Winter 1972

Speed of conflict resolution as related to the Taylor manifest anxiety scale

Jeffrey Carter Fracher

SPEED OF CONFLICT RESOLUTION AS RELATED TO THE TAYLOR MANIFEST ANXIETY SCALE

BY

JEFFREY CARTER FRACHER

A THESIS
SUBMITTED TO THE GRADUATE FACULTY
OF THE UNIVERSITY OF RICHMOND
IN CANDIDACY
FOR THE DEGREE OF
MASTER OF ARTS IN PSYCHOLOGY

FEBRUARY 1972

SPEED OF CONFLICT RESOLUTION

AS RELATED TO THE TAYLOR MANIFEST ANXIETY SCALE

BY

JEFFREY CARTER FRACHER

Approved:

Kenneth A. Blick, Ph.D.
Chairman

Edward H. Tiller, Ph.D.

Jean N. Dickinson, M.S.

Table of Contents

Table of Figures

Table of Tables

Acknowledgments

The writer wishes to express sincere appreciation to Dr. Kenneth A. Blick for his guidance, patience, encouragement, and genuine interest throughout the course of this study. Grateful appreciation is also extended to Dr. Edward H. Tiller and Mrs. Jean Dickenson for their helpful criticism and aid.

Thanks should also be given to Mr. Wally Scherer who patiently offered help and guidance in the construction of the apparatus for use in the study.

Appreciation is also extended to those professors who donated time from their classes so that subject selection could be completed.

Finally, very special appreciation is given the author's parents, Rev. and Mrs. Louis H. Fracher, for their support, confidence, and encouragement throughout the study.

Chapter I

Introduction

The topic of conflict resolution is one which has received relatively little attention in psychological research even though individuals encounter, and must resolve, numerous conflicts in their daily lives. The present paper will attempt to shed some light on several facets of this area of interest.

Lewin (1931) is primarily credited with systematically introducing the topic of conflict into psychology. According to Lewin's field theory (1935) an organism may experience tension which results in restless nondirected behavior. Objects in the organism's environment give the restless behavior direction due to what is known as valence. If an object is attractive to the organism it is said to have positive valence; whereas, if an object is repelling, it is said to have negative valence. Therefore, positive valences elicit approach responses in the organism and negative valences elicit avoidance responses.

Lewin (1931) has defined conflict as the "opposition of equally strong field forces." Using his concepts of valences, vectors, and field forces, Lewin identified

three types of motivational conflicts. In a Type I conflict the organism is attracted to two positive valence objects. If the organism is simultaneously confronted with a positive valence object and a negative valence object in the same field a Type II conflict is said to exist. A Type III conflict involves having to choose to avoid one of two objects with negative valence.

Hovland and Sears (1938) extended Lewin's conceptualizations to include a Type IV conflict which consists of two Type II conflicts occuring together. In other words, the organism must choose between one of two goals, each of which has both positive and negative valences. They went on to label the conflicts as follows: Type I--approach-approach (AP-AP), Type II--approach-avoidance (AP-AV), Type III--avoidance-avoidance (AV-AV), and Type IV--double approach-avoidance (DAP-AV). A Type IV conflict was thought by Hovland and Sears (1938) to best approximate real life conflicts.

Hovland and Sears (1938) were the first to investigate Lewin's conflict types in the laboratory. Using a type of conflict board they investigated the four types of conflicts using a motor task. They were primarily concerned with the degree of difficulty encountered with the resolution of each conflict type and the mode of resolution most frequently utilized for each conflict type. Four modes of resolution were available to the Ss

and these include single response, double response, compromise response, and blocking or failure to make a response (since presumably every conflict must eventually be resolved, blocking represents an unusually long reaction time). The results of the study indicated that the Type I conflict was the most easily resolved since it was most often resolved by a single response. Type II and III conflicts were typically resolved with double and blocking responses respectively and were therefore judged more difficult to resolve than a Type I conflict. Type IV was said to be the most difficult to resolve due to blocking occuring at the highest percentage.

According to Bolles (1967), the great majority of research in conflict types since the Hovland and Sears (1938) study has been generated from Neal Miller's (1944, 1959) theoretical analysis of conflict behavior. However, as pointed out by Powell (1971), most of the research has been restricted to the animal laboratory. Therefore, the present study deals with human behavior in conflict resolution.

Arkoff (1957) extended the work of Hovland and Sears (1938) into the area of verbal conflict resolution. Restricting his investigation to AP-AP and AV-AV conflicts he attempted to involve the Ss emotionally and establish clear cut measures of conflict behavior. To measure the conflict behavior Arkoff examined the amount of time

taken to resolve the two types of conflicts, and the number of each type of conflict judged easiest to resolve. The conflicts were created by pairing together all possible combinations of seven positive personal characteristic adjectives. The Ss had to designate which of two positive personal characteristics they would rather have to a greater degree (AP-AP) or to a lesser degree (AV-AV). Results of the study indicated that the AV-AV conflicts required significantly more time to resolve than AP-AP conflicts. In addition, AP-AP conflicts were shown to be significantly easier to resolve than AV-AV conflicts based upon Ss' subjective evaluation. No significant differences for sex were found.

Additional studies by Edwards and Diers (1962) and Minor, Miller, and Ditricks (1968) extended and supported Arkoff's (1957) work on verbal conflict resolution.

Hovland and Sears (1938) indicated a need for further investigation of manual motor conflicts in addition to the more complex emotional ones such as those Arkoff (1957) and others have attempted to present experimentally. Grouping Ss in terms of extreme levels of generalized drive is a possible means of further examination of conflict resolution since the conflicts being considered are of a motivational nature due to the organism seeking to correct a valence imbalance (Lewin, 1935) and generalized drive level is thought to

be a primary determinant of motivation which in the present study is operationally defined by responses on a test of generalized drive. The Taylor Manifest Anxiety Scale (MAS) by Taylor (1953) has received widespread usage in psychological research as a psychometric measure of generalized drive. The majority of such research reviewed was concerned with the role of drive in performance of a task. Drive level was generally varied by means of the selection of Ss based upon extreme scores on the scale rather than by experimental manipulation such as electric shock or stress-producing instructions (Taylor, 1953). Taylor made two assumptions in using the MAS in the above-mentioned manner: (a) variation in drive level of S is related to the level of internal emotionality; and, (b) the intensity of this emotionality can be ascertained by a test (i.e. MAS) consisting of items describing what have been called manifest symptoms of this state (Taylor, 1953).

