INFLUENCE OF RACE OF EXPERIMENTER AND CONFEDERATES ON CONFORMING BEHAVIOR

Thesis for the Degree of M.A.

MICHIGAN STATE UNIVERSITY
RUTH C. BAHAM

1971

ABSTRACT

INFLUENCE OF RACE OF EXPERIMENTER AND CONFEDERATES ON CONFORMING BEHAVIOR

By

Ruth C. Baham

This study is concerned with the influence of race on conforming behavior. It involved 112 white male students in social science at Michigan State University. Basically the study revealed no significant effect of race on conforming behavior. The more significant results were drawn from the interaction between blocks of trials and nested factors within the main effects.

INFLUENCE OF RACE OF EXPERIMENTER AND CONFEDERATES ON CONFORMING BEHAVIOR

By

Ruth C. Baham

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1971

ACKNOWLEDGMENTS

This study was conducted with the help and guidance of Dr. Lawrence Messé and Dr. William Crano whose interest and assistance are greatly appreciated. Thanks are also in order for Dr. Jeanne Gullahorn and all my fellow classmates for the assistance they rendered which proved invaluable.

Support for this study was provided in part by funds from the Graduate program in Psychology for the Master Thesis and in part by grants received by Dr. Messé and Dr. Crano.

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

Extensive research investigations have been conducted on the subject of conformity and factors influencing conforming behavior. Studies include those processes involving an individual's tendency to yield or maintain his independence when confronted with disagreement from others, taking into account his personality traits, sex, social status, and other variables. Similarly, this study is looking at conforming behavior but with emphasis on race of subjects, experimenters and confederates.

In view of the fact that many studies have failed to give adequate attention to the distinctions between compliance and conformity some clarification should be presented here. As suggested by Festinger (1953), the basic distinctions between compliance and conformity is compliance involves public acceptance of the influence exerted whereas conformity involves the private acceptance of the influence exerted. In other words, private acceptance involves a change in the beliefs and attitude of the individual.

The basic distinction between public conformity with and without private acceptance is not entirely a new one. Lewin (1951), was pointing in the same direction in his distinction between own and induced forces. For example, Lewin states:

> Forces may correspond to a person's own needs. Many psychological forces . . . do not, however, correspond to his own wishes but to the wishes of another person. . . . These forces can be called induced forces.

French elaborates this distinction between own and induced forces a bit more. He speaks of the acceptance or rejection of induced forces in the following manner:

> An induced force which is accepted to a high degree produces in the person additional own forces in the same direction, so that, the behavior instigated by induction becomes relatively independent of the inducing agent and will occur even if his power field is removed. But an induced force which is rejected produces in the person opposing forces with the result that the induced behavior will cease as soon as the inducing power field is withdrawn.

French states a possible operational manner of distinguishing between two types. If on removal of the source of the induction or influence, the compliant behavior disappears, we are led to believe that there was no private acceptance.

Festinger theorizes that:

> . . . public compliance without private acceptance will occur if the person in question is restrained from leaving the situation and if there is a threat of punishment for noncompliance. And, that 'public' compliance with private acceptance will occur if there is a desire on the part of the person to remain in the existing relationship with those attempting to influence him.

In a study by Klein (1967), various conformity and nonconformity responses were evoked by a complex influence technique in which sources, arguments, and measurement settings were varied. Personality correlates of compliance (public without private conformity to authorities) were investigated. When compared with subjects responsive to different influence pressure, compliant subjects were found to share limited approval orientation. When contrasted with groups showing different responses to the same sources, compliant subjects have only superficial approval needs, avoid emotional involvement, prefer intellectual defenses, and are pragmatic, secure and autonomous. Subjects who conform consistently (in public and in private) to the same authorities, share the same superficial approval orientation, but also have more general approval needs and lower self-esteem and prefer regressive defenses.

There are a number of factors that influence conforming behavior as cited by Endler (1961). These include (a) the stimulus variables used to elicit the conforming behavior; (b) group properties: i.e., group structure and function; and (c) individual differences or personality factors. A fourth phenomenon related to both (a) and (b), yet operating as a factor in its own right, is (d) the situational factor or the conditions under which conforming behavior occurs. Endler points out that

conformity is not a general factor that occurs indiscriminately, but is partially determined by the situational context in which it occurs. If in a group situation, the individual is reinforced for conforming, his conforming behavior will increase. If he is reinforced for being deviant, his conforming behavior will decrease.

