would appear, then, that an optimum level of ego-involvement will produce an increase in drive level, and habit strength, while "over" ego-involvement or intense anxiety will produce a decrease in performance and habit strength.

SUMMARY

The hypothesis to be tested was that ego-involvement would not only increase drive level but habit strength as well. Two groups of 25 subjects

each were given a modified form of the Dubois-Bunch Learning Test. A practice period which consisted of 30 problems to be done at the subject's regular rate was provided. This was followed by a 10 minute test period and a 5 minute recall period. During the recall period the key for solving the problems was eliminated. *t* tests between *n/t* LOP I, LOP II, LOR I and LOR II were made. These were significant at the 0.01 level of confidence or below. It was concluded that the hypothesis should be rejected. It was pointed out, however, that the relation between ego-involvement, habit strength and drive level was not a simple positive one as indicated in parts of the literature. It is suggested that optimum ego-involvement for the particular task is the most likely interpretation.

BIBLIOGRAPHY

1. ALPER, T. G. 1946. Task-orientation vs. ego-orientation in learning and retention. *Am. J. Psychol.* 59: 236-248.
 2. ARNOLD, M. B. 1942. A study of tension in relation to breakdown. *J. Gen. Psychol.* 26: 316-346.
 3. DUBOIS, P. H. AND M. E. BUNCH. 1949. A new technique for studying group learning. *Am. J. Psychol.* 62: 272-278.
 4. JACOBSON, E. 1938. *Progressive relaxation*. Chicago: University of Chicago Press.
 5. KAUSLER, D. H. 1951. The effect of ego-involvement on learning, *J. Psychol.* 32: 225-230.
 6. LEVINE, J. M. AND G. MURPHY. 1943. The learning and forgetting of controversial material. *J. Abnorm. and Soc. Psychol.* 38: 507-517.
 7. LEWIS, H. B. AND M. FRANKLIN. 1949. An experimental study of the role of ego in work. II. The significance of task orientation in work, *J. Exp. Psychol.* 34: 195-215.
 8. LURIA, A. R. 1932. *The nature of human conflicts*. New York: Liveright.
 9. MALMO, R. B. AND C. SHAGLASS. 1949. Physiologic studies of reaction to stress in anxiety and early schizophrenia, *Psychosom. Med.* 11: 9.
 10. MOWRER, O. H. 1950. *Learning theory and personality dynamics*. New York: The Ronald Press. Chap. 8, esp. p. 205.
 11. OLDROYD, C. 1950. *Lectures at the University of Oklahoma*. Manuscript. The author.
 12. SHERIF, M. AND H. CANTRIL. 1947. *The psychology of ego involvements*. New York: John Wiley and Sons. Chap. 6.
 13. UNDERWOOD, B. J. 1949. *Experimental psychology*. New York: Appleton Century Crofts.
 14. WALLEN, R. W. 1942. Ego involvement as a determinant of selective forgetting. *J. Abnorm. and Soc. Psychol.* 37: 20-39.
 15. ZILLIG, M. 1928. Einstellung und Aussage. *Z. sychol.* 106: 58-106.
-