It is important to note that the author of the MAS was concerned solely with the role of drive in certain learning situations; the interest was not in investigating the phenomenon of anxiety nor was the purpose one of developing a clinical assessment tool to diagnose anxiety (Taylor, 1956). Therefore, the concept of "manifest anxiety," defined operationally only in terms of test scores, is that which is dealt with in the

present paper.

The first study to utilize the MAS was, of course, done by Taylor (1951) and involved the conditioned eyeblink response. Using one group each of high and low drive Ss, Taylor presented an airpuff to the S's right eye as the UCS, following a CS which was an increase in brightness of a lighted disc. As measured by the percentage of CRs (eyeblink responses) and trials to extinction of the CR, the high drive (HD) group was clearly superior in the amount of conditioning to the low drive (LD) group. Taylor (1956) interpreted these results to indicate that MAS scores reflect differences in a "chronic emotional state" so that Ss scoring high on the scale tend to bring with them a higher level of emotionality to the experimental situation than do Ss scoring at lower levels. In other words, differences between HD and LD groups should be found using the MAS whether or not there is a "threat" present in the form of noxious stimulation, fear of failure, etc.

After training Ss on a key pressing response, Wenar (1954) measured the reaction time of HD and LD Ss to three different stimuli presented in varying degrees of intensity--a buzzer, a weak shock, and a strong shock. The results indicated that reaction time was significantly related to both drive level and stimulus intensity, with response time being quicker as these variables increased.

It would appear from the studies discussed above that in simple conditioning experiments, HD Ss tend to demonstrate superior performance than do LD Ss. Other studies have shown however, that as the experimental task increases in complexity, the performance of LD Ss surpasses that of HD ones (Child, 1954; Kerrick, 1955). For example, Taylor and Spence (1952) found that Ss in a HD group require a greater number of trials to reach a criterion in a verbal learning situation involving competing responses than do LD Ss.

Based upon numerous lines of evidence, Child (1954) concluded, with regards to the MAS, that as "the task becomes more complex (in the sense of involving conflict among various response tendencies) there is a tendency for high anxiety subjects to show increasingly poor performance in comparison with low anxiety subjects."

In view of the summarized findings on conflict resolution and the MAS, the present paper is focusing specifically on the effect of drive level on both verbal and motor conflict resolution. As in previous verbal conflict studies, and in order to more objectively ascertain motor conflict behavior, speed of conflict resolution represents the dependent variable. If, as past findings suggested, HD Ss do indeed display poorer performance on tasks more complex than simple defense conditioning than do LD Ss; and, if in fact the AP-AP

conflicts require less time to resolve than AV-AV conflicts, which require less time to resolve than DAP-AV conflicts, then the following results would be predicted:

1. HD Ss would require greater time to resolve both verbal and motor conflicts of each type than would LD Ss with the resolution times of the groups differing significantly.
2. In either verbal or motor conflicts, for both HD and LD Ss, AP-AP, AV-AV, and DAP-AV resolution times would differ significantly with DAP-AV conflict requiring the longest time to resolve, followed by AV-AV conflict. The AP-AP conflict would require the least amount of time to resolve.

Chapter II

Method

Subjects. A total of 124 college students from introductory psychology classes at the University of Richmond were given the Taylor MAS as a preliminary screening device. Selection of groups was based upon procedure recommended by Taylor (1953) for use in studies employing the MAS to operationally define drive levels in human Ss. Two groups of 20 Ss each, or a total of 40 Ss, were chosen on the basis of extreme scores on the MAS. Those students whose scores were in the upper 15% of those tested on the MAS were placed in the High Drive (HD) group. The HD group contained 14 males and 6 females whose scores ranged from 28 to 43 "anxiety responses" out of a possible 50, with a mean score of 35.8. Those students whose MAS scores were in the lower 15% of those tested were placed in the Low Drive (LD) group. The LD group also contained 14 males and 6 females and scores in the group ranged from 1 to 11 "anxiety responses" with a mean of 6.2.

Apparatus. The apparatus used was a variation of the motor conflict board designed and used by Hovland and

Sears (1938). A sketch of the top view of the apparatus is presented in Fig. 1. Modifications were made to

---

Insert Figure 1 about here

---

conform to the motor conflict phase of the present study and to allow the board to be utilized in the verbal conflict phase. The apparatus consisted of a plywood base measuring 3 ft. in length and 2 ft. in width, divided in the middle by a partition 18 in. in height to separate S and E. Located on the S's side of the board were 4 Dialco lights, a red and a green on each side, 1-1/2 in. apart with 12 in. between each pair of lights. One in. below each pair of lights was a large black button centered between the lights. Either button, when pressed, would terminate power to any and all lights on the board in addition to an electrical interval timer. A Marietta 14-15D Digital .01 Second Timer was used and is the timer referred to above. All times were recorded to hundredths of a second. The timer was located out of the view of S throughout the experiment. A third button was located approximately 1 in. from the edge of the board in front of S in the center of the board. The button was a "dummy" though S was not aware of this fact, and merely served as a starting point for S's finger in the motor conflict resolution phase of the study. Located on E's

