EGO STRENGTH AND RESPONSE TO CONFLICT

By

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CHAPTER I

INTRODUCTION TO THE PROBLEM

The principal purpose of this investigation is to determine the contribution of various personality factors to the resolution of conflict. Conflict, often defined as the competition between simultaneously aroused incompatible response tendencies (Miller, 1944; Hovland and Sears, 1938), is regarded by many (Brown and Farber, 1951; Coleman, 1956) as an important source of frustration and hence of potential maladjustment. In reviewing previous studies, one may distinguish two major emphases in the research activity on conflict. On the one hand, a great deal of work has been concerned with the experimental manipulation of conflict conditions. Thus, attempts have been made to determine the effects of the absolute strengths (Andreas, 1958), of the relative difference in strength (Worell and Castaneda, 1959), and of the number (Berlyne, 1957) of competing response tendencies on conflict performance. On the other hand, a number of investigators have stressed the role of individual differences in conflict resolution. Among the many variables suggested, it seems that ego strength in particular may be of considerable importance. Fenichel (1954) indicates the possible significance of this concept when

he lists one criterion of ego strength as being the ego's ability "to carry out its intentions even in the face of obstacles". This suggests that the individual's ability to remain task-oriented in a conflict situation may be a function of the strength of the ego. Still another criterion of ego strength, the degree to which the individual accurately perceives reality (Eriksen, 1954a), also indicates its potentially critical role in the speed of conflict performance. As a result of these considerations, the specific aim of this study is to determine the effects of ego strength on the efficiency of conflict resolution.

CHAPTER II

REVIEW OF THE RELEVANT STUDIES ON CONFLICT AND EGO STRENGTH

Conflict

In the present study, conflict is assumed to exist when there is a simultaneous arousal of incompatible response tendencies. Although a variety of response measures have been suggested as indices of the degree of response competition or conflict, such as response latency, blocking, compromise responses, vigor of response, etc. (Hovland and Sears, 1938; Worell and Castaneda, 1959), our review of the literature will be confined to those studies dealing with the latency of conflict performance, since this is the response measure employed in this study.

The Conflict Situation

The absolute and relative strengths of incompatible response tendencies have been shown in a large number of studies to be important factors in speed of response to conflict. For example, Finger (1941), in a study involving discrimination conflict, found that as the

relative difference in strength between competing tendencies decreases, the latency with which rats respond increases. In addition, two studies with humans (Castaneda and Worell, 1959; Worell and Castaneda, 1959) have also found the latency of response to increase as the similarity in brightness of two lights is increased. Aside from the effects of relative differences, the importance of the absolute values of the competing tendencies has also been the subject for study. In general, the findings of several investigations demonstrate that as the absolute strengths of competing response tendencies increase, the latency of response also increases (Andreas, 1958; Berlyne, 1957).

Individual Differences in Speed of Conflict Resolution

Several studies indicate that certain individual difference variables influence response to conflict. In this regard, the variable of anxiety has received the most attention. The studies, however, using anxiety measures and choice reaction time, the latter of which may be regarded as a simple conflict situation, show inconsistent results. For example, Eriksen (1954b), in a choice reaction time study, found that anxious students tend to react slower than nonanxious students.[1] Grice (1955), using the Taylor Manifest Anxiety Scale (MAS), exposed

[1]The two groups of subjects used by Eriksen were selected by their performance on the Hysteria and Psychasthenia scales of the MMPI. Properties of low and high anxiety were attributed to these groups by Eriksen, since he found a high negative correlation between Hysteria and Psychasthenia scores and MAS scores. (Eriksen and Davids, 1955).

sixty high- and low-anxious Air Force Trainees to the Air Force Discrimination-Reaction-Time Test. He found that the low anxiety group performed at a level superior to that of the high anxiety group, but when intellectual differences between MAS groups were eliminated, no relationship between anxiety and choice reaction time was obtained. Farber and Spence (1956), in two experiments concerning anxiety and choice reaction time, also obtained no significant relationship between scores on the MAS and performance.

A study by Worell and Castaneda (1959) indicates that positive, zero, or negative relationships may exist between choice reaction time and anxiety depending on various conditions. These authors were concerned with the manner in which conflict-produced drive combines with previous drive level to influence behavior. Using the MAS as an index of drive, anxious and nonanxious Ss were placed in high and low conflict situations. The results indicated that anxious Ss respond faster under low conflict conditions, but slower under high conflict conditions than nonanxious Ss. However, when Ss were screened on the basis of MMPI Lie-scale scores, it was found that, although the anxious Ss were still faster under low conflict conditions, the difference in performance between MAS groups disappeared under high conflict conditions.

Worell and Castaneda, in attempting to explain the divergent results obtained by Eriksen (1954b), Grice (1955), Farber and Spence (1956), and their own study, suggest three factors which seem to

influence the speed with which conflict situations are resolved. First, they indicated, on the basis of the differences obtained between performance to high and low conflict conditions, that the relative difference in strength between competing tendencies was important. Secondly, typical speed instructions used in RT studies could be significant, since several studies indicate that speed instructions may possess motivational properties (Castaneda and Palermo, 1955). The third factor was concerned with an individual difference variable. It was shown that MAS subjects scoring above four on the L-scale tend to react differently than subjects scoring below four.

