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John Milam Brame

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ABSOLUTE AND RELATIVE BIDIRECTIONAL TRANSFER
IN VERBAL CONFLICT RESOLUTION TASKS

BY

JOHN MILAM BRAME

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ABSOLUTE AND RELATIVE BIDIRECTIONAL TRANSFER
IN VERBAL CONFLICT RESOLUTION TASKS

BY

JOHN MILAM BRAME

Approved:

Kenneth A. Blick

Kenneth A. Blick, Ph.D.
Chairman

Barbara K. Sholley

Barbara K. Sholley, Ph. D.

Robin C. Tucker

Robin C. Tucker, Ph. D.

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ABSOLUTE AND RELATIVE BIDIRECTIONAL TRANSFER
IN VERBAL CONFLICT RESOLUTION TASKS

John Brame

University of Richmond

Abstract

Prior exposure to difficult motor conflicts has been shown to impede later performance in resolving easier conflicts. To determine if similar negative transfer occurred with verbal conflicts, 80 undergraduates resolved conflicts formed by pairing seven personal characteristic adjectives. Additional transfer effects associated with moving from easier to more difficult conflicts were also examined. Using a conflict resolution board, one group of Ss resolved 10 double approach-avoidance (DAP-AV) conflicts followed by 10 approach-approach (AP-AP) conflicts, and another group transferred from AP-AP to DAP-AV. Two additional groups, which resolved 20 conflicts of the same type (AP-AP or DAP-AV), were used in assessing relative transfer effects. Results from five two-factor ANOVA's indicated longer resolution times associated with DAP-AV conflicts, but no absolute or relative transfer in either direction, $p < .05$. Failure to show generalization of conflict-specific responses may have resulted from procedural artifacts. Refinements of procedure and some implications for future research were discussed.

It was Lewin (1935) who first cast conflict behavior into a theoretical framework which was instrumental in stimulating basic research into this area. The concept of conflict resolution was an outgrowth of Lewin's dynamic and representational form of theorizing. According to Lewin, an organism behaves as it does because of a combination of inner-personal tension states and psychological field forces. Briefly, tension (produced by an inner need) furnishes the "push" for behavior, and the location of a valued (or valenced) region in the more peripheral psychological field produces the "pull" (positive or negative) for behavior. This combined "push-pull" process results in the end force which determines the organism's locomotion, or behavior. Inasmuch as there may exist a number of valenced regions associated with any particular tension state, the occurrence of conflicting behavioral tendencies is inevitable. It was in order to represent such situations that Lewin (1935) delineated three major types of conflict.

Lewin (1931) defined conflict as the "opposition of equally strong field forces." In a Type I conflict (Lewin, 1935) the organism is simultaneously attracted by two positive-valenced objects. Lewin thought that such conflicts were relatively easy to resolve. Type II conflicts consist of those in which the organism is both attracted to and repelled from objects in the same field. In this case the attracting object is said to have a positive valence, and the repelling object is said to have a negative valence.

Lewin thought that such conflicts were relatively more difficult to resolve. Type III conflicts are those in which the organism is simultaneously confronted by two negative-valenced objects. Lewin predicted that responses to Type II and Type III conflicts would be characterized by blocking tendencies and by attempts to withdraw from the field. Thus, Lewin provided a rather clear conceptual framework for investigating conflict behavior. He defined the basic types of conflict situations and gave a terminology to the components of a conflict. These contributions, coupled with the proposed behavioral manifestations of conflict, were instrumental in fostering further research into this area of investigation.

Hovland and Sears (1938) performed the first laboratory investigation of Lewin's conflict types. In conducting their research, they added a fourth type of conflict to those offered by Lewin. This type was composed of two interlocking Type II situations encountered concurrently by an organism. In other words, the organism is faced with two separate goals, both of which contain positive and negative aspects. This type of conflict, termed Type IV, was believed to more closely approximate real life situations. Hovland and Sears (1938) conferred a more descriptive set of labels on the various conflict types which they investigated. These labels were 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).

The primary concern of Hovland and Sears (1938) was in determining the relative difficulty of the types of conflicts as indicated by the most frequent modes of resolution. Using a conflict board, which allowed S to respond with a graphic motor response, they were able to differentiate four modes of resolution: single response, double response, compromise response, and blocking or failure to make a response. They speculated that the blocking reaction signified an unusually long reaction time, since presumably all conflicts could eventually be resolved. Results of their study indicated that DAP-AV conflicts elicited the highest percentage of blocking responses, followed respectively by AV-AV, AP-AV, and AP-AP conflicts. By their criteria, DAP-AV situations were clearly the most difficult to solve. The AP-AP and AP-AV conflicts were typically resolved by single responses and double responses, respectively. Both AV-AV and DAP-AV conflicts typically resulted in blocking reactions.

A very interesting auxiliary finding by Hovland and Sears (1938) concerned a group of SS who practiced solving DAP-AV conflicts and were then exposed to AP-AV conflicts. The SS in this condition displayed approximately twice as many blocking responses in the AP-AV situation as did SS who had only been exposed to AP-AV conflicts. Practice in resolving a more difficult conflict (DAP-AV) resulted in an increased proportion of blockages when the SS were subsequently exposed to an easier conflict (AP-AV). Stated in

different terms, there was a negative transfer effect in moving from DAP-AV to AP-AV conflicts.

A second set of experiments by Sears and Hovland (1941) was directed at determining the effect of the relative strengths of competing tendencies upon modes of conflict resolution. Again motor responses were required in two separate experiments involving AV-AV conflicts. In the first experiment escape from electric shock was used to manipulate the relative strengths of two incompatible responses. In the second experiment differing ratios of practice between conflicting responses produced the strength differences. In both experiments it was found that fewer blockages occurred when there was a difference in response strengths. Sears and Hovland (1941) used their results as evidence to support their hypothesis that blockage increases as the strengths of conflicting responses approach equality. This proposal has been termed the "equivalence hypothesis" by Bitterman (1944).

Brown (1942) applied the principle of instrumental response generalization in his analysis of conflict behavior and its relation to difficult discrimination reactions. He was primarily interested in the effects of drive and punishment on the resolution responses of AP-AP, AP-AV, and AV-AV conflicts. Of more importance here, however, is his explanation of discrimination reactions in terms of approach and avoidance tendencies. Specifically, when a discrimination habit is established in relation to stimuli on the same

continuum, tendencies to approach the positive stimulus will generalize in a decreasing fashion toward the negative stimulus. Likewise, avoidance tendencies will generalize toward the positive stimulus. By positioning both the positive and the negative stimulus at an intermediate position on the continuum, the generalized approach and avoidance tendencies would be approximately equal, and a special DAP-AV conflict would exist. As illustrated by Hovland and Sears (1938), this was a difficult conflict to resolve. Therefore, Brown (1942) expected blockage to occur frequently in this condition. His experiment with rats in a brightness discrimination problem confirmed this expectation.

Using his finding that pairs of intermediate stimuli did produce increased response times, Brown (1942) set up a series of what he termed "breakdown" tests. In these tests the positive and negative stimuli jointly converged toward an intermediate stimulus value in six incremental steps. The result of this procedure was that the previously established discrimination habit was disrupted, and response times were increased. (The increased response times were much more evident for Ss shocked for inappropriate responses during "breakdown" trials than for non-shocked Ss.) Following "breakdown" trials, Ss were again subjected to the original "easy" discrimination task. For all groups of Ss, responses to the original discrimination task were adversely affected in terms of response times.

Brown (1942) considered his results as an explanation of the experimental neurosis effect originally found by Pavlov (1927). In these studies, animals required to make very fine discriminations soon exhibited disrupted responses to stimuli which normally evoked consistent responding. It has been shown that this disrupted manner of responding can also accrue, presumably through response generalization, to stimuli other than the ones used in establishing the experimental neurosis (Liddell, 1944).

Miller's (1944) analysis of conflict also focused attention on the parallel between aspects of conflict resolution and reactions to difficult discriminations. He reinforced Brown's (1942) reasoning that response generalization was instrumental in producing response disruption in separate, but similar, conflict situations. He further proposed that the act of making a decision produced stimuli which were relatively similar in different choice situations. Responses associated with these stimuli could therefore generalize to new, but similar, choice situations. Miller (1944) described such an occurrence as "spread of conflict," and noted its relation to behavioral disorders often reported by clinicians.

Further support for the "spread of conflict" hypothesis was demonstrated in a study by Worell (1962). Since the aims and results of this study bear a direct relation to the current investigation, a more detailed account of this work is rendered. The task used was a brightness

discrimination conflict and the dependent variable was reaction latency, or the time required to initiate a decision. Subjects were initially exposed to 16 "easy" discrimination conflicts. Such conflicts were produced by requiring SS to make button-pressing responses to either the brighter or dimmer of two lights. In the easy situation, a very bright and a very dim light were presented. Following this, five experimental conditions were administered to different groups. In the high conflict conditions, two equally bright (Group I) or equally dim (Group II) lights were presented. For intermediate conflicts, relatively bright and dim lights were presented (Groups III and IV). The fifth condition consisted of continued training with the original easy conflict (Group V). There were 24 trials for all SS in this stage of the experiment. Subsequent to these differential training procedures, all SS were finally subjected to 24 trials at the original easy conflict level. Results of the experiment showed that the differential training conditions produced different speeds of conflict resolution as expected. High conflict groups took longer to resolve the discriminations than did intermediate conflict groups, which were also slower than the low conflict group. A beneficial practice effect was also shown for Groups III, IV, and V; no such effect was exhibited by Groups I and II. An additional finding was that the strength of conflict depended primarily upon the relative strengths of the competing tendencies, a finding also made

by Sears and Hovland (1941). There was no evidence that the absolute values of stimulus pairs were related to degree of conflict.