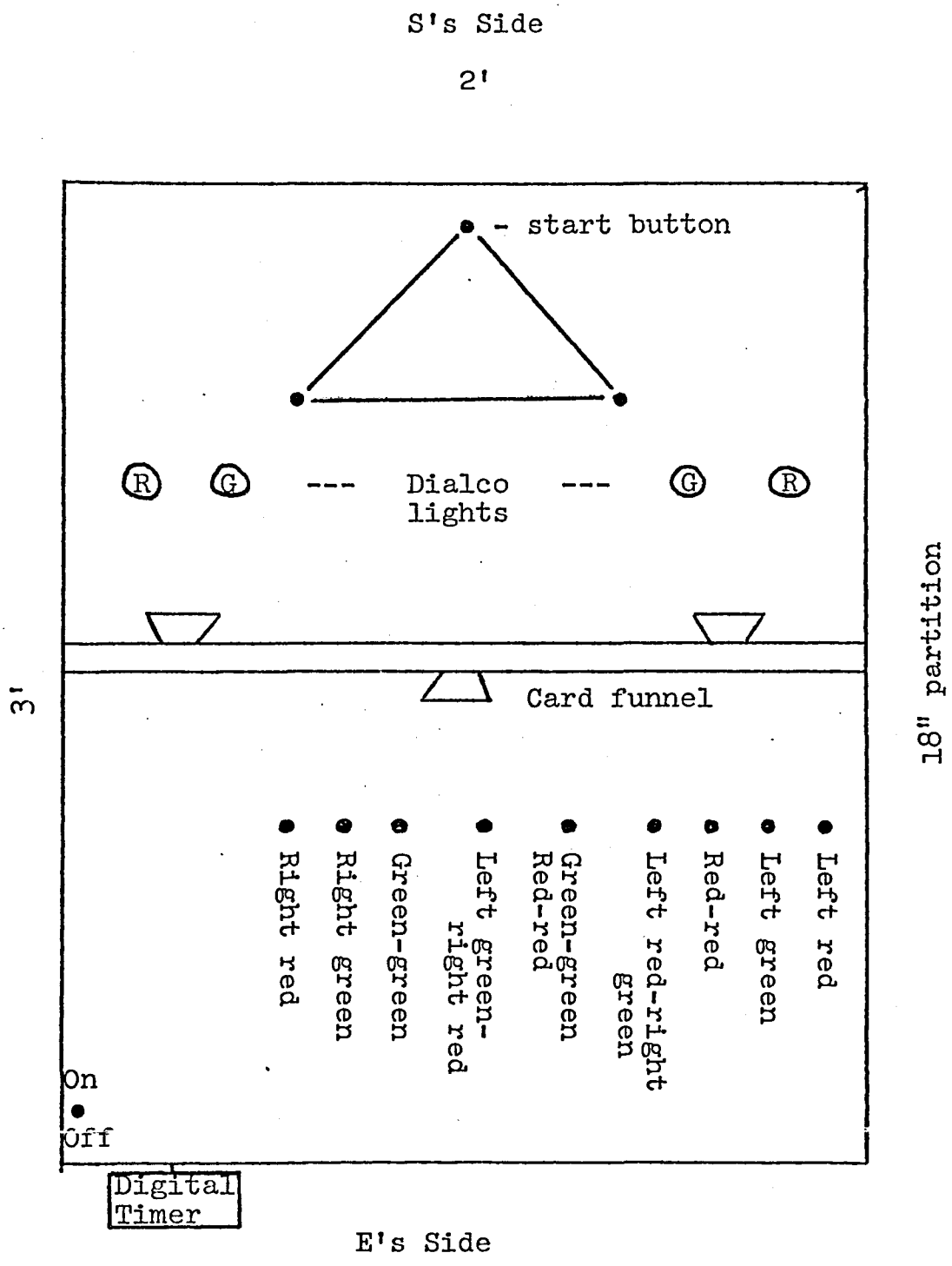


FIG. 1. Schematic Top View of the Motor and/or Verbal Conflict Apparatus

side of the center partition were 9 switches, each of which would light one of nine different combinations of red and green lights on the S side of the board in addition to activating the timer.

In addition to serving as a screen, the above-mentioned partition contained 3 slots to allow for exchanging of 3x5 cards containing verbal conflicts between E and S and vice-versa. The procedure was undertaken to prevent any variability due to E's reaction time. The 3 slots were located 2 in. apart in a row 12 in. from the base of the conflict board. The center slot contained a metal funnel on E's side of the partition to facilitate passing cards to S whereas the slots on the left and right had identical funnels on S's side of the partition to facilitate passing the cards back to E. A switch in the center slot activated the digital timer when a card was passed thru the slot to S, and a switch in either of the other slots de-activated the timer when a card was passed back to E.

For the verbal phase of the study, Powell's (1971) modification of the conflict types used by Arkoff (1957) was employed. The modification involved the use of personal characteristic adjectives judged to be high in desirability by a group of college women. The conflict presentation method involved using a 3x5 card across the top of which was typed the question: "Which would you

rather be?" The alternatives were printed on the left and right side of each card below the question. An example of the alternatives comprising each conflict type is given in Table 1. Six descriptive adjectives (well-

---

Insert Table 1 about here

---

adjusted, honest, sincere, intelligent, healthy, and confident) judged to be high in personal desirability in the Powell (1971) study were paired in all possible combinations. The assumption was made that pairing items high in personal desirability produced equally difficult conflict situations. Fifteen separate conflict pairings resulted from combining the adjectives of which 10 were randomly selected and placed in the AP-AP, AV-AV, and DAP-AV form shown in Table 1 to make a total of 30 conflict situations.

Procedure. In order to assure that no experimenter bias occured in data collection, the Ss from each of the two drive level groups were scheduled to appear randomly and E was unaware of the group to which S belonged until data collection was completed.

Instructions were given for the first phase of the experiment which could have been either the motor conflict resolution phase or the verbal conflict resolution phase since the two were alternated equally with regard

TABLE 1.

Verbal Conflict Items

AP-AP:	More healthy than you are now.	More honest than you are now.
AV-AV:	Less sincere than you are now.	Less intelligent than you are now.
DAP-AV:	More confident but less well-adjusted than you are now.	More well-adjusted but less confident than you are now.

to presentation. Assuming the motor conflict phase was to be first, the following instructions were given S:

> In front of you is a board with 4 lights on it. As you can see there is a red and a green light on each side. When I signal you by saying "OK" you will press the button directly in front of you. Please use only the forefinger of one hand keeping your nonpreferred hand in your lap. A short time after you have pressed the button in front of you one or more of the lights on the board will come on. If a green light comes on you are to trace along the line on the board with your forefinger to the button below that light and press that button. If a red light comes on you are to trace with your forefinger along the line to the button on the side opposite the red light and press the button there. In other words, you are to trace a line toward a green light should it come on and away from a red light should it come on. It is very important that your forefinger remain on the small black start button in front of you until you are absolutely sure of where you plan to trace on the board. The amount of time between when your finger leaves the start button and when it reaches one of the large black destination buttons should be kept at the very minimum. To do your best think about exactly where you intend to trace with your forefinger before it leaves the start button. This is very important. Now, are there any questions before we begin? I can answer no questions once we have started. OK, we are ready so please press the start button and we will begin.