Although the findings of the above studies are somewhat inconsistent, several tentative conclusions may be drawn with regard to experimental and individual difference variables which influence speed of response to conflict. Worell and Castaneda (1959) have indicated that speed of response to conflict may be a function of at least two experimental variables (instruction and degree of response competition) and two individual variables (L-scale performance and manifest anxiety). When these variables are taken into account, it appears that anxious Ss respond faster than nonanxious Ss under conditions of minimal response competition, but that there is no significant difference in reaction time under conditions of considerable response competition.

Ego Strength

Since this study is primarily concerned with the effects of ego strength on response to conflict, our major interest is directed toward interpretations of the ego-strength construct which will permit unequivocal predictions of performance. In this regard, general definitions, such as that of Barron (1953), who views ego strength in terms of personality integration, or that of Eriksen (1954a), who defines it as "the individual's capacity for appraising the reasonable limits in his interpretations and perceptions of his environment", although suggestive, are not clearly relevant for predictions of conflict behavior.

Aside from general definitions, several attempts have been made to operationally specify the concept of ego strength. For example, Eriksen (1954a) presented Ss with the task of evaluating fifty Rorschach concepts as to their goodness of form. He used the percent of correct responses, with correctness being determined by agreement with Beck's scoring tables, as an index of ego strength. With this measure of ego strength, Eriksen found that high ego strength Ss tended to recall incompleted tasks under task-oriented conditions and completed tasks under conditions of threat to self-esteem, while the opposite appeared true for Ss with low ego strength.

Jourard, also using the Rorschach, defined ego strength in terms of five factors: (1) F+% between 80-90, (2) F+% for C cards 70-100,

(3) F% between 30-50, (4) M greater than FM, (5) FC greater than CF + C. In contrast to Eriksen's findings, Jourard found no correlation of ego strength with measures of recall. Thus, it would appear that these two scales may not be measuring the same personality factors.

In line with this observation, Tampkin (1957), in a correlational study involving three scales assumed to measure ego strength, found no significant intercorrelations between scores on Barron's Ego Strength Scale, Rorschach F+% and Bender-Gestalt scores. These findings indicate that despite the application of the term ego strength to various measures, the scales are not measuring the same phenomena.

Barron (1953), in developing a scale to measure therapeutic success with psychoneurotics, came to the conclusion that his derived scale was essentially a measure of ego strength. After an inspection of the item content of this scale, he suggested that ego strength was composed of the following characteristics: physiological stability, good health, a strong sense of reality, feelings of personal adequacy and vitality, permissive morality, lack of ethnic prejudice, emotional outgoingness, spontaneity, and intelligence.

> Other personality characteristics also positively correlated with the Ego-Strength (Es) scale are self-confidence, drive, breadth of interest, independence, stability, tolerance, easy command over own resources, poise, and ability to recover from psychological stress.
>
> Personality characteristics negatively correlated with ego strength include the following: affected, dependent,

> effeminate, mannerly, mild, inhibited, submissive, introceptive, confused, unadaptive, rigid, stereotyped and unoriginal (Barron, 1956).

It was concluded by Barron that persons of high ego strength convey the general impression of greater resourcefulness, vitality, and self-direction, while those of low ego strength show inhibition, affection, and inability to adapt, with effeminacy being a characteristic of males.

This study will use Barron's Es scale as a measure of ego strength since considerable attention has been given to the construction of this scale and several studies have demonstrated its construct validity (Taft, 1957; Wirt, 1955; Quay, 1955). As will be shown, however, the characteristics indicated by Barron do not lead to a single hypothesis about the role of the Es concept in conflict. Before indicating these hypotheses, however, the results of a study by Block and Petersen should be considered because of its relevance to both Barron's conception of ego strength and the problem of predicting conflict performance. These authors were concerned with personality correlates of confidence, caution, and speed in a decision situation. Fifty-three military officers, after undergoing intensive personality assessment, were presented individually with a series of discrimination problems for which reaction time was measured. The authors divided the possible decisions into two groups, easy and difficult, and the Ss into two groups, fast deciders and slow deciders. They then compared the personality characteristics of individuals in each group.

The results of the experiment by Block and Petersen indicated that fast deciders are more rapid in their decisions because of submission to external pressure and concern about social acceptance. The slow decider, on the other hand, was more masculine, self-reliant, and did not "subordinate himself so completely to the task at hand". The particular relevance of this study is to be found in the adjectives describing slow and fast deciders, which are highly similar to those used by Barron for high and low Es Ss respectively. On the basis of this similarity, it would appear that low ego strength Ss should resolve both easy and difficult discrimination-type conflict situations faster than high ego strength Ss.