The major finding of Worell (1962) concerned the effects of practice at different conflict levels upon later performance in resolving easy conflicts. The predictions which he made were again supported by the data. An analysis of the difference scores (postconflict performance minus preconflict performance) showed that high conflict groups were significantly impeded in reaction time as compared to intermediate and low conflict groups. Worell (1962) considered his results as offering primary support for the competing response hypothesis of conflict behavior. This hypothesis holds that exposure to conflict leads to the learning of conflict-specific responses. Such responses are then generalized to related conflicts along dimensions of similarity of situations. Thus, exposure to strong conflicts produced longer reaction time responses which were generalized to similar weak conflicts and resulted in impaired performance. By way of contrast, the effects of conflict training were not shown in a study by Worell and Castaneda (1961) in which the conflict-arousing stimuli were dissimilar from those used in the testing situation.

In discussing his results, Worell (1962) alluded to the parallel between his findings and clinical descriptions of people faced with strong conflicts. These descriptions frequently indicate that such individuals demonstrate

inefficient behavior not only in relation to strong conflicts, but also in resolving comparatively mild conflicts. Worell contended that the parallel was valid, subject to the degree of similarity which exists between previously experienced and present conflicts.

Barker (1946) extended the study of conflict behavior into the area of verbal conflicts. Using college students as Ss, he presented a questionnaire containing all possible pairs of 18 personal characteristics and environmental conditions. For one group, the characteristics were worded positively; for the other group, negatively. Subjects were required to indicate their preferred choice for each pair of statements, and to mark those decisions about which they were uncertain. By counting the frequency with which each characteristic had been selected, a positive or negative valence was assigned to each characteristic. Results indicated that the frequency of uncertainty increased as the difference between the valences of the alternatives decreased. Also, there was a greater frequency of uncertainty for negative as opposed to positive alternatives.

Arkoff (1957) made a similar investigation of verbal conflicts in an attempt to involve his college-student Ss emotionally. Using seven positive personal characteristics, he constructed all possible paired comparisons. The Ss had to designate which of two positive characteristics they would rather have to a greater degree (AP-AP) or to a

lesser degree (AV-AV). Subsequently, Ss were asked to sort the conflicts into two piles, one for conflicts they considered more difficult, one for those judged less difficult. Arkoff used two measures of conflict behavior: the decision time in resolving each conflict, and the number of conflicts of each type judged to be easier to resolve. Results indicated that AV-AV conflicts required significantly more time to resolve than AP-AP conflicts. In addition, based upon Ss' subjective evaluation, AP-AP conflicts were judged to be easier to resolve than AV-AV conflicts. There were no significant sex differences.

Edwards and Diers (1962) were interested in the resolution behavior displayed in AP-AP and AV-AV conflicts as related to the tendency of individuals to respond in a socially desirable manner on personality inventories. Items from the Edwards Personal Preference Schedule (EPPS) constituted the conflicts in this study. The EPPS is so constructed that the two alternative responses for each item are approximately equal in terms of judged social desirability (SD). Further the relative amount of SD associated with each alternative has been found. From this information AP-AP conflicts (items with high SD) and AV-AV conflicts (items with low SD) were identified. The EPPS was administered with special instructions that S could omit items which he felt were too difficult. The rationale for this procedure was that removing pressure to respond would allow S to block when difficult items were encountered.

Subjects were grouped on the basis of high or low scores on Edwards' Social Desirability scale, purported to measure the tendency to choose socially desirable alternatives. The results showed that response omissions were more frequently made in connection with AV-AV conflicts than with AP-AP conflicts, a finding in agreement with Barker (1946). It was also revealed that high scorers on the SD scale gave significantly more no-choice responses than did low scorers.

A study by Powell (1971) relied upon verbal materials, similar to those used by Arkoff (1957), in determining the effect of vicarious reinforcement upon the speed of conflict resolution. Powell used 14 positive personal characteristics to create conflict pairs. Positive or negative wording of the characteristics allowed the formation of AP-AP, AV-AV, or DAP-AV conflicts. Following the pretest phase, college Ss were exposed to performance by a model S. The model was either reinforced for fast responding (RF), slow responding (RS), or not reinforced (NR). The Ss then encountered the posttest conflicts. An analysis of covariance revealed a significant effect of conflict types, as expected, and in agreement with applicable findings by Arkoff (1957). The vicarious reinforcement factor was effective in that Ss in the RF condition were faster than those in the RS condition. Neither of these conditions was significantly different from the NR treatment. Thus, Powell concluded that imitation and vicarious reinforcement were operations by which one's manner of conflict resolution could be modified.

In view of the evidence presented concerning "spread of conflict" in rats (Brown, 1942) and in motor tasks with human ss (Hovland & Sears, 1938; Worell, 1962), the present study is concerned with spread, or transfer of conflict, in verbal tasks. Specifically, if such an effect is operative with verbal stimuli, then practice in solving difficult conflicts would impede the subsequent resolution of similar easy conflicts. Alternatively, prior exposure to easy conflict situations would be expected to enhance performance under strong conflicts. Difficult conflicts in the present study are defined as DAP-AV conflicts, those requiring a longer time for resolution in the Powell (1971), Fracher (1972), and Bloomfield (1973) studies. Easy conflicts are defined as AP-AP conflicts, those with relatively shorter resolution times in the three studies just mentioned. (Results of a pilot study, Appendix A, indicated that an alternative method for defining easy and difficult conflicts was unfeasible.) As in previous verbal conflict studies the speed of resolution served as the dependent variable. If the conflict-specific response associated with a difficult or easy task generalizes to a later task of a different difficulty level, then the following results would be predicted:

1. Upon initial encounter AP-AP conflicts would be resolved significantly faster than DAP-AV conflicts.
2. The absolute transfer effect for DAP-AV conflicts following practice with AP-AP conflicts would be positive. Thus, second task performance in

- moving from AP-AP to DAP-AV conflicts (AP-AP;DAP-AV) would be significantly faster than initial task performance in the DAP-AV followed by DAP-AV (DAP-AV;DAP-AV) situation.
3. The absolute transfer effect for AP-AP conflicts following practice with DAP-AV conflicts would be positive, due to practice effects. Thus, second task performance in moving from DAP-AV to AP-AP conflicts (DAP-AV;AP-AP) would be significantly faster than initial trials performance in the AP-AP followed by AP-AP (AP-AP;AP-AP) situation.
 4. The transfer from AP-AP to DAP-AV conflicts would be positive relative to the DAP-AV;DAP-AV situation. Second task resolution times for the AP-AP;DAP-AV situation would therefore be significantly faster than second task times in the DAP-AV;DAP-AV situation.
 5. The transfer from DAP-AV to AP-AP conflicts would be negative relative to transfer in the AP-AP;AP-AP situation. Second task resolution times for the DAP-AV;AP-AP sequence would be significantly slower than second task times in the AP-AP;AP-AP situation.

Method

Subjects. A total of 82 male and female undergraduate students from three introductory psychology classes at the

University of Richmond served as Ss. Participation in the present study was a requirement of the introductory psychology course. The Ss had no prior knowledge of the purpose of the experiment.

Apparatus and Materials. The apparatus used for the individual conflict resolution task was the modified conflict board designed by Fracher (1972), and equipped with a Hunter Silent Timer. Although this apparatus was designed to allow for the performance and measurement of both motor and verbal conflicts, only the verbal conflict portion was used in this study. The apparatus used consisted of a plywood base, 3 ft. in length by 2 ft. in width, and divided in the middle by a plywood partition 18 in. in height. This vertical partition contained three slots which allowed for the passing of 3 x 5 index cards containing verbal conflicts between E and S. The three slots were located in a row 12 in. from the base of the conflict board, and separated by a horizontal distance of 2 in.. A funnel was appended to the center slot on E's side of the partition to facilitate the passing of cards to S. The slots on the left and right had similar funnels on S's side of the partition. A switch in the center slot activated the silent timer when a card was passed through the slot. Similar switches located in the left and right slots deactivated the timer when a card was returned by S to E. The slots and automatic timer were incorporated into the

design of the apparatus in order to prevent any variability in timing due to E's reaction time.

The verbal conflicts posed to the Ss were formed by pairing personal characteristic adjectives as originally conceived by Arkoff (1957). All verbal conflicts were presented in typed form on plain white 3 x 5 index cards. The two formats used on these cards, one for AP-AP conflicts and one for DAP-AV conflicts, followed those of Bloomfield (1973). In both formats a total of 16 words appeared on each card. Across the top of all cards appeared the words: "Would you rather be:". Below these words appeared the alternatives, one typed on the left and the other typed on the right side of the card. An example of the AP-AP conflict format is given in Table 1, which also indicates

Insert Table 1 about here

the actual pairings of the adjectives used. An example format for the DAP-AV conflicts is given in Table 2 along

Insert Table 2 about here

with the actual pairings used for this type of conflict. An additional sample card was prepared for use during the preliminary instructions to Ss. The purpose of this card was to familiarize Ss with the format of the conflicts which would be presented. The sample card followed the AP-AP

TABLE 1

 Format for AP-AP Conflicts and List of Adjectives Used

 Format for AP-AP Conflicts

Would you rather be:

 more CONFIDENT than
 you are now

 more HEALTHY than
 you are now

 Adjective Pairs Used in AP-AP Conflicts

CONFIDENT - HEALTHY
 CONFIDENT - HONEST^a
 CONFIDENT - POPULAR^a
 HEALTHY - HONEST^a
 HEALTHY - POPULAR^a
 HEALTHY - WELL-ADJUSTED^a
 HONEST - INTELLIGENT^a
 HONEST - SINCERE
 HONEST - WELL-ADJUSTED
 INTELLIGENT - CONFIDENT
 INTELLIGENT - HEALTHY^a
 INTELLIGENT - SINCERE^a
 POPULAR - HONEST
 POPULAR - INTELLIGENT^a
 POPULAR - SINCERE
 SINCERE - CONFIDENT
 SINCERE - HEALTHY
 WELL-ADJUSTED - CONFIDENT^a
 WELL-ADJUSTED - INTELLIGENT
 WELL-ADJUSTED - POPULAR

^aPairs of items randomly selected for use with AP-AP;
 DAP-AV and DAP-AV:AP-AP groups

TABLE 2

 Format for DAP-AV Conflicts and List of Adjectives Used

 Format for DAP-AV Conflicts

Would you rather be:

more CONFIDENT but
less HONEST

more HONEST but less
CONFIDENT than now

 Adjective Pairs Used in DAP-AV Conflicts

CONFIDENT - HONEST^a
 CONFIDENT - POPULAR
 CONFIDENT - INTELLIGENT^a
 HEALTHY - CONFIDENT
 HEALTHY - INTELLIGENT
 HEALTHY - SINCERE^a
 HONEST - HEALTHY
 HONEST - POPULAR^a
 HONEST - SINCERE^a
 INTELLIGENT - HONEST
 INTELLIGENT - POPULAR^a
 INTELLIGENT - WELL-ADJUSTED
 POPULAR - HEALTHY
 POPULAR - SINCERE^a
 POPULAR - WELL-ADJUSTED^a
 SINCERE - CONFIDENT^a
 SINCERE - INTELLIGENT
 WELL-ADJUSTED - CONFIDENT^a
 WELL-ADJUSTED - HEALTHY
 WELL-ADJUSTED - HONEST

^aPairs of items randomly selected for use with AP-AP:
DAP-AV and DAP-AV:AP-AP groups

format and paired two adjectives, dependable and tolerant, which were not otherwise used in this study.