At this point the first of the 3 counterbalanced conflicts types was presented. Counterbalancing was based on the Underwood (1966) A-B-C model so that each conflict type occured equally often at each stage of practice and preceded and followed the other conflict types an equal number of times.

For the AP-AP motor conflict S received a series of 10 practice trials in which he randomly received a single green light on either the left side of the board or the right side. The digital timer was activated on each practice trial although no record was kept of practice trial times. There was a 5 sec. intertrial interval during which S was asked to re-press the start button in front of him. On trial 11 both green lights were activated thus representing an AP-AP conflict. Conflict resolution time, consisting of the time interval between the activation of the two green lights and S's depression of one of the buttons below the lights, was then recorded to hundredths of a second.

The same procedure was followed for the AV-AV conflict as the AP-AP conflict except that a single red light was activated on either side of the board on the 10 practice trials with both red lights on trial 11 representing the AV-AV conflict. Again, conflict resolution time on trial 11 was recorded.

The procedure for the DAP-AV conflict was identical to the two above types except there was a series of 20 practice trials involving either a left green--right red or right green--left red which proceeded trial 21 when all 4 lights appeared simultaneously. As before, resolution time was recorded on the test trial. The additional practice trials for the DAP-AV conflict follows Hovland and Sears (1938) recommendation that due to the alleged

degree of difficulty of the DAP-AV conflict S should be given double the number of practice trials prior to presentation of the DAP-AV conflict.

Following completion of the first phase of the experiment a rest period of approximately 1 min. elapsed while E pretended to busy himself with notetaking out of the view of S. The second phase of the experiment, which in this case was the verbal conflict resolution phase, was then begun. The instructions used in the verbal conflict resolution study were a modification of those used by Arkoff (1957) and were as follows:

> Please listen carefully to the instructions for this task as I will not be able to answer any questions once we have begun. In front of you is a board with 3 slots in it. When we are ready to begin, and I signal you by saying "OK", I will pass a card to you through the center slot. Each card you receive will contain a conflict which you must resolve. Study the conflict presented. After choosing one of the alternatives pass the card back to me through the slot to your left if your choice is the alternative on the left side of the card. Pass the card back to me through the slot to your right if your choice is the alternative on the right side of the card. Pay no attention to the timer. Take as much or as little time with each card as you like. Imagine the conflict really confronts you. Be sure your choice is one you would make if you really had to decide. Now, if there are no questions we will begin. Ok, here is your first card.

The 30 verbal conflict cards, 10 of each type, were then presented in randomly distributed order and conflict resolution time was recorded for each card to the

hundredths of a sec.. A mean score of the times for each of the 3 conflict types was computed following completion of this phase of the experiment.

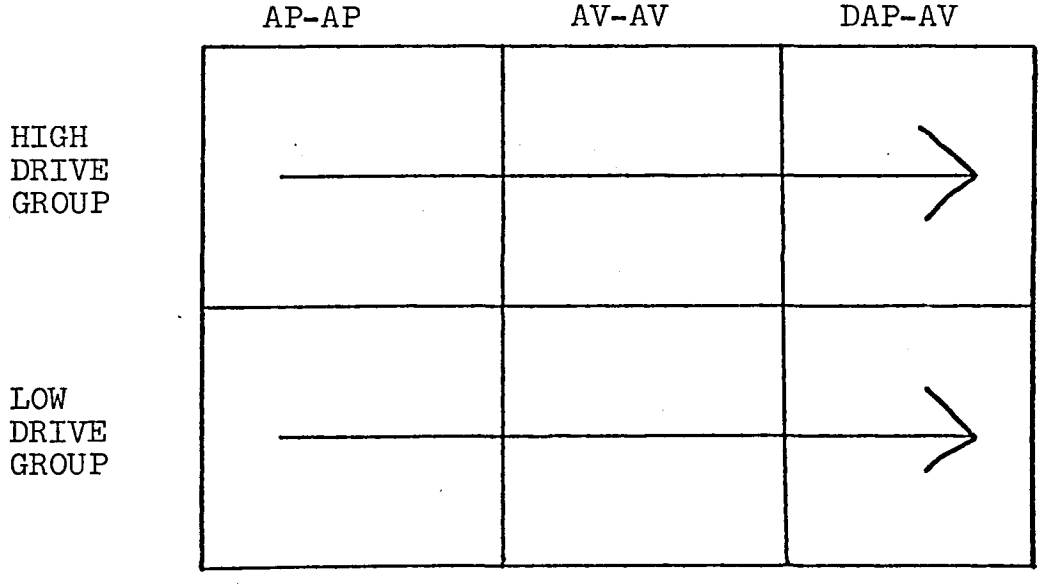
Table 2 is a schematic representation of the experimental design of both the verbal and motor phases of the study. The design is a 2x3 factorial with repeated measures on the second, or Conflict, factor. There were 20 Ss in each of the 2 levels of factor 1, the MAS-determined groups of HD and LD.

Insert Table 2 about here

TABLE 2

Experimental Design of Verbal and Motor Conflict Resolution Study

Conflict Type



Chapter III

Results

Motor Conflict Resolution. A 2x3 analysis of variance with repeated measures on the second factor yielded a nonsignificant Conflict X MAS interaction. However, significant main effects for both the MAS factor ($F(1, 38) = 24.30$, $p < .05$) and the Conflict factor ($F(2,76) = 14.54$, $p < .05$) were obtained. A significant main effect

---

Insert Table 3 about here

---

for the MAS factor indicated, as hypothesized, that the HD group took significantly longer to resolve the conflict types than did the LD group.

The Duncan test for differences among ordered means was performed on the significant Conflict factor. It

---

Insert Table 4 about here

---

indicated that AP-AP conflicts were resolved more rapidly than either AV-AV or DAP-AV conflicts ($p < .05$) but that

TABLE 3

Analysis of Variance: Motor Conflict Resolution

SOURCE	df	MS	F
Between Ss	39		
MAS	1	35.97	24.30*
Ss w. Grps.	38	1.48	
Within Ss	80		
Conflict	2	4.80	14.54*
MAS X Conflict	2	.41	1.24
Conflict X Ss w. Grps.	76	.33	

*$p < .05$

TABLE 4

Duncan Test of Differences: Motor Conflict Resolution

	Conflict Type		
	AP-AP	AV-AV	DAP-AV
ORDERED MEANS: (Sec. of res. time)	1.318	1.767	2.000*

*Means not underlined by a common line differ significantly at $p < .05$.

the two later conflicts did not differ significantly.