Several alternative interpretations, however, are possible. Since no studies have investigated the relationship of Barron's Es scale to conflict performance, predictions may be derived from an examination of the relationships which have been obtained between the Es scale and other scales which have some known characteristics. The two most prominent scales in this respect are the MAS and the MMPI. A study by Ends and Page (1957) reveals a negative correlation of -.45 pre-therapy and -.65 post-therapy between the MAS and Es-scale. In as much as the MAS has been used in a large number of studies as an assumed measure of drive (Spence, 1958; Taylor, 1956), one might expect that a higher drive level would characterize low Es Ss. In such a case, one would anticipate, on the basis of the drive theory advanced by Spence and Taylor, that

low Es Ss would respond faster in the type of conflict conditions used in this study than high Es Ss. This is based on the notion that in situations where the correct response tendency is relatively stronger than competing incorrect tendencies, as is the case in this study, high drive or low Es Ss would have a stronger tendency to evoke the correct response than low drive (high Es) Ss.

Another interpretation, however, may be made on the basis of studies by Barron (1953) and Williams and Lawrence (1954), who found consistently high negative correlations between the Es scale and the clinical scales of the MMPI. Barron interprets this as suggesting that the Es scale is "picking up a general factor of psychopathology in the MMPI". If maladjustment is construed as the presence of generally inappropriate or irrelevant response tendencies in a person, then the negative relation to the MMPI suggests that low Es Ss might have more of these interfering response tendencies than high Es Ss. As a result, high Es Ss, due to their possessing relatively fewer interfering or irrelevant response tendencies, should respond faster to conflict than low Es Ss.

Summary and Hypotheses

The studies and theoretical positions considered in this chapter lead to two major contrasting hypotheses regarding the possible relation of ego strength to the speed of conflict performance.

On the one hand, using the negative relation of Barron's Es scale to the MAS, high Es Ss should be less anxious and have a lower drive level than low Es Ss. High Es Ss, therefore, should respond more slowly than low Es Ss to conflict situations in which correct response tendencies are dominant.

On the other hand, the relationship between the Es-scale and the MMPI clinical scales (Barron, 1953; William and Lawrence, 1957) suggests that high Es Ss, who are presumably lacking in chronic psychopathology, should resolve conflicting tendencies faster than low Es Ss, who are prone to possess a larger number of interfering response tendencies.

A number of additional hypotheses may be derived from the statements made with regard to the Es scale by Barron (1956). As indicated earlier, Barron found that effeminacy is a characteristic of low Es males (Barron, 1956). In view of this finding, one might expect low Es males to respond in a manner similar to that of females. Consequently, high and low ego strength females and low ego strength males would be expected to exhibit a similarity in responding to conflict, while the high ego strength males should be significantly differentiated from these groups.

Another personality characteristic indicated by Barron (1953) is the high Es individual's greater ability to adapt to new sitations. This would lead one to expect the high Es Ss, regardless of whether or not they responded faster initially, to adapt more rapidly over a

series of trials than low Es Ss. This greater adaptibility should be manifest in the greater decrease in response latency for high Es Ss over protracted exposure to conflict conditions than for low Es Ss.

CHAPTER III

METHOD

Design

Two experiments were conducted to determine the effects of ego strength, as measured by Barron's Ego-Strength Scale, on speed of response to conflict. Each S was exposed to both high and low conflict conditions in a brightness discrimination apparatus. The simultaneous presentation of a bright and dim light constituted the low conflict condition, while the high conflict situation consisted of the exposure of two relatively bright lights.

In the first experiment, Es-MAS Uncontrolled, high and low Es Ss were selected without regard to performance on the Taylor Manifest Anxiety Scale. In the second experiment, Es-MAS Controlled, high and low Es Ss were matched in terms of MAS performance. The measure of conflict performance used with all groups was the time elapsing between the presentation of the conflict condition and the initation of a response to the conflict situation.

Subjects

The Ss were selected from the general college undergraduate summer school population. The Barron Ego-Strength, the Taylor Manifest Anxiety, and the MMPI Lie Scales were administered to a total of 354 Ss. For the first experiment, 16 Ss with scores above the 80th percentile (high Es group) and 16 Ss scoring below the 20th percentile (low Es group) of the distribution on the Es-scale were selected for the Es-MAS Uncontrolled groups. For the second experiment, Es-MAS Controlled, 16 high and 16 low Es Ss were matched according to MAS performance. An equal number of males and females were used in all Es groups, and no S was included who scored above four on the MMPI Lie-scale.

Apparatus

The apparatus is a modification of that used by Worell and Castaneda (1959). It consisted of a black vertical panel in which two circular milk glass windows of equal diameter were set on a horizontal plane. The illimination in each window could be varied by means of variable transformers. Located directly below each light was a push button which, when pressed, shut off the illumination in both windows. A "start" platform was placed equidistant from the buttons and attached to the front of the apparatus. Finally, a small visual ready signal was located slightly above and equidistant from both windows.