The seven personal characteristic adjectives used in this study (confident, healthy, honest, intelligent, popular, sincere, well-adjusted) were seven of the eight judged highest in personal desirability in the Powell (1971) study. Powell (1971) had 29 students, ". . . most of whom were female . . . [p. 15] ," to rank order 14 adjectives. An overall ranking was then formulated based upon median rank order values. Powell's assumption was that pairing items high in personal desirability produced equally difficult conflict situations. For the seven characteristics used in the present study, all possible pairings resulted in 21 pairs. Since only 20 pairs were needed (for 20 trials), one pair was randomly omitted. As a result of the pairing procedure, each adjective (except for sincere and well-adjusted) was matched with six other adjectives. On three of the cards upon which adjectives appeared, the adjective was on the right side. The other three appearances were on the left side. Sincere occurred on the right side three times and on the left side twice. The opposite distribution was made for well-adjusted.

To facilitate presentation to Ss in different conditions, three separate decks of 20 cards each were constructed. The first deck consisted of the 20 adjective pairs cast in the AP-AP format. The second deck consisted of the 20 adjective pairs cast in the DAP-AV format. A

third deck was composed of 10 AP-AP and 10 DAP-AV conflicts. The 10 conflicts of each type were randomly selected from the 20 original AP-AP and 20 original DAP-AV conflicts.

Procedure. Ss were randomly assigned to one of the four conditions. In all conditions Ss were presented with 20 conflicts by use of the modified conflict resolution board. The first 10 conflicts and the last 10 conflicts were either similar or dissimilar in type (AP-AP or DAP-AV), depending upon the experimental condition. The four experimental conditions, and groups, are delineated as follows: DAP-AV:DAP-AV; AP-AP:DAP-AV; AP-AP:AP-AP; DAP-AV:AP-AP. A total of 82 Ss reported for the experimental sessions; however, data from one S was eliminated due to failure to follow instructions, and data from another S was eliminated because of extraneous noise adjacent to the experimental room. A total of 80 Ss, 20 Ss in each of the four groups, completed the task.

For the individual conflict resolution task, Ss reported to the laboratory at designated times. After being seated facing the S side of the conflict board, Ss were asked to read the following instructions while the E read them aloud.

In front of you is a vertical board with three slots in it. When we are ready to begin, I will signal you by saying "OK" and then will pass a card to you through the center slot. Each card you receive will contain a conflict which you must resolve. Study the alternatives of 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.

Now I am going to pass to you a card to serve as an example which will familiarize you with the format of the card and what to do when you have made a decision.

(SEE SAMPLE CARD)

In resolving these conflicts, imagine that each conflict really confronts you. Be sure that your choice is one you would make if you really had to decide. Take as much time or as little time with each card as you like.

I will not be able to answer any questions once we have begun. If there are no questions, we will now begin.

The 20 conflicts of the appropriate type were then randomly presented to Ss in the DAP-AV:DAP-AV and AP-AP: AP-AP groups. For the AP-AP:DAP-AV and DAP-AV:AP-AP groups, the 10 conflicts of one type were presented in random order, followed by another 10 conflicts of the appropriate type, also in random order. Resolution time for each conflict was measured to the nearest hundredth of a second. An interval of time always elapsed between the resolution of one conflict by S and the appearance of the next conflict which he was to resolve. During this interval E recorded the resolution time of the previous conflict, reset the timer, and selected the next card for insertion through the center slot. An estimate of the time required for this procedure was obtained by measuring the intertrial interval for an additional S whose scores were not used in the data analysis. The intertrial interval varied around a mean of 8.39 sec., with standard deviation of .52 sec..

Results

Analysis of AP-AP and DAP-AV Resolution Times. An ANOVA was conducted to determine if different resolution times were produced in the resolution of AP-AP and DAP-AV conflicts the first time either of these tasks was encountered. The AP-AP resolution times of all groups which initially encountered this type of conflict were compared to the DAP-AV resolution times of all groups initially engaged in this task. The mean speed of resolution for AP-AP conflicts was 11.93 sec., as opposed to 17.59 sec. for DAP-AV conflicts. The results of the 2 X 10, Groups X Trials, repeated measures ANOVA (Table 3) indicated that

 Insert Table 3 about here

the observed means were significantly different, $F(1,78) = 18.64$ $p < .05$. No effects due to trials or interaction were indicated. Resolution times across trials are shown in Figure 1.

 Insert Figure 1 about here

Analysis of Absolute Transfer. The second analysis performed concerned the occurrence of absolute transfer, as indicated by time scores, of practice in AP-AP conflict resolution to performance in resolving DAP-AV conflicts. The 2 X 10 ANOVA (Table 4) with repeated measures on the

TABLE 3
 Analysis of Variance: Initial Performance,
 Groups X Trials

Source	df	MS	F
<u>Between Ss</u>	<u>79</u>		
Groups	1	6,403.72	18.64*
<u>Ss w. Grps.</u>	78	343.47	
<u>Within Ss</u>	<u>720</u>		
Trials	9	103.08	1.65
Groups X Trials	9	64.58	1.03
<u>Trials X Ss</u> w. Grps.	702	62.43	

* $p < .05$.

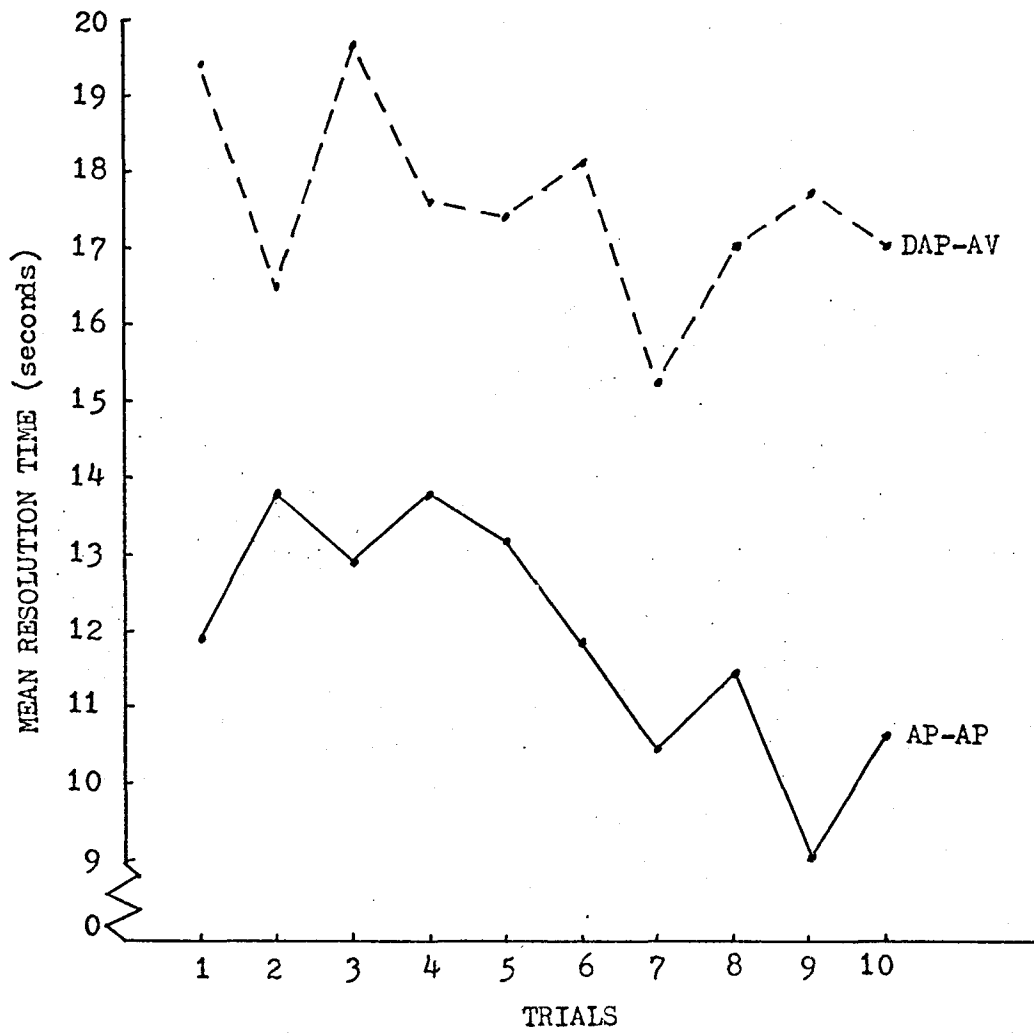


Fig. 1. Initial Performance Resolution Time for AP-AP and DAP-AV Conflicts.

second factor yielded no significant effects due to Groups,

 Insert Table 4 about here

Trials, or an interaction of these factors. The DAP-AV resolution times across trials for the AP-AP:DAP-AV and DAP-AV:DAP-AV groups are shown in Figure 2.