He further states that

> Conforming behavior can be manipulated like any other class of behavior. It is an instrumental act that leads to need satisfaction and goal attainment, with reinforcement playing a crucial role in the need-instrumental act-goal, behavioral sequence.

Important in determining adjustment in a conformity producing situation are personal characteristics of the subjects. Personal characteristics may be described by either of several kinds of measures. Other ways involve measuring psychological characteristics and physiological states.

The effects of personality differences related to prior experiences has been approached in a number of studies through evaluating the effects of childhood experiences on differences in susceptibility to conformity pressures. Persons who conform more in a pressure situation can be characterized as perceiving their parents as harsh, punitive, restricting, and rejecting and are classified as late in independence training (Krebs, 1958; Mussen & Kagan, 1958). Greater susceptibility to conform

with ethical standards under social influence conditions is found for students classified in the dominant life style (McQueen, 1957).

Numerous psychological characteristics of subjects differing in susceptibility to conformity pressures have been investigated. Individual differences on standard personality measures have been related to frequency of shifting under social influence conditions. Results show that those who are more susceptible to conformity pressures are more likely to be submissive (Bray, 1950; Helson, et al., 1956; Kelman, 1950), score higher on authoritarian scales (Crutchfield, 1955; Hardy, 1957; Wells, Weinert, & Rubel, 1956), low in self-confidence (Bray, 1950; Kelman, 1950), be less original, and to have greater inner conformity needs (Hoffman, 1957). In addition, they show greater dependence on the perceptual field and are more compliant in social situations (Helson, et al., 1958; Carpenter & Carpenter, 1956).

The psychological characteristics discussed above and investigated in numerous studies are pertinent factors which may account for the varying degree of conforming behavior revealed in this study. However, these characteristics were not utilized as variables in this study but merely as descriptive explanatory statements.

In view of the fact that conformity literature has provided minimum research on the subject of race,

this study has investigated the influence of race on performance of white naive subjects in the presence of both black and white confederates and experimenters in a conformity-producing situation.

Based on the above mentioned psychological characteristics, it is believed that because of personality traits of subjects and their idiosyncracies, performance on the perceptual judgment task is influenced by the race of the experimenter as well as that of the confederates. In other words, the naive subject's performance in the presence of white experimenter and confederates differs from his performance when the experimenter and confederates are black.

METHOD

Subjects

Subjects were one hundred and twelve (112) male undergraduates fulfilling social science requirements at Michigan State University. Subjects' cooperation was sought through cash payment for his participation in the study.

Setting

Since conformity was viewed as a continuous process, dependent upon the differential weighing of social and perceptual inputs, experimental provisions were made for a high degree of response freedom. A perceptual judgment task was employed in which subjects estimated the number of dots flashed onto a screen. Before the experimental investigation could be attempted, information regarding subject's perceptual acuity and judgmental confidence under various stimulus presentation conditions was needed. Accordingly, a preliminary study was conducted, the results of which indicated that accuracy of judgment was maximized, and judgmental confidence minimized, when a stimulus presentation interval of five seconds was employed. It was further discovered

that respondents substantially underestimated the number of dots projected on each slide, regardless of presentation interval. In order to investigate the affect of a confederate's judgment upon the estimate of a naive subject without any ambiguity, all influence attempts in the experiment to be described were consistently in the direction of overestimation. Thus, a higher mean estimate (relative to control group judgments) implies that greater weight has been accorded the socially-supplied information, and correspondingly less to visual inputs.

Design and Procedure

The experimental investigation was divided into two parts: acquisition session and transfer session. On each trial of the acquisition session, a naive subject immediately proceeded or followed an experimental accomplice in announcing his estimate on each of 40 trials. In the transfer session, the confederate was effectively removed, and the subject responded in a "pressure-freed" situation.

Subjects were randomly assigned to the four possible conditions resulting from the factorial combination of race of experimenter and race of confederate. All subjects were tested individually with one of four possible confederates (two of each race).

In the acquisition phase of the experiment, subjects judged 4 blocks of 10 trials each, a total of 40

judgments. The mean number of stimuli per slide (40) was equal in each block, and the variance between blocks was not significantly different. One of four block orders was randomly assigned to each subject. The experimental instructions represented the situation as an experiment in which group and individual accuracy in a perceptual task was under study. Subjects were assigned a fixed response position, and asked to be "as accurate as possible" in their estimate.