Figure 3 graphically depicts the 3 conflict types and the mean resolution times for the HD and LD groups.

Insert Figure 2 about here

Verbal Conflict Resolution. A 2x3 analysis of variance with repeated measures on the second factor yielded a significant Conflict X MAS interaction ($F(2, 76)= 9.13$, $p < .05$), in addition to the predicted significant main effects for both the MAS factor ($F(1, 38)= 29.73$, $p < .05$) and the Conflict factor ($F(2,76)= 90.04$, $p < .05$). Again, as hypothesized, the HD group took significantly longer time to resolve the conflict types than did the LD group. A test of simple effects

---

Insert Table 5 about here

---

of the significant Conflict X MAS interaction yielded a significant difference for both Conflict at HD ($F(2,76)= 74.76$, $p < .05$) and Conflict at LD ($F(2,76)= 24.42$, $p < .05$). The Duncan Test for differences among ordered

---

Insert Table 6 about here

---

means was performed on both significant simple effects.

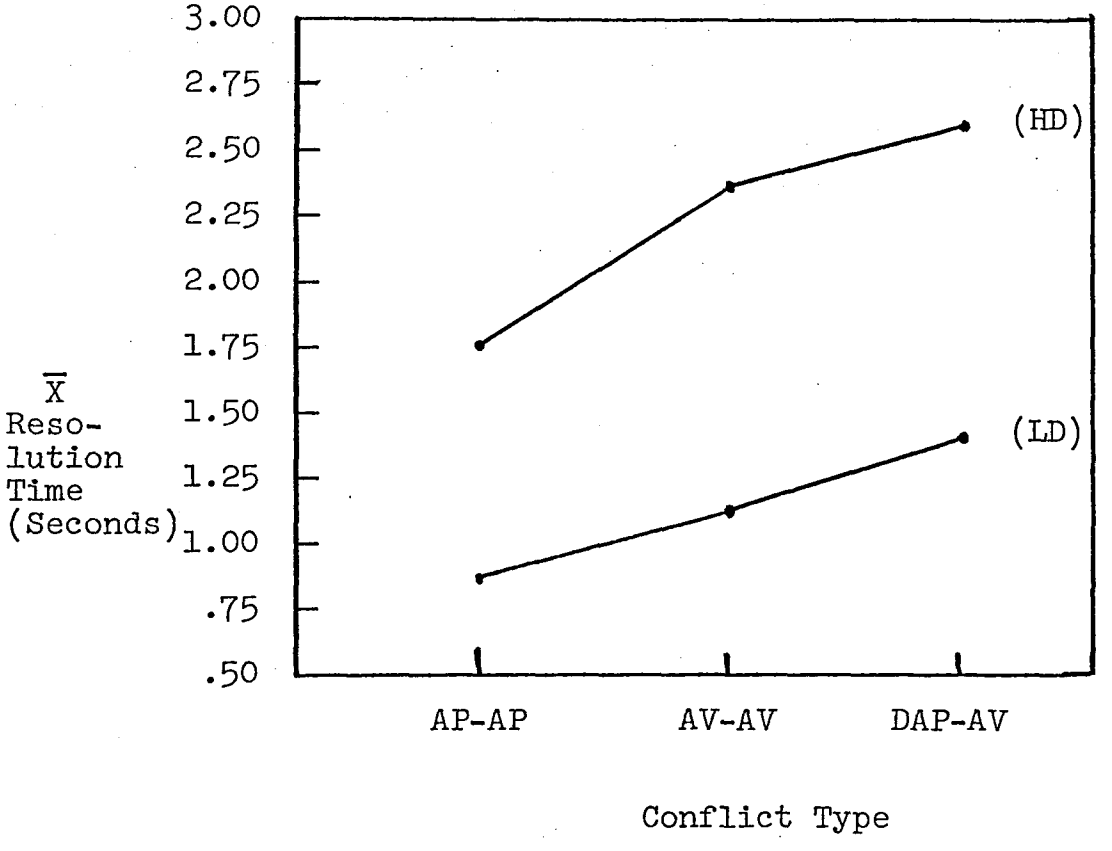


FIG. 2. Speed of Motor Conflict Resolution for HD and LD Ss.

TABLE 5

Analysis of Variance: Verbal Conflict Resolution

SOURCE	df	MS	F
Between Ss	39		
MAS	1	166.19	29.73*
Ss w. Grps.	38	5.59	
Within Ss	80		
Conflict	2	62.13	90.04*
MAS X Conflict	2	6.30	9.13*
Conflict X Ss w. Grps.	76	.09	

*$p < .05$

TABLE 6

Analysis of Variance:
Verbal Conflict Resolution Simple Effects

SOURCE	df	MS	F
Conflict at HD	2	51.59	74.76*
Conflict at LD	2	16.85	24.42*
Error	76	.69	

*$p < .05$

For the Conflict at HD it indicated, as expected, that AP-AP conflicts were resolved significantly faster ($p < .05$) than AV-AV conflicts and that each of these were resolved significantly faster ($p < .05$) than DAP-AV conflicts. The Duncan Test for Conflict at LD revealed

---

Insert Table 7 about here

---

that, again as predicted, all 3 conflict types differed significantly ($p < .05$) with regard to resolution time.

Insert Table 8 about here

As with Conflict at HD, and once again as expected, the AP-AP conflicts were resolved significantly faster ($p < .05$) than AV-AV conflicts and each of these types were resolved significantly faster ($p < .05$) than the DAP-AV conflict.

Figure 3 graphically depicts the results of the verbal conflict resolution study as described above.

Insert Figure 3 about here

TABLE 7

Duncan Test of Differences:
Verbal Conflict at High Drive

	Conflict Type		
	AP-AP	AV-AV	DAP-AV
ORDERED MEANS: (Sec. of res. time)	6.90	8.59	10.05

*Means not underlined by a common line differ significantly at $p < .05$.