 Insert Figure 2 about here

A separate 2 X 10, Groups X Trials, repeated measures ANOVA (Table 5) was performed to test for absolute transfer

 Insert Table 5 about here

from practice with DAP-AV conflicts to performance with AP-AP conflicts. The ANOVA yielded no significant effects due to Groups, Trials, or an interaction of these factors. The mean resolution times across trials for this analysis are depicted in Figure 3.

 Insert Figure 3 about here

Analysis of Relative Transfer. In order to determine if there was a transfer effect for the AP-AP:DAP-AV condition compared to the DAP-AV:DAP-AV condition, a 2 X 10, Groups X Trials ANOVA, repeated measures, was performed on

TABLE 4

Analysis of Variance: Absolute Transfer from
AP-AP to DAP-AV (Groups) X Trials

Source	df	MS	F
<u>Between Ss</u>	<u>39</u>		
Groups	1	709.88	1.85
<u>Ss w. Grps.</u>	38	384.14	
<u>Within Ss</u>	<u>360</u>		
Trials	9	92.56	1.34
Groups X Trials	9	58.36	.84
<u>Trials X Ss</u> w. Grps.	342	69.20	

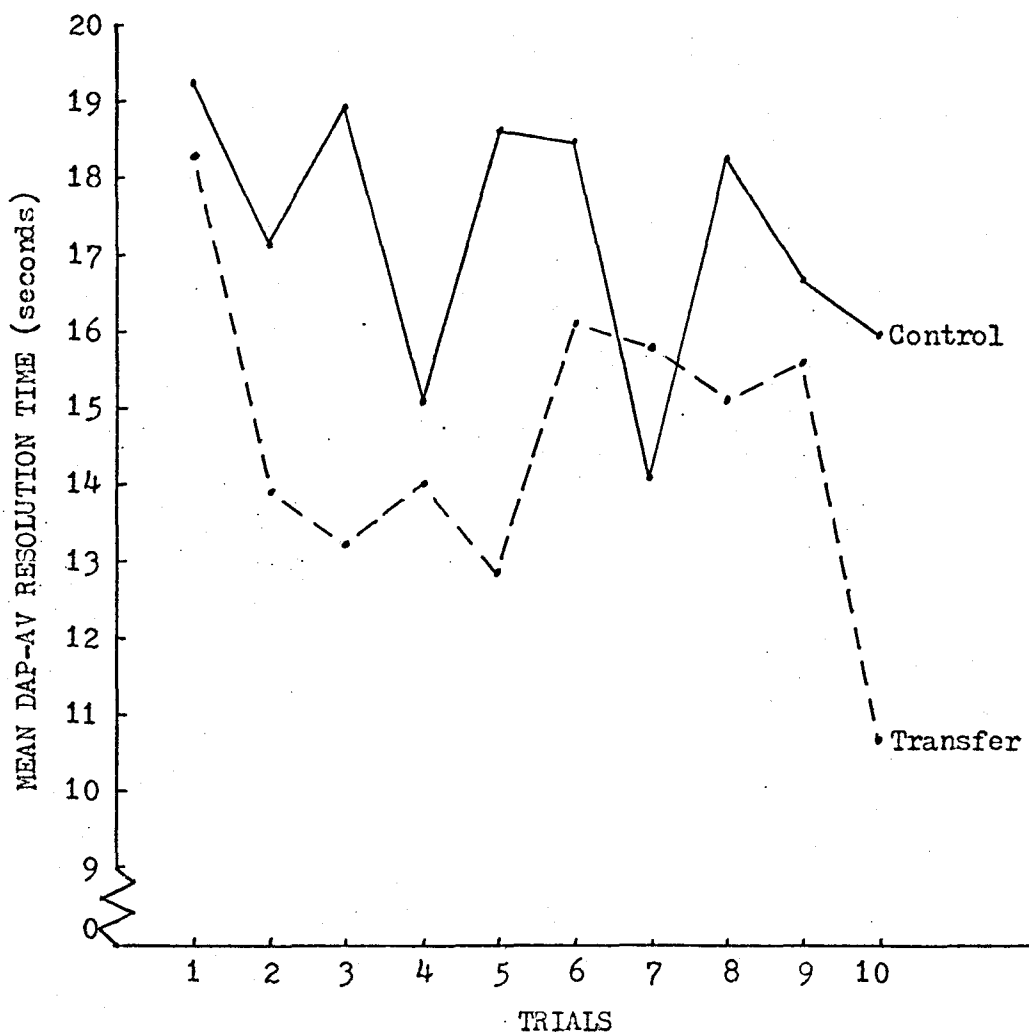


Fig. 2. DAP-AV Resolution Time for AP-AP:DAP-AV Transfer Group and DAP-AV:DAP-AV Control Group.

TABLE 5

Analysis of Variance: Absolute Transfer from
DAP-AV to AP-AP (Groups) X Trials

Source	df	MS	F
<u>Between Ss</u>	<u>39</u>		
Groups	1	140.86	.42
<u>Ss w. Grps.</u>	<u>38</u>	<u>333.79</u>	
<u>Within Ss</u>	<u>360</u>		
Trials	9	80.03	1.42
Groups X Trials	9	44.56	.08
Trials X <u>Ss</u> w. Grps.	342	56.21	

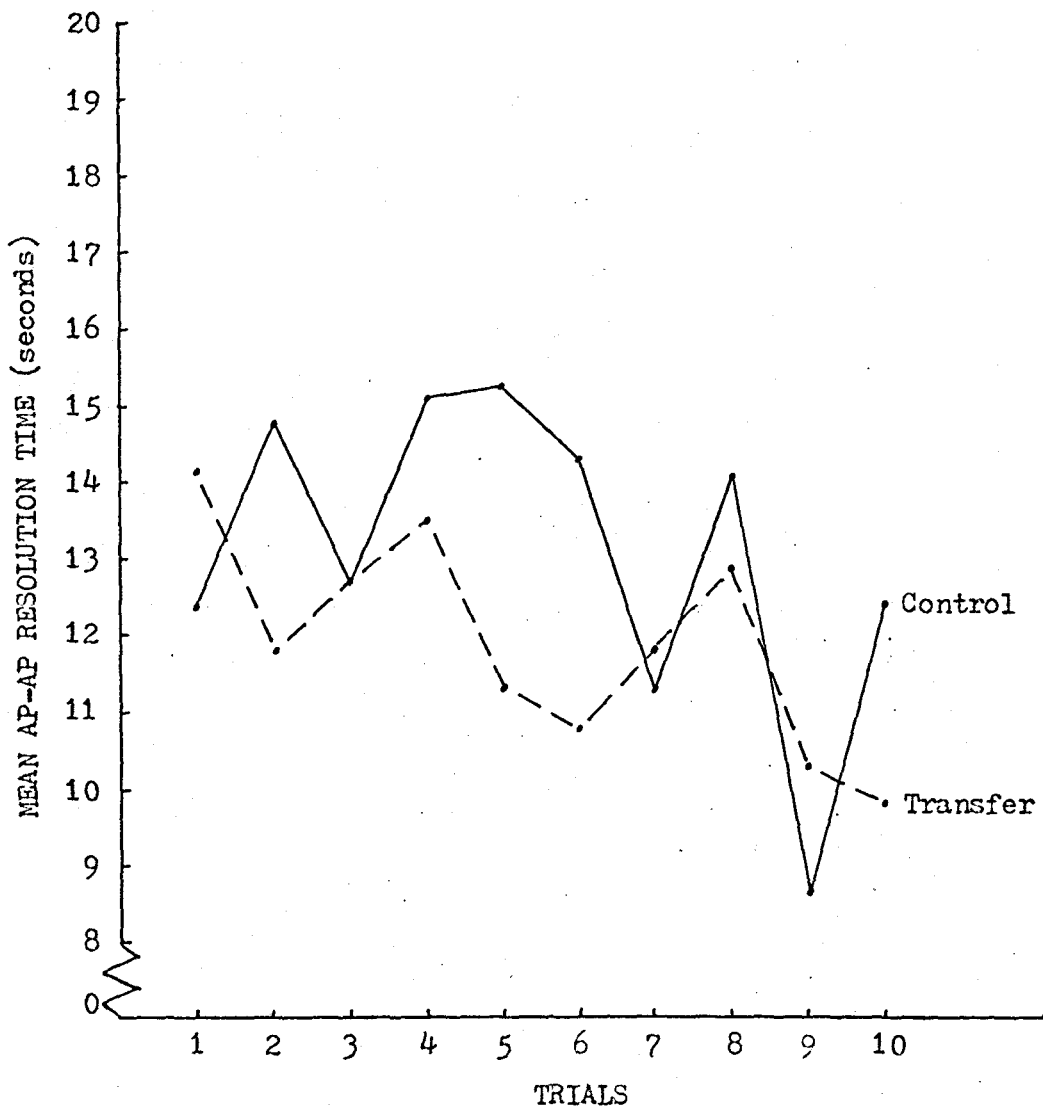


Fig. 3. AP-AP Resolution Time for DAP-AV:AP-AP Transfer Group and AP-AP:AP-AP Control Group.

on the second block of trials for these groups. Results (Table 6) indicated a significant Groups X Trials interaction, $F(9,342) = 2.72$ $p < .05$; the Trials main effect was

 Insert Table 6 about here

also significant, $F(9,342) = 1.99$ $p < .05$. A simple effects test of the significant interaction (Table 7) revealed that

 Insert Table 7 about here

the AP-AP:DAP-AV group resolution time was significantly faster than that of the DAP-AV:DAP-AV group only on trial three. Examining Trial effects within each of the conflict groups by means of another simple effects test, it was found that no significant Trial effect existed in the AP-AP:DAP-AV condition; there was a significant difference between trials (Table 7) for the DAP-AV:DAP-AV condition, $F(9,342) = 3.46$ $p < .01$. The nature of this trial difference was investigated by use of the Duncan test for differences among ordered means (Table 8). The test indicated that the

 Insert Table 8 about here

mean resolution time for trial 10 was significantly faster than the mean resolution time for trial 3, $p < .05$. Figure 4 graphically depicts resolution times for this relative

TABLE 6

Analysis of Variance: Relative Transfer,
 Groups (AP-AP:DAP-AV compared to DAP-AV:DAP-AV) X Trials

Source	df	MS	F
<u>Between Ss</u>	<u>39</u>		
Groups	1	16.08	.04
<u>Ss w. Grps.</u>	<u>38</u>	<u>383.27</u>	
<u>Within Ss</u>	<u>360</u>		
Trials	9	140.53	1.99*
Groups X Trials	9	192.54	2.72*
<u>Trials X Ss</u> w. Grps.	<u>342</u>	<u>70.69</u>	

*p < .05.