Subjects and confederates, separated by a wooden partition, responded to each slide. All the confederate's estimates were programmed to be 30% greater than the actual number of stimuli presented. No other subject-confederate interaction was permitted.

After 40 acquisition trials, subjects were informed that an attempt to determine individual accuracy was about to be made; thus their remaining estimates were to be written. In an effort to minimize possible "demand" affects, subjects were told <u>not</u> to sign the answer sheets provided for this task and, upon completion, to deposit these anonymous forms into an envelope containing a large number of similar sheets, ostensibly the results of tests with previous groups. Anonymity was emphasized, since the objective of the transfer session was to investigate the persistence of induced behavior in the absence of <u>all</u> conformity pressure. If, for example, the subject

felt that having "complied" in the group, he must continue to do so when "alone" in order that he be evaluated by the experimenter as consistent, then the results of this study would have been uninterpretable. On the basis of post-experimental interviews, however, it seems highly probable that the precautions taken were successful.

The transfer session consisted of five blocks of five trials each. Again, the mean number of stimuli presented (40) was equal in each block, and variance between blocks was not significantly different from that of acquisition trials. One of five possible block orders was randomly assigned to each subject. As before, slides were presented for five seconds, followed by a five-second interval during which the subject wrote his estimate. No subject-confederate interaction occurred in transfer. Having completed this task, subjects were debriefed and allowed to leave.

Controls

A group of subjects, responding in pairs with race of experimenter and race of confederate, was used as a control in this study.

RESULTS

Acquisition

Subjects' estimates, the dependent variable in this study, were analyzed through the use of a 2 (Race of Confederate) by 2 (Race of Experimenter) by 5 (Blocks of Trials) analysis of variance. In this analysis, the significance of the main effects of race of confederate (C) was tested by the nested Confederate within race of confederate (c/C) term, and race of experimenter (A) was tested by the nested Experimenter within race of experimenter (a/A) term, a test made possible by the experimental design which employed two confederates and two experimenters of each race.

As indicated in Table 1, these main effects were not significant. However, as shown in the table, the interaction of Confederates/c nested within race of confederates and Experimenter/A nested within race of experimenter does indicate a significant interaction ($p < .005$). The analysis of variance also reveals a significant interaction between Trials (E) and Race of experimenter nested within experimenter. This indicates that race of

Table 1

Analysis Summary, Acquisition Trials
(4 Blocks of 10 Trials / blk)

Source	SS	df	MS	F
Race of Experimenter (A)	10,042.89	1	10,842.89	0.36[g]
Experimenters/A (B)	13,921.43	2	13,921.43	0.37[f]
Race of Confederate (C)	16,104.01	1	16,104.01	0.75[c]
Confederates/C (D)	8,241.83	2	4,120.92	0.15[d]
A x C	4,719.01	1	4,719.01	0.15[c]
A x D	26,191.66	2	13,095.83	0.38[b]
B x C	90,722.02	2	45,361.01	1.32[b]
B x D	137,596.79	4	34,399.20	4.05[a**]
Ss in Conditions	815,220.22	96	8,491.88	
Pooled Error Term I: (BxD) + (BxC) + (AxD)	254,510.47	8	31,813.81	
Pooled Error Term II: B + (BxC) + (BxD)	242,240.24	8	30,280.08	
Pooled Error Term III: D + (AxD) + (BxD)	172,030.28	8	21,503.78	
Trials (E)	4,189.41	3	1,396.47	2.06[l]
E x B x D	6,141.09	12	511.76	0.75[i]
A x E	4,249.42	3	1,416.47	0.49[k]
E x B	6,979.14	6	2,883.97	4.22[i***]
C x E	2,213.41	3	737.81	1.08[j]
E x D	4,107.41	6	684.57	1.00[i]
A x C x E	4,488.39	3	1,496.13	2.19[i*]
Residual: (ExAxD) + (ExBxC)	2,737.21	12	227.89	
Trials X Ss in conditions	202,227.49	288	702.18	
Pooled Error IV: Residual + (Trials x Ss in condition	204,964.70	300	683.22	

Table 1 (Cont.)