TABLE 8

Duncan Test of Differences:
Verbal Conflict at Low Drive

	Conflict Type		
	AP-AP	AV-AV	DAP-AV
ORDERED MEANS: (Sec. of res. time)	5.28	6.10	7.11

*Means not underlined by a common line differ significantly at $p < .05$.

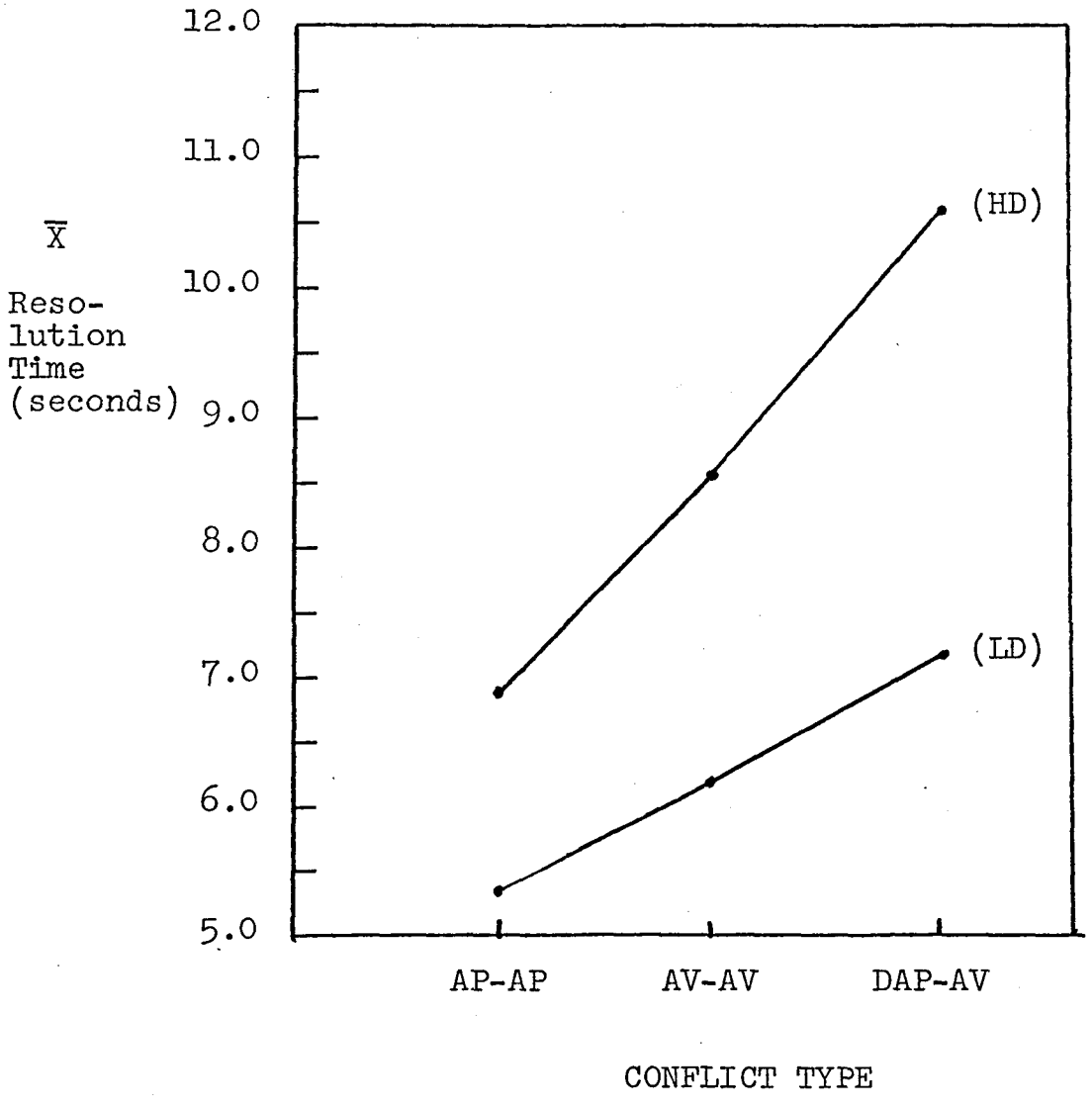


FIG. 3. Speed of Verbal Conflict Resolution for HD and LD Ss.

Chapter IV

Discussion

Motor Conflict Resolution. Previous findings in a similar study (Hovland and Sears, 1938) that motor AP-AP conflicts were easier to resolve than AV-AV or DAP-AV conflicts were confirmed in the present study assuming that significantly shorter resolution time can be equated with Hovland and Sears' (1938) criterion of "easier," which was that conflict type with the highest percentage of single responses. Since the present study did not concern itself with modes of resolution but rather with conflict resolution time as the dependent variable, it is difficult to make a direct comparison with Hovland and Sears (1938) and to state unequivocally that their results were confirmed. On the other hand, the difference in the dependent variables perhaps explained the nonsignificant difference between resolution times of AV-AV and DAP-AV conflicts; a finding which contradicted Hovland and Sears' (1938) results. Whereas DAP-AV conflicts on a motor task was more difficult to resolve than AV-AV if the dependent variable is percentage of a certain type of response, the apparent difference in the degree of resolution difficulty

did not appear to exist in the present study where the amount of time necessary to resolve the AV-AV and DAP-AV conflicts was being examined. Even though AV-AV and DAP-AV conflicts apparently required more time to resolve than an AP-AP, or choosing between two positive valence alternatives, the amount of time required to resolve a motor conflict situation containing two negative valences, as both the AV-AV and DAP-AV do, did not differ significantly as demonstrated in the present study.

Verbal Conflict Resolution. As past findings (Arkoff, 1957; Edwards and Dier, 1962; Minor, Miller, and Ditricks, 1968; and Powell, 1971) have indicated, AP-AP conflicts were easier and therefore resolved more rapidly than AV-AV conflicts which in turn were resolved more rapidly, and were thereby easier to resolve, than DAP-AV conflicts. Since the criteria in all verbal conflict studies mentioned has been speed of conflict resolution, and since the results of all the studies, including the present one, concur, no apparent problems existed in assimilating the results of the present study. The results of those studies mentioned above perhaps give a better representation of real life conflict behavior and the degree of difficulty inherent in actual conflicts since they do, as Arkoff (1957) pointed out, involve the individual more emotionally than the previously-discussed motor conflicts. In addition, verbal conflicts seemingly establish more clear cut measures of conflict behavior

since they are of a more cognitive nature than motor conflicts which involve visual-motor discrimination and reaction behavior.