TABLE 7
 Simple Effects Analysis of Variance: Relative Transfer,
 Groups X Trials

Source	df	MS	F
Groups at Trial 1	1	341.46	3.35
Groups at Trial 2	1	49.20	.48
Groups at Trial 3	1	482.61	4.73*
Groups at Trial 4	1	1.40	.01
Groups at Trial 5	1	318.66	3.13
Groups at Trial 6	1	181.99	1.79
Groups at Trial 7	1	.70	.01
Groups at Trial 8	1	165.32	1.62
Groups at Trial 9	1	192.33	1.89
Groups at Trial 10	1	8.90	.09
SS w. cell	206	101.95	
Trials at AP-AP:DAP-AV	9	88.30	1.25
Trials at DAP-AV:DAP-AV	9	244.77	3.46**
Trials X <u>Ss</u> w. Grps.	342	70.69	

*p < .05.

**p < .01.

TABLE 8

Duncan Test of Differences: Trials at DAP-AV:DAP-AV Group

	Trials									
	(10)	(8)	(9)	(6)	(1)	(4)	(7)	(2)	(5)	(3)
ORDERED MEANS:*										
(Sec. of res- olution time)	9.78	11.07	11.26	11.84	12.54	14.43	16.13	16.16	18.61	20.27

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

transfer comparison using the second block of trials for both groups.

 Insert Figure 4 about here

The test for transfer in the DAP-AV;AP-AP condition compared to transfer in the AP-AP;AP-AP condition was effected by a 2 X 10, Groups X Trials, repeated measures ANOVA. Based on time scores for the second block of trials, the analysis (Table 9) revealed no significant effects due

 Insert Table 9 about here

to Groups, Trials, or an interaction of these factors. Resolution times for this relative transfer comparison are illustrated in Figure 5.

 Insert Figure 5 about here

Ex Post Facto Analysis. An analysis was conducted concerning the personal characteristic alternatives most often chosen by males and females. Such a comparison was possible since a record was kept of the actual choices made by each S in each conflict situation. The analysis performed was a t test of the significance of differences between proportions of males and females choosing a given alternative. The comparison of proportions was facilitated by

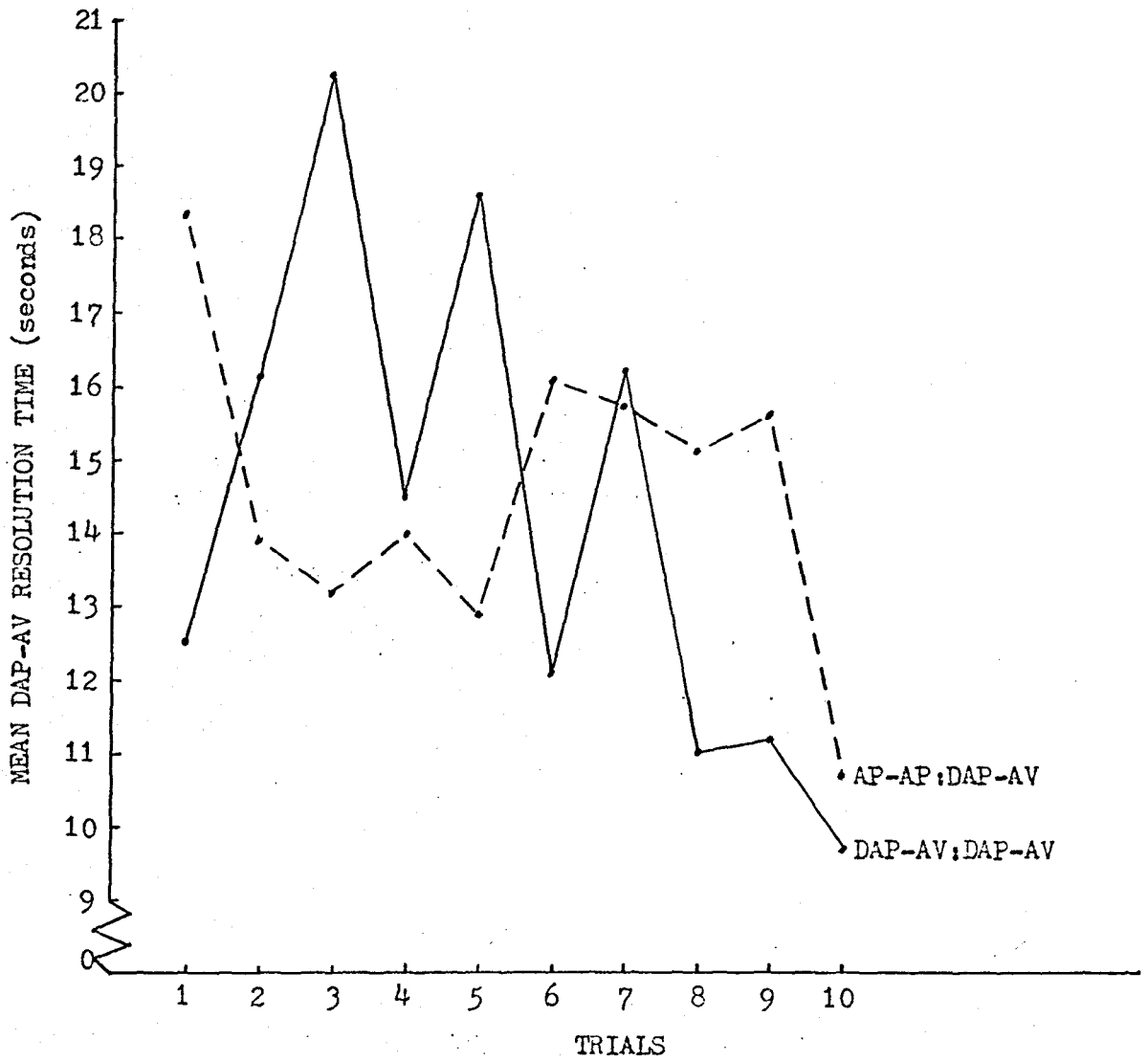


Fig. 4. Resolution Time for AP-AP:DAP-AV Group and DAP-AV:DAP-AV Group, Second Block of Trials.

TABLE 9
 Analysis of Variance: Relative Transfer,
 Groups (DAP-AV:AP-AP compared to AP-AP:AP-AP) X Trials

Source	df	MS	F
<u>Between Ss</u>	<u>39</u>		
Groups	1	132.55	.63
<u>Ss w. Grps.</u>	<u>38</u>	<u>210.09</u>	
<u>Within Ss</u>	<u>360</u>		
Trials	9	61.73	1.38
Groups X Trials	9	36.58	.82
<u>Trials X Ss</u> w. Grps.	<u>342</u>	<u>44.73</u>	

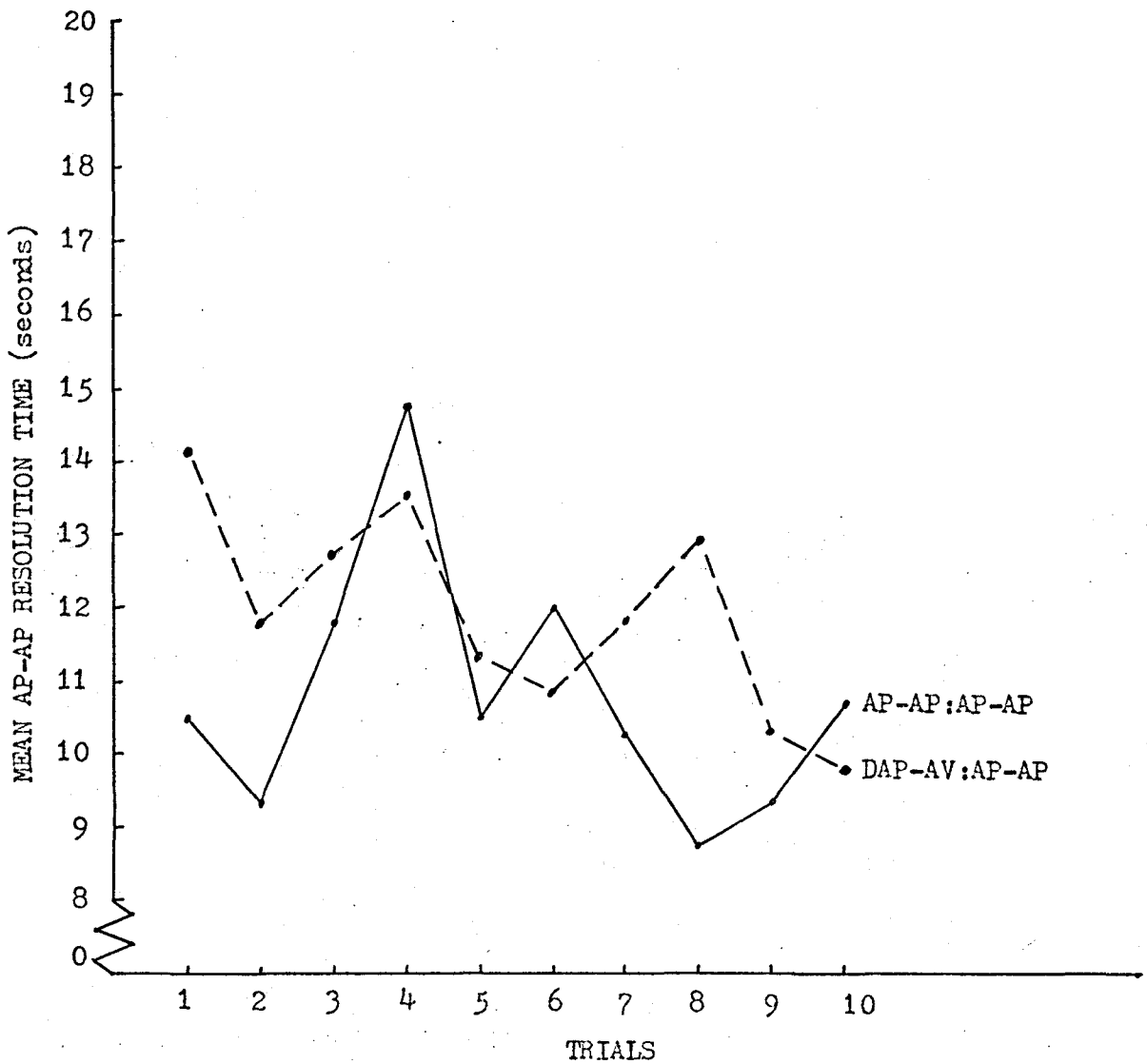


Fig. 5. Resolution Time for DAP-AV:AP-AP Group and AP-AP:AP-AP Group, Second Block of Trials.