Source	SS	df	MS	F
Pooled Error V: pooled error IV + (ExD)	209,072.11	306	683.24	
Pooled Error VI: pooled error IV + (ExBxD)	211,105.79	312	676.62	

[a]Tested using Ss in conditions as error term.

[b]Tested using B x D as error term.

[c]Tested using pooled error term I as error term.

[d]Tested using (B+D) + (AxD) as error term.

[e]Tested using pooled error term III as error term.

[f]Tested using (B+D) + (BxC).

[g]Tested using pooled error term II as error term.

[h]Tested using Trials x Ss in conditions as error term.

[i]Tested using pooled error term IV as error term.

[j]Tested using pooled error term V as error term.

[k]Tested using E x B as error term.

[l]Tested using pooled error term VI as error term.

*p < .10

**p < .005

***p < .0001

experimenter nested within experimenter did influence the subjects' estimates over the number of trials ($p < .0001$).

The only other acquisition result of note was the interaction between Race of experimenter and Race of confederate and Trials. This interaction was only marginally significant (see Table 1). In an effort to determine if any other significant interaction occurred over the blocks of trials in relation to the main effects of Race of experimenter and Race of confederates (E x A x C), a simple effect test was employed. This test indicated that the interaction between main effects over the blocks of trials was significant ($p < .0001$). More specifically, results indicated that subjects were more susceptible to the influence of confederates of another race than they were to those of the same race, but only as the number of trials increased (see Figure 1).

As indicated above when both experimenter and confederate were of a different race from subject's, influence was greater than when they were of the same race.

Transfer

In the analysis of the transfer-session data, the statistical test employed was the same as that used in the acquisition, with one minor exception--blocks in transfer were composed of five, rather than ten trials. As indicated in Table 2, no significant level was reached by the

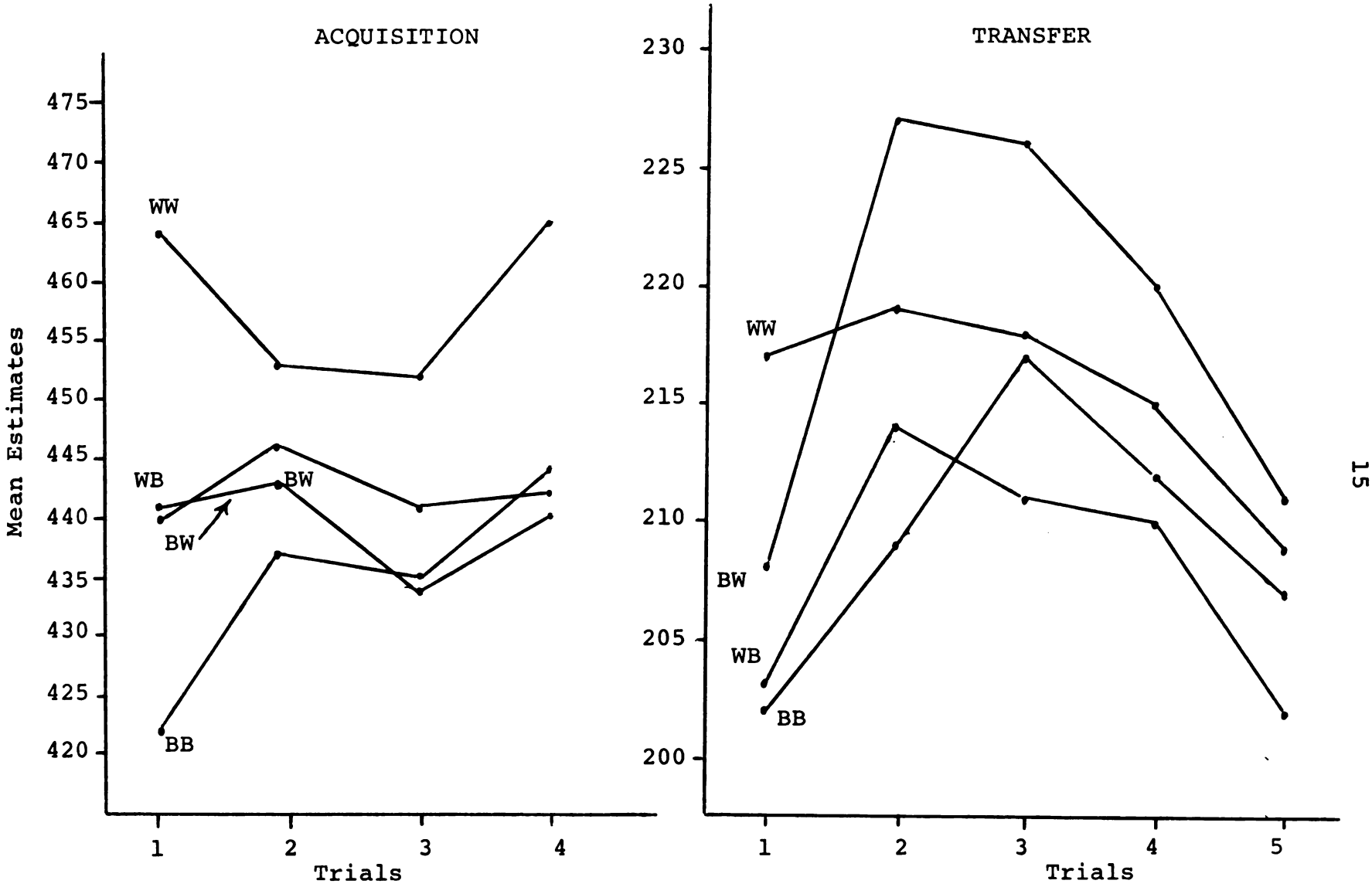
ACQUISITION
TRANSFER
Mean Estimates
475
470
465
460
455
450
445
440
435
430
425
420
230
225
220
215
210
205
200
WW
WB
BW
BB
1
2
3
4
5
Trials