MAS Groups. Results of both the verbal and motor conflict phases of the present study regarding the HD and LD groups were consistent with the findings of previous research (Child, 1954; Kerrick, 1955; Taylor and Spence, 1952). The results indicated that both types of conflict resolution constitute "complex behaviors" as defined by Child (1954) and as opposed to simple classical defense conditioning.

Taylor (1956) has indicated that the differential performance of HD and LD groups in a relatively complex task is dependent upon the number and comparative strengths of the various response tendencies. The present study has apparently demonstrated that two is a sufficient number of response tendencies to result in significantly different HD and LD group behavior.

Further support was given by the present study to Taylor's (1956) theoretical statement that MAS scores reflect differences in a "chronic emotional state" since performance of the HD and LD groups was the same in both the verbal and motor conflict situations. Differences between the two groups was found on each of the two tasks, neither of which presented a "threat in the form of noxious stimulation, fear of failure, etc."

As Powell (1971) noted, past research into conflict resolution, motor or verbal, has focused primarily on either (a) the alternative chosen, or (b) the process of or activities involved in conflict resolution. Whereas, the present study has not dealt directly with (a) or (b), it has pointed out that whatever the activities or processes involved in conflict resolution, they are seemingly influenced by an individual's pre-existing level of generalized drive. The theoretical implication seems to be that regardless of the undefined cognitive or motor processes involved in conflict resolution, the fact that an individual has a relatively high level of generalized drive apparently increases the amount of time required in the conflict resolution process as compared to low drive individuals.

Ex Post Facto Consideration. Overlooked in the Powell (1971) study, and in the present study until data collection was completed, was an apparent confounding variable in the verbal conflict resolution phase of the study. Whereas the AP-AP and AV-AV conflict statements contained 12 words, the DAP-AV conflict contained 18 words. Since reading time of the conflict statement was included in resolution time, any significant difference in reading time between the 12 and 18 word statements would seriously confound the results. In order to investigate the possibility of a reading time difference,

22 college students, none of whom participated in the original study, were each asked to simply read 10 cards containing 12-word conflict statements and 10 cards containing 18-word conflict statements. Ten AV-AV statements (12 words) and 10 DAP-AV statements (18 words) were presented in ABBA counterbalanced order. The apparatus used in the verbal conflict phase of the original study was used to record, to .01 sec., reading times for each S. Mean reading times on the 12-word and 18-word conflicts for each S were determined and a repeated-measures ANOV was performed. It revealed that the reading time for 12-word statements ($\bar{x}$= 3.73 sec.) differed significantly from the reading time for 18-word statements ($\bar{x}$= 4.71 sec.) with $F(1,21)= 62.76$, $p < .05$ (see Table B in appendix). The finding of a differential reading time confounded the significant difference between the DAP-AV conflicts and both the AV-AV and AP-AP conflicts in the verbal conflict phase of the study for both the HD and LD groups.

The ex post facto study indicated that the mean of all 18-word reading times differed by approximately one sec. from the mean of all 12-word reading times, as previously mentioned. The numerical difference between the mean conflict resolution time for each of the verbal conflict types in both the HD (AP-AP= 6.90, AV-AV= 8.59, DAP-AV= 10.06) and LD (AP-AP= 5.28, AV-AV= 6.10, DAP-AV= 7.11) was approximately 1 to 1.5 sec.. Therefore, by

correcting for reading time, the apparent significant difference between DAP-AV conflict resolution time and AP-AP and AV-AV conflict resolution times quite possibly ceased to exist were reading time adequately controlled for. However, the question remains purely speculative at this point and only a replication of the original study with proper reading time controls would provide the answer. The reading time variable did not, of course, confound the significant difference between conflict resolution for AP-AP and AV-AV conflicts at both HD and LD since both of the conflict types consisted of 12-word statements.

Several possibilities exist as means of controlling the variable of reading time in future studies dealing with verbal conflict resolution. One such possibility would involve a pretest to establish Ss reading rates which would be used as a covariate in analyzing the speed of conflict resolution by Analysis of Covariance. A possible change in procedure to control for reading time would involve having E read the conflict to S before activating the timer by passing the conflict card to S. Instructions would specify that S was not to re-read the card but only to resolve the conflict by returning the card to E through the appropriate slot to indicate the choice of alternatives. A third possibility would involve familiarizing S with the format on each conflict

type and presenting only the adjectives of the alternatives on a screen or apparatus such as the T-scope. S would indicate his choice of alternatives by pressing a button. Though the suggestions above represent only several possibilities, it is quite clear that some type of well-defined procedure must be undertaken in future research in verbal conflict resolution so that reading time is an adequately controlled variable.

In that the resolution times recorded in the original study involved a single resolution time for each motor conflict and a mean resolution time for each verbal conflict, no valid statistical comparison of Ss behavior in the two forms of conflicts could be made. A follow-up study is therefore indicated to investigate the similarity of behavior of Ss in verbal and motor conflicts. Possibly resolution time could again serve as the dependent variable, and provided similar measures could be established for both sets of conflicts, an Analysis of Variance could be performed on the data.

In addition to the above, several other areas of follow-up research were indicated and they include:

1. Further investigation, as indicated by Kimble and Garmezy (1963), into the personality characteristics of the "kinds of persons who respond with indecision and uncertainty under minimal conflict or with speed, dispatch, and lack of vacillation under conflicts of

considerable complexity (p. 489)." Any number of personality tests could be related to conflict resolution behavior as was done with the MAS in the present study.

2. Examination of the effects of modeling on the behavior of HD and LD Ss in conflict resolution. A modeling procedure similar to that used by Powell (1971) could be employed to investigate the modifiability of the speed with which HD and LD Ss resolve motor and verbal conflicts.