use of a Lawshe-Baker Nomograph (Downie & Heath, 1970). A sex difference in alternatives chosen was evident for 2 of the 20 AP-AP conflicts. When confronted with being "more intelligent" or "more popular," 67% of the males opted for "intelligent." By contrast, only 12% of the females chose "intelligent." For the alternatives "more intelligent" or "more sincere," 69% of the males selected "intelligent," while 46% of the females made this selection. In both of these conflicts the differences in proportions were significant at $p < .10$. The percentages of males and females choosing each alternative for all of the AP-AP conflicts are given in Appendix B.

For DAP-AV conflicts, 2 of the 20 conflicts discriminated between males and females in manner of resolution. When faced with deciding between "more popular but less well-adjusted" and "more well-adjusted but less popular," 8% of the males picked the former alternative while 25% of females made this selection. In deciding between "more sincere but less confident" and "more confident but less sincere," 53% of males chose the former combination while the same alternative was selected by 75% of the females. These differences in proportions were significant at $p < .10$. The percentages of both sexes selecting each alternative for all of the DAP-AV conflicts are listed in Appendix C.

Discussion

The object of the analysis of resolution time scores for the two types of conflict prior to any other practice in conflict resolution was to determine if the tasks were, in fact, different. Results revealed that AP-AP conflicts were resolved significantly faster than DAP-AV conflicts upon initial encounter. This result was predicted and it is in agreement with the results of Powell (1971), Fracher (1972), and Bloomfield (1973). The lack of a beneficial trial effect operating within either task was an unexpected result. An increase in speed across trials has been the usual finding in studies of conflict produced in brightness discrimination tasks (Worell & Castaneda, 1961; Worell, 1962).

The predictions regarding transfer between the two tasks of this study were derived from the conflict-specific response hypothesis of Worell (1962). For the verbal tasks used here, it was reasoned that a response habit or set would develop while performing a specific task. Whatever the nature of this habit might be, one characteristic of the habit would be the time necessary for it to be carried out. When S was placed into a new task, which involved a different (longer or shorter) response, there would arise the possibility of inter-task influence. As performance on the second task proceeded, any generalization of the first response could either enhance or impede performance of the

second response. The implications of this rationale for the tasks of this study will be given for each transfer situation separately.

In the absolute transfer situation defined by moving from AP-AP to DAP-AV conflicts, the effects of prior performance were expected to be facilitative. Responses to AP-AP conflicts were faster than those to DAP-AV conflicts. To the extent that the stimulus conditions of the two tasks were similar, there would exist a tendency for the initially practiced response to be evoked in the second task. There would also exist the expected tendency that performance in the second task would improve with practice. Since these two tendencies would compliment each other, a net positive transfer effect was predicted. It is evident that such facilitative transfer did not occur.

For the absolute transfer condition described by moving from DAP-AV to AP-AP conflicts, the net amount and direction of transfer could not be predicted. It could only be speculated that the transfer in this situation would be less positive than that in the first absolute transfer (AP-AP:DAP-AV) condition. For the present case the similarity between stimulus conditions was expected to determine the extent to which the first practiced response would be evoked in the second situation. The first response in this case involved a longer comparative resolution time. To the degree that such a response generalized

to the second task, performance in the second task would be slowed or affected negatively. However, practice effects during the second task were also expected to operate, and this influence was presumed to be positive. Thus, second task performance would be a composite of both positive and negative factors. Since the statistical analysis indicated neither transfer nor practice effects, it could be the case that neither factor operated, or it could be that both operated in such a way that the effects of each were obscured by the other. There is no way to determine which of these occurrences might have prevailed in this study.

The predictions concerning relative transfer effects followed from those for absolute transfer. It was predicted that there would be greater positive transfer in the AP-AP;DAP-AV situation than in the DAP-AV;DAP-AV situation. In the former case a reduction in second task resolution time was predicted due to the combined influence of a facilitative response set and practice effects. Improvement in the latter case would have been produced only by practice. Results indicated no significant differences in second task performance for the two groups concerned, and no practice effects. Possible reasons for the failure to find practice or transfer effects, either absolute or relative, are discussed later.

Transfer in the DAP-AV;AP-AP situation was predicted to be negative compared to that in the AP-AP;AP-AP situation. In the former case any improvement in response

time produced by practice effects was expected to be reduced by generalization of the slower response set established during the first task. In the AP-AP:AP-AP situation any beneficial practice effects were not expected to be countered by an antagonistic response set. Thus, any transfer in the DAP-AV:AP-AP combination would be considered negative compared to second task performance for Ss in the AP-AP:AP-AP situation. The results obtained again showed no difference in the second task performance for the groups concerned, and no practice effects.

The results regarding transfer effects run counter to the predictions made in this study. There was no effect of first task performance upon that in the second task, especially in the AP-AP:DAP-AV condition. Such effects could have occurred and been masked in the DAP-AV:AP-AP condition. Likewise, there were no transfer effects relative to groups receiving an equivalent number of prior trials on the second, or transfer, task. There are two possible explanations as to why no transfer effects were shown. First, a response set might have been produced during the first task, but it could have failed to achieve generalization to the second task because the stimulus situations were not similar enough. Second, the hypothesized conflict-specific response may never have been established during first task performance and, therefore, never exerted an influence on second task responses.

If conflict-specific responses were never established during the first task, several possible reasons for this occurrence are suggested. First, perhaps ten trials is too few to allow the establishment of a set manner of responding for verbal conflict resolution. In Worell's (1962) study, which did show evidence of a response set, Ss received 24 trials with difficult conflict prior to transfer to much easier conflicts. Although the number of trials might be a relevant factor in the production of a response set, there are other factors in the present study which could have impeded the formation of a conflict-specific response.

A second reason which could conceivably account for the lack of an established response set is that Ss experienced interference in their resolution performance. One possible source of interference was the repetition of the adjectives themselves. Since only seven characteristics were used to form conflicts, each one appeared five or six times. The Ss could have been concerned with their responses to conflicts containing elements which they had already encountered. Thus, Ss would not have been merely resolving individual conflicts, but recalling and comparing conflicts containing the same elements before making a decision. That such may have been the case is supported by statements of Ss after serving in the experiment. Many Ss said that they thought the object of the study may have been to investigate consistency of response. Other Ss

asked if some conflict pairs were presented two or more times. If Ss were engaged in such recall and comparison, the establishment of a set manner of response would have been impeded. Such an occurrence, too, could perhaps account for the extreme error variance evident in both tasks and in all conditions.

A second possible source of interference is related to that just described and stems again from the fact that the same adjectives appeared several times. An experiment by Gerard (1967) was concerned with examining the pre-decision and postdecision behaviors of Ss who chose between two paintings which they valued approximately equally. Gerard found that most Ss gave more attention to the non-chosen alternative before a decision was made and to the chosen alternative following a decision. He also presented evidence that an evaluational change occurred in the period following a decision. The nature of this change was that the chosen alternative increased in value relative to the non-chosen alternative.

Since adjectives in the present study were presented a number of times, subsequent decisions might have been disrupted by the "biased" attending patterns resulting from prior exposure to the same adjectives. For example, in a given situation if S chose honest, and thereby rejected confident, in a later conflict containing honest, he might direct more attention to this stimulus than to its alternative. Such "biased" attending could alter resolution

time depending upon what the alternative adjective happened to be. Conversely, in later conflicts containing confident, S might give less attention to this stimulus, again affecting the resolution time in an unstable manner. Of course, the extent of such disruptions would depend upon factors such as the proximity in time of the same adjective, the number of encounters with that adjective, and S's ability to recall his choices and rejections of previously presented stimuli. At any rate, it seems quite probable that the reoccurrence of identical adjectives may have exerted a disruptive influence upon the establishment of a stable response set.

A third possible reason which might account for the lack of a response set in first-task performance concerns the desirability of the adjectives used. While Powell (1971) assumed that the pairing of highly desirable adjectives would create equally difficult conflicts, such may not have been the case. If, due to subjective interpretations or other factors, items were not valued equally, then some conflicts would have been easier or harder than others of the same type. Thus, a randomly ordered series of conflict resolution trials might consist of a dispersion of easy, hard, and intermediately difficult conflicts. It might be expected that such a dispersion would not be conducive to the establishment of a stable response set. That items were not necessarily valued equally by all Ss is supported by evidence from the ex post facto analysis. In

four conflicts, two AP-AP and two DAP-AV, it was indicated that some characteristics were differentially valued by males and females.

In view of the procedural difficulties which might have prevented the illustration of response generalization in the present study, some suggestions and refinements for future research are offered. First, the lack of similarity between the two tasks in this study might have been responsible for the failure to show transfer. It is suggested that a subsequent study use conflicts all of one type, i.e., AP-AP, AV-AV, or DAP-AV. Thus, there would be maximum similarity in the outward appearances of the two tasks. The difference between the two tasks would merely be the level of difficulty of the conflicts, produced by pairing closely valued or differentially valued characteristics.