The ready signal was given four seconds prior to the illumination of the windows. A Standard Electric Timer was activated simultaneously with the illumination of the windows and stopped when S removed his hand from the start platform. The latency measure, consisting of the time between illumination of the windows and Ss raising his hand from the start platform, was recorded to the nearest 1/100 second. All reaction time scores for each S were converted to reciprocals in order to normalize any skewness in the distribution of latency scores.

Three brightness values, 2.8, 90.9, and 291.4 ft. candles, were used to produce two levels of conflict. The two brightest stimili (90.9 and 291.4) were used in the high conflict condition, while the two extreme values (2.8 and 291.4) were used for the low conflict condition.

Procedure

The procedure was the same for both experiments. Each S, participating individually, was asked to respond to the brighter of two simultaneously exposed lights. The instructions, containing no implication of speed, were as follows:

> This experiment is concerned with your accuracy in making visual discriminations. Here is what you are to do. Two lights, a bright one and a dim one, will appear in these two openings. Below each opening there is a push button. You are always to push the button under the opening containing the brighter light. On some of the trials the brighter light will appear in the opening on the right, and on the

left on other trials. Each time before the lights come on this little red light will come on as a signal to you that the lights will appear soon.

Before each trial, you are to start with your hand resting on this platform. When the lights come on, you are to lift your hand from the platform and push the button under the brighter light. It is important, however, that you do not remove your hand from the platform until you have decided in which opening the brighter light is. You may experience a tendency to want to raise your hand as soon as the lights come on even though you have not yet noticed which opening contains the brighter light. It is important that you prevent this from happening. Also, after you have pushed the button, do not place your hand back on the platform until told to do so.

Each S was presented with a total of forty-eight discrimination trials. Both the position of the brighter light and the order of appearance of the high and low conflict trials were presented in a stratified random order. Thus, the four conditions, i.e. the two positions and two levels of conflict, appear an equal number of times within each block of twelve trials.

Prior to the first discrimination trial, the correct "brighter" stimulus was presented alone once in each window. During the discrimination trials, anticipatory errors were construed to be those responses having reaction latencies of less than 12/100 second. When these occurred, S was cautioned and the trial repeated.

CHAPTER IV

RESULTS OF THE EXPERIMENT

Before the major results of the two experiments are presented, consideration should be given to the age and MAS differences of the Es groups (Table I). The age differences were not significant. Examination, however, of the portion of Table I showing the MAS scores of the Es-MAS Uncontrolled group suggests that a negative relationship may exist between performance on the MAS and Es scales. Since Es and MAS scores were available for the general population from which Ss were selected (N=354), a Pearson r was calculated to determine the relationship between the two scales. The obtained correlation of -.37 indicates a highly significant (p=.001) inverse relationship between the two scales. In view of this correlation, the significant difference (p=.005) in mean MAS scores for high and low Es groups in the Es-MAS Uncontrolled experiment is not surprising.

Turning to the Es-MAS Controlled data in Table I, it should be noted that both female groups had significantly higher MAS scores (p=.005) than the corresponding male groups. The importance of this difference will be considered more fully at a later point.

TABLE I

MEAN Es AND MAS SCORES AND AGES OF Ss IN EACH EXPERIMENT

Group	N	Age	Es	MAS
		Es - MAS - Uncontrolled		
High Es-Male	8	22.625	54.50	10.125
Low Es-Male	8	20.125	41.00	22.750
High Es-Female	8	18.125	53.75	12.250
Low Es-Female	8	18.500	36.50	24.500
		Es - MAS - Controlled		
High Es-Male	8	22.875	55.38	13.500
Low Es-Male	8	20.876	43.13	14.500
High Es-Female	8	19.375	52.88	18.380
Low Es-Female	8	19.875	38.75	18.630

Ego Strength—Manifest Anxiety Uncontrolled

The data for the Es-MAS Uncontrolled groups in Table II were subjected to an analysis of variance, mixed type. The results of this analysis, summarized in Table III, reveal that the main effects of Es are significant at approximately the .075 level of confidence (F=3.615), while the main effects of conflict (F=24.75) and trials (F=59.09) are significant beyond the .001 level. The only other significant effect is the T x Es interaction (.005).

TABLE II

MEAN RESPONSE SPEEDS (1/RT x 1000) AND STANDARD DEVIATIONS OF Es-MAS UNCONTROLLED GROUPS FOR TWO LEVELS OF CONFLICT

Group	Low Conflict		High Conflict	
	Mean	S.D.	Mean	S.D.
HEs-Male	20.66	6.21	19.33	7.74
HEs-Female	21.90	5.82	20.32	5.68
LEs-Male	17.91	3.97	15.64	3.62
LEs-Female	17.11	5.35	15.60	5.26

Tests for the significance of the mean differences between the Es groups at each level of conflict resulted in a t of 1.892 for the low conflict condition and a t of 2.03 for the high conflict condition. A t value of 2.042 is needed for the .05 level of significance. Thus, high Es Ss, as is shown in Figure 1, responded faster under both high and low conflict conditions. In addition, the mean performance speed of each group (Table II) reveals a consistently slower RT under