3. Collection of qualitative data on personal characteristic adjectives with regard to degree of desirability for use in verbal conflict research. Whereas Powell (1971) touched on this area, much more extensive work is indicated if verbal conflicts of comparable difficulty are to be available for use in other verbal conflict studies.

4. Investigation of the effects of situational variables on the speed of conflict resolution. Such variables as fear of failure, threat in the form of noxious stimulation, or motivating instructions, might be considered. Ss could be grouped as HD and LD on the basis of such situational variables. Results could be compared with the behavior of HD and LD Ss as determined by the MAS.

In addition to the suggestions listed above there are undoubtedly numerous other areas in conflict

resolution requiring examination. Hopefully, psychologists will begin to focus more attention on an area so relevant to human behavior.

Chapter V

Summary and Conclusions

The present study has sought to investigate both verbal and motor conflict behavior as a function of generalized drive level. It was hypothesized that high drive Ss would require longer to resolve all conflicts than the low drive Ss; and furthermore, the DAP-AV conflicts would require longer to resolve than both the AP-AP and AV-AV conflicts. In addition, the AV-AV would require longer to resolve than the AP-AP conflict.

Twenty Ss in each of two groups, designated as high drive (HD) and low drive (LD) according to extreme scores on the Taylor Manifest Anxiety Scale, had to resolve AP-AP, AV-AV, and DAP-AV conflicts of both a motor and a verbal form. The dependent variable was speed of conflict resolution. A 2x3 factorial design for repeated measures on the second, or Conflict, factor was used.

Regarding the two drive groups in the motor phase of the study, results were in agreement with past findings in that the HD group, as predicted, took significantly (at .05 level) longer to resolve all three types of motor conflicts than the LD group. Only the AP-AP was found to differ significantly from both other types, a finding not

in complete agreement with past research. Possible reasons for this outcome were discussed.

In the verbal phase of the study the HD group, also as predicted, took significantly longer to resolve all types of conflicts than the LD group. Also, the three conflict types were found to differ significantly ($p < .05$) as suggested by past research. The DAP-AV took singificantly longer to resolve than the AV-AV conflict which in turn took significantly longer to resolve than the AP-AP. The AP-AP, of course, differed significantly from the DAP-AV. However, a possible confounding between resolution time and reading time was discovered and the possible effect it might have on results of the verbal phase of the study were discussed.

TABLE B

Analysis of Variance:
Number of Words per Verbal Conflict Type

SOURCE	df	MS	F
Between Groups	1	10.67	62.76*
Error	21	.17	

*$p < .05$.

References

Arkoff, A. Resolution of approach-approach and avoidance-avoidance conflicts. Journal of Abnormal and Social Psychology, 1957, 55, 402-404.

Bolles, R. C. Theory of motivation. New York: Harper and Row, 1967.

Child, I.L. Personality. Annual Review of Psychology, 1954, 5, 149-170.

Edwards, A. and Diers, C. Social desirability and conflict. Journal of Social Psychology, 1962, 58, 349-356.

Hovland, C. and Sears, R. Experiments on motor conflict I. Types of conflict and their modes of resolution. Journal of Experimental Psychology, 1938, 23, 477-493.

Kerrick, J.S. Some correlations of the Taylor Manifest Anxiety Scale. Journal of Abnormal and Social Psychology, 1955, 50, 75-77.

Kimble, G. A. and Garmezy, N. Principles of general psychology. (2nd ed.). New York: Ronald Press Co., 1963.

Lewin, K. Environmental forces in child behavior and development. In C. Murchinson, A Handbook of Child Psychology. Worcester, Mass.: Clark University Press, 1931.

Lewin, K. A dynamic theory of personality. New York: McGraw-Hill, 1935.

Miller, N. Experimental studies in conflict. In J. M. Hunt (Ed.), Personality and the Behavior Disorders, 1944.

Miller, N. Liberalization of basic S-R concepts: extensions to conflict behavior, motivation, and social learning. In S. Koch (Ed.), Psychology: A Study of a Science. New York: McGraw-Hill, 1959.

Minor, J., Miller, L., and Ditricks, R. The effect of an undecided alternative on resolution of approach-approach and avoidance-avoidance conflict situations. Psychonomic Science, 1968, 12(8), 375.

Powell, N. Influence of vicarious reinforcement on an observer's speed of conflict resolution. Unpublished Master's Thesis. University of Richmond, 1971.

Taylor, J.A. The relationship of anxiety to the conditioned eyelid response. Journal of Experimental Psychology, 1951, 41, 81-92.

Taylor, J.A. A personality scale of manifest anxiety. Journal of Abnormal and Social Psychology, 1953, 48, 285-290.

Taylor, J.A. Drive theory and manifest anxiety. Psychological Bulletin, 1956, 53, 303-320.

Taylor, J.A. and Spence, K.W. The relationship of anxiety level to performance in serial learning. Journal of Experimental Psychology, 1952, 44, 61-64.

Underwood, B. J. Experimental Psychology, (2nd ed.) New York: Appleton-Century-Crofts, 1966.

Wenar, C. Reaction time as a function of manifest anxiety and stimulus intensity. Journal of Abnormal and Social Psychology, 1954, 49, 335-340.

Winer, B. Statistical principles in experimental design. New York: McGraw-Hill, 1962.

Vita

Jeffrey Carter Fracher was born on January 8, 1948, in Waynesboro, Virginia. He grew up and attended public schools in Waynesboro, Virginia and was graduated from Waynesboro High School in 1966.

From 1966 until 1970 Mr. Fracher attended Randolph-Macon College in Ashland, Virginia. He was graduated from that institution in May, 1970 with a B.A. in Psychology. While at Randolph-Macon College Mr. Fracher was honored with memberships in Who's Who Among Students in American Colleges and Universities, Pi Gamma Mu Social Science Fraternity, and Omicron Delta Kappa Leadership Society.

Mr. Fracher studied at University of Richmond in Richmond, Virginia from 1970 until 1972 and expects to receive a M.A. degree in Psychology from that institution in February, 1972. While there he was honored with membership in Psi Chi Psychology Fraternity.

Upon completion of his studies at University of Richmond Mr. Fracher plans to assume a position as Psychologist with the Commonwealth of Virginia, Department of Mental Hygiene and Hospitals, at Western State Hospital in Staunton, Virginia.