Second, the number of first-task or training trials might be increased. Rather than 10 trials, as used here, perhaps 25 or 30 trials should be allowed. Such an increase would be in greater agreement with the procedure used by Worell (1962), where generalization effects were shown.

Third, a future study might eliminate, or at least reduce, the repeated use of any one adjective. This goal could be accomplished by using a larger number and variety of adjectives than was used here. It is certainly possible to obtain a pool of 60 or more non-redundant personal characteristic adjectives. Thus, the disruptive effects

caused by recall efforts and postdecision attending patterns could be eliminated, or at least greatly reduced.

Another possible obstruction to the establishment of a stable response set was mentioned in regard to the value of the adjectives in the present study. Perhaps the adjectives were not approximately equal in value for many of the Ss. If this were the case, a great deal of variability in decision times across trials and within conflict types would be expected. A remedial measure would be to ascertain the value of each adjective for each S prior to pairing the characteristics to form conflicts. In this way, S would be confronted with choices between adjectives which he, himself, had indicated were equal or unequal in value.

Although the results of the ex post facto analysis were not very strong, they do deserve comment. On two occasions for AP-AP conflicts a significantly greater percentage of males chose intelligent than did females. Although no evidence is offered in support of this contention, it is believed that the wording of the conflict format was partly responsible for this occurrence. The Ss were asked to indicate which characteristic they would rather possess as compared to their current possession of both alternatives concerned. Thus, intelligent described a valued goal for males, and one in which they felt deficient. Females might also have valued intelligent very highly, but did not feel such a deficiency in this area. In this way perceptions of an experiential situation may have

influenced responses to a greater extent than the actual values placed upon certain characteristics. It should also be pointed out that intelligent was the most frequently chosen of all adjectives for males; intelligent was the second most frequent choice for females. Females selected confident more often than any other adjective.

For DAP-AV conflicts the most often preferred characteristic for males was honest. For females, the most frequent selection was sincere. The characteristic least preferred by both sexes was popular. A review of the results of the ex post facto analysis suggests that at least some personal characteristics in the present study were valued differently by males and females. It would appear likely that the use of such characteristics in constructing verbal conflicts would act as a source of error variance in the analysis of scores of groups composed of both sexes.

Some suggestions for future research on conflict behavior and transfer of responses have already been given. In addition to the possibilities indicated, there are several areas where research might be profitable using the general procedures of this study or modifications of these procedures as mentioned previously.

First, more information concerning the adjectives used here, as well as others, would appear to be helpful. It would seem to be advisable to obtain more recent rankings of the adjectives, such that the value system of the sample

population would be more accurately reflected. It would also seem prudent to investigate in more detail any sex differences in the valuations of adjectives. Finally, for some experimental tasks, it might be necessary to obtain individual value judgments for each S as has been suggested previously.

Second, the general format for conflict resolution as used here could be combined with the procedure of obtaining individual assessments of value alternatives before conflicts were resolved. By this means it could be determined which items would likely be chosen over other characteristics. It is probable that S would not always act as might be predicted from his prior ratings. Thus, indications of consistency between ratings and actions would be available. Such a consistency measure might be useful in examining sex differences in conflict resolution. It could also prove useful as an indicant of decision efficiency before and after some treatment, such as a therapeutic intervention.

Third, the ability to resolve either easy or more difficult conflicts could be related to some measure of self-concept or self-esteem, such as a self-ideal self Q sort. Rogers (1961) has described a fully functioning individual as one who can confront and resolve conflicts, especially those of a personal nature, in an efficient and adaptive manner. Indeed, Rogers, among others, expected that this ability should be one of the important outcomes of

successful therapeutic encounters. Rogers (Rogers & Dymond, 1954) also regarded a relatively high correlation on a self-ideal self Q sort (following therapy) as a useful indicant of therapeutic success. Thus, prior to therapy, clients were typically characterized by inefficiency in decision making and a low self-ideal self correlation. After therapy, clients were expected to perform better in conflict resolution, and they were expected to demonstrate increased self-ideal self correlations. Evidence has been presented to support the positive increase in self-ideal self correlations following therapy (Butler & Haigh, 1954); however, there has been no objective support for the contention that proficiency in conflict resolution increases. There has also been no indication that efficiency in conflict resolution is related in any way to self-ideal self correlations. If Rogers' reasoning is correct, however, then Ss who score at the extremes of a self-ideal self Q sort should differ in their ability to resolve conflicts, especially conflicts concerning their own values. Such a proposal could be investigated using conflict resolution tasks such as those used in the present study. Levels of conflict difficulty could be varied according to conflict types, or by pairing equally or unequally valued characteristics as determined by prior ratings of the adjectives by each S.

A fourth area of research was suggested by the Gerard (1967) study. Gerard found that for many Ss the act of choosing between highly valued alternatives resulted in a

postdecision spread in value judgments for the items concerned. It has also been found that such a spread, or dissonance effect, only occurs when S has high self-esteem or a high degree of confidence about his ability to make the subject decision (Gerard, Blevans, & Malcolm, 1964; Malewski, 1962). By obtaining predecision ratings of the "importance" of each alternative, presenting conflicts formed by the pairing of selected alternatives, and then obtaining postdecision judgments of the alternatives, the degree of spread could be measured for each comparison. A concurrent measure of self-esteem, either by questionnaire or Q sort, could also be obtained for each S. If the previously mentioned relationship between self-esteem and postdecisional shifts were operative, it would be predicted that a significantly greater spread of ratings would be evident for high self-esteem as compared to low self-esteem Ss. In such an experimental treatment, it would be advisable to make the consequences of the decision behavior personally important or relevant to Ss. Also, steps should be taken to insure that each alternative appeared only once and that each conflict be regarded, as much as possible, as a separate situation.

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APPENDIX A

A pilot study was conducted to determine the feasibility of identifying easy and difficult conflicts by reference to prior ratings of decision difficulty by individual Ss. For this study 58 personal characteristic adjectives were randomly paired until 70 pairs were formed. The pairs were cast into AP-AP conflict format and printed in random order on a rating scale (see Auxiliary Notes). The 16 undergraduate Ss who were employed in the pilot study then rated each of the 70 conflicts on a 7-point scale as to how difficult it would be to resolve. Conflicts which received ratings from 1 to 2 were tentatively defined as easy conflicts. Those receiving ratings from 6 to 7 were tentatively defined as difficult conflicts.

Only those Ss who provided (by their ratings) at least 10 easy and 10 difficult conflicts were used in the remainder of the study. Thus, the following account concerns 12 Ss, four males and eight females, who supplied the required number of easy and difficult conflicts. These Ss were randomly assigned to one of two groups. In the Easy to Difficult group (E-D), Ss resolved 10 easy conflicts followed by 10 difficult conflicts. For the Difficult to Easy group (D-E), Ss encountered 10 difficult conflicts and then 10 easy conflicts. For each S the 10 conflicts of each type were randomly selected from all those rated easy (1-2) or difficult (6-7) by that S. Conflicts were

presented using the modified conflict resolution board as resolution times were recorded to the nearest hundredth second.

In order to determine if conflicts tentatively identified as easy differed from those tentatively identified as difficult, an analysis was made comparing the first 10 trials of the E-D group to the first 10 trials of the D-E group. The mean resolution time for easy conflicts was 6.31 sec.; mean time of resolution for difficult conflicts was 9.33 sec.. The t test revealed no significant difference in resolution times for the two types of conflict, $p > .05$. Thus, it was not deemed feasible to define easy and difficult conflicts by reference to individual ratings of conflict difficulty by each S. Since resolution times associated with the two types of conflict did not differ, the analysis of transfer effects for the pilot study data was not conducted.

APPENDIX A, AUXILIARY NOTES

On the following pages certain choice situations are presented. Each situation involves a choice between two adjectives, or personal characteristics, often used to describe people, for example INTELLIGENT and HONEST. If you were actually making a personal choice between two adjectives, such as these, you might consider it a difficult choice or an easy choice. It will be your task to consider several pairs of personal characteristics and to indicate whether choosing between the two would be very hard FOR YOU, personally, or NOT very hard FOR YOU. You may indicate your ratings by placing a numeral in the blank beside each choice situation. The meanings of the numerals which you may use and some examples are presented below:

EASY to resolve			OF MEDIUM difficulty			HARD to resolve
1	2	3	4	5	6	7

Which would you rather be. . .

- | | |
|--|----------|
| 1. more INTELLIGENT or more HONEST
than you are now? | <u>7</u> |
| 2. more CHEERFUL or more STUBBORN
than you are now? | <u>1</u> |
| 3. more AMBITIOUS or more INDEPENDENT
than you are now? | <u>6</u> |

On the pages that follow, the words "than you are now" do not follow every choice situation in order to save space; however, these words are implied for each pair of adjectives. You may use any of the numerals for your ratings, but do not

APPENDIX A, AUXILIARY NOTES

hesitate to use the more extreme numerals at each end of the scale if they represent your judgments. Remember to consider each pair of characteristics as if you were really making the decision, and show how difficult the decision would be FOR YOU.

EASY			OF MEDIUM			HARD
to resolve			difficulty			to resolve
1	2	3	4	5	6	7

Which would you rather be . . .