TABLE III

SUMMARY OF ANALYSIS OF VARIANCE FOR THE Es-MAS UNCONTROLLED GROUPS

Source of Variation	SS	df	MS	F	p.
Between	322,039.41	31			
Es	36,635.87	1	36,635.87	3.615	.075
Sex (S)	275.27	1	275.27	.027	
Es x S	1,354.70	1	1,354.70	.134	
Error	283,773.57	28	10,134.77		
Within	110,892.35	224			
Conflict (C)	6,424.62	1	6,424.62	24.746	.001
C x Es	110.41	1	110.41	.425	
C x S	37.82	1	37.82	.146	
C x Es x S	141.40	1	141.40	.545	
Trials (T)	46,020.41	3	15,340.14	59.087	.001
T x Es	4,188.41	3	1,396.14	5.378	.005
T x S	690.64	3	230.21	.887	
T x Es x S	392.68	3	130.89	.504	
T x C	597.62	3	199.21	.767	
T x C x Es	148.47	3	49.49	.191	
T x C x S	610.45	3	203.48	.784	
T x C x Es x S	644.03	3	214.68	.827	
Error	50,885.39	196	259.62		
Total	432,931.76	255			

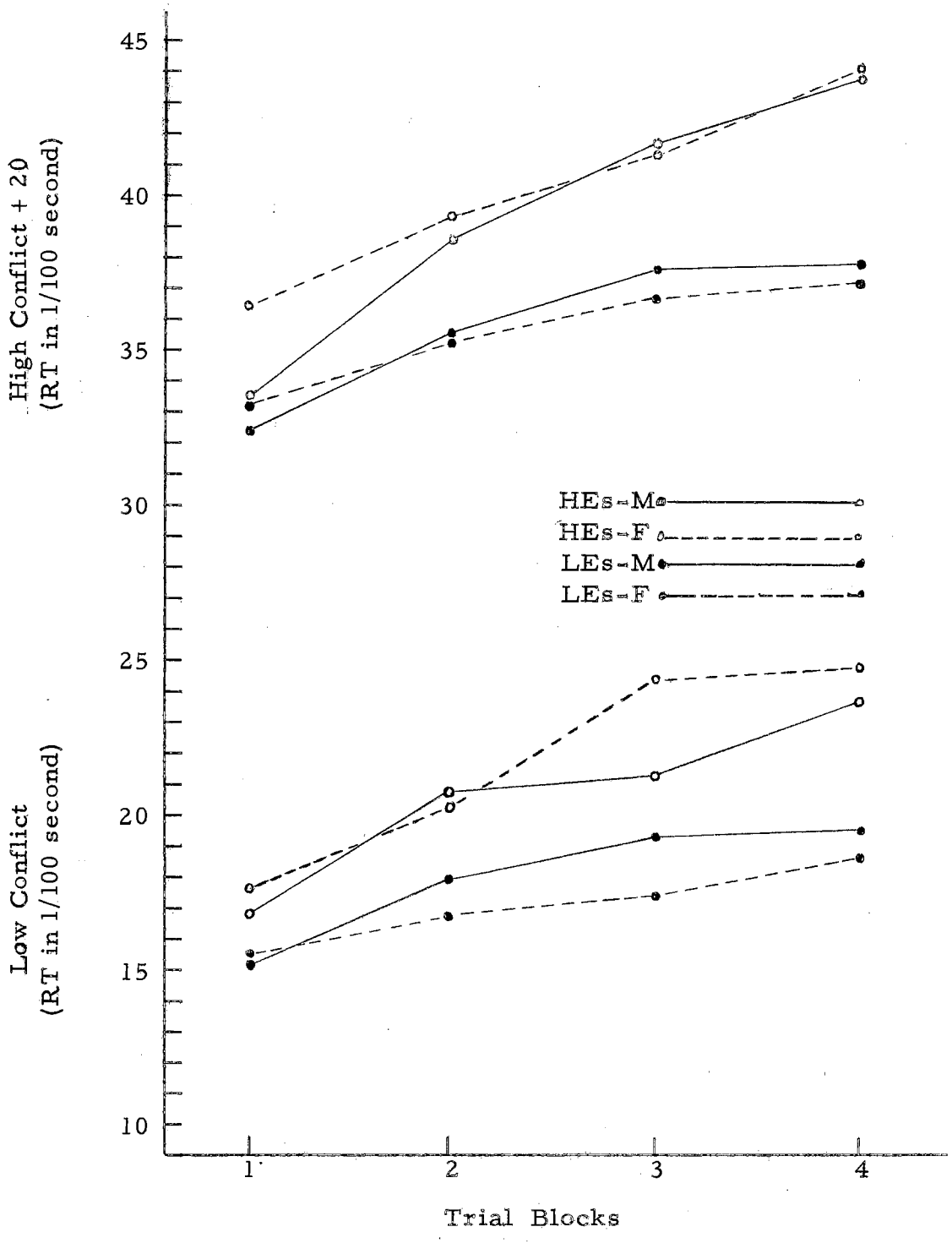

Fig. 1. Mean Performance Speed of Es-MAS Uncontrolled Groups for Each Trial Block

high conflict conditions. It may also be noted (Figure 1) that each group, with the exception of high Es males on Block 3 of the low conflict trials, was consistent in reducing its speed of response over each block of six trials.