- | | |
|--|-------|
| 1. more GENEROUS or more RECKLESS
than you are now? | _____ |
| 2. more AFFECTIONATE or more ENTHUSIASTIC | _____ |
| 3. more FAULT-FINDING or more CHEERFUL | _____ |
| 4. more SELF-ACCEPTING or more PROMPT | _____ |
| 5. more CONFIDENT or more FRIENDLY | _____ |
| 6. more HEALTHY or more MODEST | _____ |
| 7. more ORGANIZED or more STUBBORN | _____ |
| 8. more SYMPATHETIC or more THRIFTY | _____ |
| 9. more INDEPENDENT or more CREATIVE | _____ |
| 10. more FRANK or more FEARFUL | _____ |
| 11. more CHEERFUL or more STABLE | _____ |
| 12. more ASSERTIVE or more MEDDLESOME | _____ |
| 13. more COMPETENT or more ADAPTABLE | _____ |
| 14. more FEARFUL or more SINCERE | _____ |
| 15. more ANNOYING or more TOLERANT | _____ |
| 16. more PERSEVERING or more SARCASTIC | _____ |

APPENDIX A, AUXILIARY NOTES

EASY to resolve				OF MEDIUM difficulty			HARD to resolve
1	2	3	4	5	6		7

Which would you rather be . . .

- | | |
|--|-------|
| 17. more ANXIOUS or more HELPFUL | _____ |
| 18. more RATIONAL or more ANXIOUS | _____ |
| 19. more CLEVER or more HEALTHY | _____ |
| 20. more MODEST or more DEPENDABLE | _____ |
| 21. more ADAPTABLE or more PERSEVERING | _____ |
| 22. more HELPFUL or more ENERGETIC | _____ |
| 23. more CRUEL or more FAULT-FINDING | _____ |
| 24. more THRIFTY or more FRANK | _____ |
| 25. more RESPONSIBLE or more COMPETENT | _____ |
| 26. more SARCASTIC or more LOYAL | _____ |
| 27. more ATTRACTIVE or more FRANK | _____ |
| 28. more PERCEPTIVE or more CONFIDENT | _____ |
| 29. more CAUTIOUS or more KIND | _____ |
| 30. more COURTEOUS or more FASHIONABLE | _____ |
| 31. more KIND or more RESPONSIBLE | _____ |
| 32. more FRIENDLY or more IMPULSIVE | _____ |
| 33. more CONTENTED or more PATIENT | _____ |
| 34. more INTELLIGENT or more SYMPATHETIC | _____ |
| 35. more DEPENDABLE or more HONEST | _____ |
| 36. more CONSCIENTIOUS or more INTELLIGENT | _____ |
| 37. more OPTIMISTIC or more CONTENTED | _____ |
| 38. more ENERGETIC or more ANNOYING | _____ |

APPENDIX A, AUXILIARY NOTES

EASY to resolve			OF MEDIUM difficulty			HARD to resolve
1	2	3	4	5	6	7

Which would you rather be . . .

- | | |
|---|-------|
| 39. more RECKLESS or more ATTRACTIVE | _____ |
| 40. more IMPULSIVE or more ORGANIZED | _____ |
| 41. more HONEST or more SELF-CONTROLLED | _____ |
| 42. more RELAXED or more CLEVER | _____ |
| 43. more PROMPT or more CONSCIENTIOUS | _____ |
| 44. more TOLERANT or more CRUEL | _____ |
| 45. more SINCERE or more OPTIMISTIC | _____ |
| 46. more ENTHUSIASTIC or more PERCEPTIVE | _____ |
| 47. more PATIENT or more AMBITIOUS | _____ |
| 48. more MEDDLESOME or more CAUTIOUS | _____ |
| 49. more FASHIONABLE or more RATIONAL | _____ |
| 50. more STABLE or more TACTFUL | _____ |
| 51. more STUBBORN or more INDEPENDENT | _____ |
| 52. more TACTFUL or more EFFICIENT | _____ |
| 53. more LOYAL or more COURTEOUS | _____ |
| 54. more COURAGEOUS or more ASSERTIVE | _____ |
| 55. more SELF-CONTROLLED or more SELF-ACCEPTING | _____ |
| 56. more EFFICIENT or more RELAXED | _____ |
| 57. more AMBITIOUS or more AFFECTIONATE | _____ |
| 58. more CREATIVE or more COURAGEOUS | _____ |
| 59. more ANNOYING or more COURAGEOUS | _____ |
| 60. more STUBBORN or more THRIFTY | _____ |

APPENDIX A, AUXILIARY NOTES

EASY		OF MEDIUM					HARD	
to resolve		difficulty					to resolve	
1	2	3	4	5	6	7		

Which would you rather be . . .

- | | | |
|-----|--|-------|
| 61. | more FAULT-FINDING or more PROMPT | _____ |
| 62. | more ORGANIZED or more CREATIVE | _____ |
| 63. | more RESPONSIBLE or more ATTRACTIVE | _____ |
| 64. | more SELF-CONTROLLED or more ENERGETIC | _____ |
| 65. | more GENEROUS or more PERSEVERING | _____ |
| 66. | more SYMPATHETIC or more RATIONAL | _____ |
| 67. | more IMPULSIVE or more HEALTHY | _____ |
| 68. | more SINCERE or more COURTEOUS | _____ |
| 69. | more ASSERTIVE or more RELAXED | _____ |
| 70. | more CAUTIOUS or more HELPFUL | _____ |

Male, Female, and Total Percentages
Choosing Each Alternative for AP-AP Conflicts

	<u>Percentages choosing left alternative</u>				<u>Percentages choosing right alternative</u>		
	Male %	Female %	Total %		Male %	Female %	Total %
more CONFIDENT	75	75	75	more HEALTHY	25	25	25
more CONFIDENT	81	88	83	more POPULAR	19	12	17
more CONFIDENT	72	58	67	more HONEST	28	42	33
more HEALTHY	36	42	38	more WELL-ADJUSTED	64	58	62
more HEALTHY	64	71	67	more POPULAR	36	29	33
more HEALTHY	50	50	50	more HONEST	50	50	50
more HONEST	33	50	40	more SINCERE	67	50	60
more HONEST	17	38	25	more WELL-ADJUSTED	83	62	75
more HONEST	42	63	50	more INTELLIGENT	58	37	50
more INTELLIGENT	50	25	40	more CONFIDENT	50	75	60
more INTELLIGENT	72	63	68	more HEALTHY	28	37	32
more INTELLIGENT*	69	46	60	more SINCERE*	31	54	40
more POPULAR	50	25	40	more HONEST	50	75	60
more POPULAR**	33	88	32	more INTELLIGENT**	67	12	68
more POPULAR	42	25	35	more SINCERE	58	75	65
more SINCERE	67	63	65	more HEALTHY	33	37	35
more SINCERE	50	38	45	more CONFIDENT	50	62	55
more WELL-ADJUSTED	42	50	45	more INTELLIGENT	58	50	55
more WELL-ADJUSTED	75	75	75	more POPULAR	25	25	25
more WELL-ADJUSTED	31	33	32	more CONFIDENT	69	67	68

*Male and female percentages different, $p < .10$.

**Male and female percentages different, $p < .01$.

APPENDIX C

Male, Female, and Total Percentages

Choosing Each Alternative for DAP-AV Conflicts

	<u>Percentages choosing left alternative</u>			<u>Percentages choosing right alternative:</u>			
	Male	Female	Total	Male	Female	Total	
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	
more CONFIDENT but less POPULAR	83	75	80	more POPULAR but less CONFIDENT	17	25	20
more CONFIDENT but less INTELLIGENT	47	54	50	more INTELLIGENT but less CONFIDENT	53	46	50
more CONFIDENT but less HONEST	39	29	35	more HONEST but less CONFIDENT	61	71	65
more HEALTHY but less CONFIDENT	50	38	45	more CONFIDENT but less HEALTHY	50	62	55
more HEALTHY but less INTELLIGENT	50	25	40	more INTELLIGENT but less HEALTHY	50	75	60
more HEALTHY but less SINCERE	61	46	55	more SINCERE but less HEALTHY	39	54	45
more HONEST but less HEALTHY	58	75	65	more HEALTHY but less HONEST	42	25	35
more HONEST but less SINCERE	58	46	53	more SINCERE but less HONEST	42	54	47
more HONEST but less POPULAR	81	92	85	more POPULAR but less HONEST	19	8	15
more INTELLIGENT but less HONEST	50	50	50	more HONEST but less INTELLIGENT	50	50	50
more INTELLIGENT but less WELL-ADJUSTED	67	38	55	more WELL-ADJUSTED but less INTELLIGENT	33	62	45
more INTELLIGENT but less POPULAR	69	79	73	more POPULAR but less INTELLIGENT	31	21	27
more POPULAR but less SINCERE	19	17	18	more SINCERE but less POPULAR	81	83	82
more POPULAR but less HEALTHY	17	25	20	more HEALTHY but less POPULAR	83	75	80

	Male Female Total				Male Female Tota.		
	<u>%</u>	<u>%</u>	<u>%</u>		<u>%</u>	<u>%</u>	<u>%</u>
more POPULAR but less WELL-ADJUSTED *	8	25	15	more WELL-ADJUSTED but less POPULAR *	92	75	85
more SINCERE but less INTELLIGENT	50	75	60	more INTELLIGENT but less SINCERE	50	25	40
more SINCERE but less CONFIDENT *	53	75	62	more CONFIDENT but less SINCERE *	47	25	38
more WELL-ADJUSTED but less HEALTHY	50	63	55	more HEALTHY but less WELL-ADJUSTED	50	37	45
more WELL-ADJUSTED but less HONEST	33	63	45	more HONEST but less WELL-ADJUSTED	67	37	55
more WELL-ADJUSTED but less CONFIDENT	47	58	52	more CONFIDENT but less WELL-ADJUSTED	53	42	48

*Male and female percentages different, $p < .10$.

VITA

John Milam Brame was born on September 29, 1946 in High Point, North Carolina. He attended public schools in North Wilkesboro, High Point, and Walnut Cove, and in 1964 was graduated from Walnut Cove High School. He completed work for the Bachelor of Arts degree, with a major in psychology, at Wake Forest University, Winston-Salem, North Carolina in 1968. He immediately accepted a commission in the United States Marine Corps and served as a Platoon Commander until his discharge in 1971.

In September, 1971, he entered the graduate school of the University of Richmond, Richmond, Virginia. While at Richmond he was inducted into Psi Chi National Honor Society in Psychology. During this time also he was employed as an Educational Therapist at Commonwealth Psychiatric Center. He expects to receive his Master of Arts degree in psychology in May, 1974.