The nature of the T x Es interaction is graphically presented in Figure 1, where one may note a progressive divergence of response speeds for the Es groups over the 4 blocks of trials in each conflict condition. Only on Block 3 of the low conflict condition is there any interruption of this trend. These results indicate that, although the over-all difference in performance between high and low Es Ss only approaches significance, high Es Ss increase their speed over trials at a significantly faster rate than low Es Ss under both high and low conflict. Finally, it should be noted that the lack of a significant ego strength and sex interaction ($F=.134$) offers little support for the "effeminacy" hypothesis concerning low Es males.

Ego Strength—Manifest Anxiety Controlled

An analysis of variance, mixed type, was also used with the data (Table IV) obtained from the Es-MAS Controlled experiment. The summary of this analysis may be found in Table V. In contrast to the findings of the first experiment, only the main effects of conflict (.001) and trials (.001) remained significant when Es groups were matched according to MAS performance. The previously found significant effects associated with Es and the T x Es interaction were

not obtained. As before, the means in Table IV indicate that response speeds are consistently longer under high conflict conditions and that speed performance over trials (Figure 2) again showed a gradual increase for all groups.

TABLE IV

MEAN RESPONSE SPEEDS (1/RT x 1000) AND STANDARD DEVIATIONS OF Es-MAS CONTROLLED GROUPS FOR TWO LEVELS OF CONFLICT

Group	Low Conflict		High Conflict	
	Mean	S. D.	Mean	S. D.
HEs-Male	17.76	5.83	16.07	7.18
HEs-Female	22.09	6.49	20.10	6.50
LEs-Male	18.54	4.80	16.45	5.67
LEs-Female	18.29	6.59	16.96	7.23

Note should be made of the consistent but insignificant speed superiority of high Es female Ss evident in Figure 2. It will be remembered that, in this experiment, female Ss were found to have significantly higher MAS scores than male Ss. In consideration of this finding, it appears that the differences in performance between male and female Ss may be attributed to the sex differences in MAS level.

TABLE V

SUMMARY OF ANALYSIS OF VARIANCE FOR THE Es-MAS CONTROLLED GROUPS

Source of Variation	SS	df	MS	F	p.
Between	387,925.72	31			
Es	4,805.53	1	4,805.53	.371	
Sex (S)	10,724.03	1	10,724.03	.827	
Es x S	9,456.46	1	9,456.46	.730	
Error	362,939.70	28	12,962.13		
Within	106,892.80	224			
Conflict (C)	7,247.23	1	7,247.23	27.880	.001
C x Es	8.78	1	8.78	.034	
C x S	30.65	1	30.65	.118	
C x Es x S	161.38	1	161.38	.621	
Trials (T)	44,174.96	3	14,724.99	56.648	.001
T x Es	1,525.36	3	508.45	1.956	
T x S	720.61	3	240.20	.924	
T x Es x S	1,090.27	3	363.42	1.398	
T x C	98.40	3	32.80	.126	
T x C x Es	44.41	3	14.80	.057	
T x C x S	517.56	3	173.52	.668	
T x C x Es x S	324.79	3	108.26	.416	
Error	50,948.40	196	259.94		
Total	494,818.52	255			

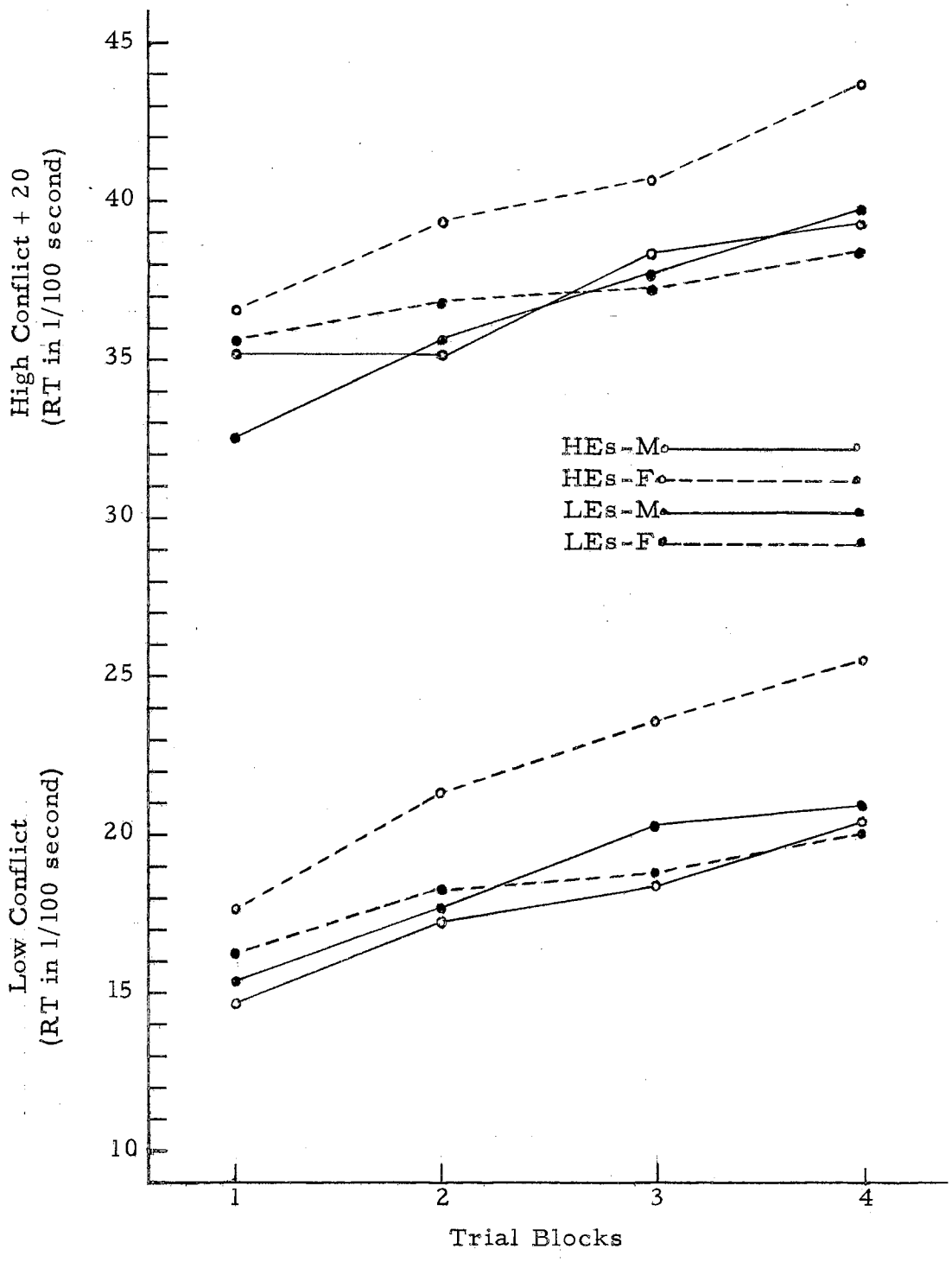

Fig. 2. Mean Performance Speed of Es-Mas Controlled Groups for Each Trial Block

CHAPTER V

INTERPRETATION OF THE RESULTS

Discussion

Taken together, the findings of the two experiments indicate that when Ss are selected solely on the basis of Es scores, high Es Ss show a consistent and, over trials, a progressively increasing superiority of performance over low Es Ss. However, when manifest anxiety is controlled for the ego strength groups, differences in performance between Es groups disappear. These findings appear to be consistent with the hypothesis that high Es Ss resolve conflicting tendencies faster due to a relative lack of interfering or irrelevant competing tendencies. Acceptance of this interpretation, however, signifies that the MAS must also be measuring interfering tendencies, since removal of MAS differences between Es groups led to an elimination of Es performance differences.

Although plausible, the view that the MAS measures interfering tendencies does not seem to accord with the findings obtained by Worell and Castaneda (1959) in a similar conflict study using only the MAS. In the present study, high Es (low MAS) Ss were superior to low Es (high MAS) Ss, whereas Worell and Castaneda found the

reverse, with high MAS persons responding faster than low MAS Ss. It should be noted, however, that in the present study the designation of Es groups in terms of manifest anxiety is based on the significant negative correlation (.-37) between the MAS and Es scales. Since this correlation is low, it is likely that only some high and low Es Ss would have the appropriate low and high anxiety levels. In order to check this contingency, high and low MAS groups were obtained without regard to Es scores. There were 16 Ss with scores above 20 and 9 Ss with scores below 10 among the Ss in both experiments. Since no sex difference was found, sexes were combined, and a Lindquist (1953) Type I analysis of variance (Table VI) was performed on the speed data of the MAS groups at two levels of conflict.

TABLE VI

SUMMARY OF ANALYSIS OF VARIANCE FOR THE ANXIETY GROUPS

Source	SS	df	MS	F	p.
Between	1,636.77	24			
A	20.50	1	20.50	.292	
Error	1,616.27	23	70.27		
Within	61.80	25			
C	39.29	1	39.29	41.71	.001
C x A	.85	1	.85	.90	
Error	21.66	23	.942		
Total	1,698.57	49			

Although no significant difference was obtained between the performances of these groups, the performance curves (Figure 3) were found to be somewhat similar to those obtained by Worell and Castaneda.

High anxious Ss responded slightly faster than low anxious Ss in both conflict situations.

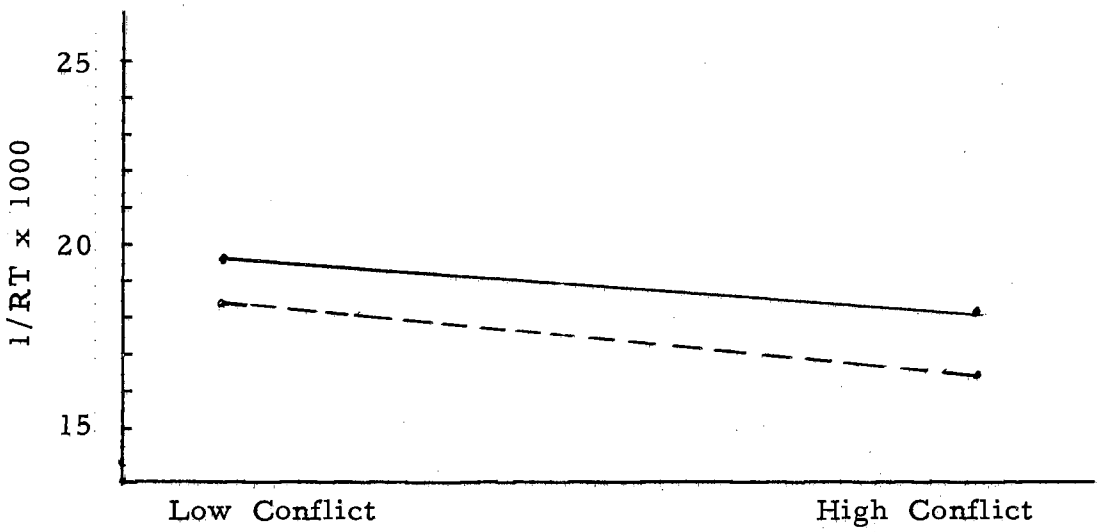

Fig. 3. Performance of High and Low Anxious Ss for Two Levels of Conflict (N=25)

Thus, it appears that selection of Ss according to manifest anxiety level results in some support for the "drive" hypothesis, but that selection of Ss according to ego strength leads to results consistent with the "interference" hypothesis. On the basis of these findings, it might be assumed that an interaction may exist between the components of the two scales that produces an effect on performance. It is clear that further research regarding this possible interaction is indicated.

Irrespective of the theoretical interpretation of the Es-scale, another finding of this study warrants consideration. The significant interaction of Es and trials, shown in Figure 2, indicated that high Es Ss tend to improve in their performance at a significantly faster

rate than low Es Ss. This result supports Barron's (1953) statement that high Es Ss show a greater ability to adapt than low Es Ss, and seems to offer some confirmation of the validity of the Es-scale as a measure of response to therapy. The greater ability of high Es Ss to resolve conflicting tendencies of the experimental type is consistent with the view that high ego strength persons may be able to "work through" and resolve emotional conflicts more rapidly than those with low ego strength.

Still another finding of this study also seems relevant to the prediction of the response of high and low Es patients to psychotherapy. The fact that no significant difference was found between the performance of high and low Es groups of equal manifest anxiety suggests the possibility that certain patients with low ego strength may respond to therapy as well as those having high ego strength if the anxiety level of the two groups does not differ. If this is true, then it would seem that utilization of both the Es and MAS scales in therapy might prove to have greater predictive accuracy than the use of the Es-scale alone. These are, of course, matters for further investigation.

Summary and Conclusions

In order to determine the effects of ego strength on speed of response to conflict, two experiments were conducted in which each S was exposed to two levels of discrimination conflict. In the first

experiment, the manifest anxiety level of high and low Es (Barron's Ego Strength Scale) Ss was not controlled, while in the second experiment, high and low Es Ss were matched in terms of manifest anxiety.

The following are the major findings of this investigation:

1. When subjects of high and low ego strength are selected without regard to MAS scores, high Es Ss resolve easy and difficult conflict situations faster than low Es Ss.

2. When Ss are selected only on the basis of MAS scores, the high MAS Ss tend to respond to both levels of conflict faster than low MAS Ss.

3. When high and low Es Ss are matched in terms of MAS performance, all differences in speed of response between Es groups disappear.

4. Although effeminacy has been listed as a characteristic of low Es males, there was no indication that low Es males respond like females to conflict.

5. The effects of degree of conflict and amount of practice were found to be very influential variables in determining speed of conflict resolution.

6. High Es Ss tend to adapt to both high and low conflict situations significantly faster than low Es Ss.

7. No clear support was obtained for the hypothesis that high Es Ss, due to a relative lack of interfering response tendencies, respond faster to high and low conflict conditions than low Es Ss; nor was there any evidence supporting the alternative hypothesis that low Es Ss, having a higher drive level, respond faster to high and low conflict conditions than high Es Ss.

The principal results regarding ego strength were interpreted as suggesting that an interaction may exist between ego strength and manifest anxiety which contributes to differences obtained between extreme Es Ss in experimental performance and response to therapy.

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