FIGURE 1

Table 2

Analysis Summary, Transfer Trials
(5 Blocks of 5 Trials / Block)

Source	SS	df	MS	F
Race of Experimenter (A)	492.19	1	492.19	0.06[g]
Experimenter/A (B)	267.04	2	138.02	0.01[f]
Race of Confederate (C)	9,421.80	1	9,421.80	1.51[e]
Confederate/C (D)	150.22	2	75.11	0.01[d]
A x C	212.55	1	212.55	0.02[c]
A x D	8,561.09	2	4,280.54	0.42[b]
B x C	20,815.34	2	10,407.67	1.01[b]
B x D	41,131.25	4	10,282.81	2.32[a*]
Ss in conditions	425,989.03	96	4,437.39	
Pooled error term I: (BxD) + (BxC) + (AxD)	70,507.68	8	8,813.46	
Pooled error term II: (BxD) + (AxD)	49,692.34	6	8,282.05	
Pooled error term III: (BxD) + (AxD) + (D)	49,767.45	8	6,220.93	
Pooled error term IV: (BxD) + (BxC)	61,946.59	6	10,324.43	
Pooled error term V: (BxD) + (BxC) + B	62,213.63	8	7,776.70	
Trials (E)	11,455.69	4	2,863.92	10.86[**]
E x B x D	2,292.79	16	143.30	0.53[l]
A x E	1,672.00	4	468.00	1.73[k]
E x B	2,883.97	8	360.50	1.34[i]
C x E	637.35	4	159.34	0.06[j]
E x D	1,243.34	8	155.42	0.58[i]
A x C x E	1,401.46	4	350.37	1.30[i]
Residual: (ExAxD) + (ExBxC)	3,518.77	16	219.92	0.81[h]
E x Ss in conditions	104,005.83	384	270.85	
Pooled error term VI: Residual + E x Ss with condition	107,524.60	400	268.81	

Table 2 (Cont.)

Source	SS	df	MS	F
Pooled error term VII: pooled error term VI + (ExD)	108,758.94	408	266.56	
Pooled error term VIII: pooled error term VI + (ExB)	110,408.57	408	270.61	
Pooled error term IX: pooled error term VIII + (ExD)	111,651.91	416	268.39	
Pooled error term X: pooled error term IX + (ExBxD)	113,944.70	432	263.76	

[a]Tested using as error term, Ss within conditions.

[b]Tested using as error term, B x D.

[c]Tested using as error term, Pooled error term I.

[d]Tested using as error term, Pooled error term II.

[e]Tested using as error term, Pooled error term III.

[f]Tested using as error term, Pooled error term IV.

[g]Tested using as error term, Pooled error term V.

[h]Tested using as error term, E x Ss within conditions.

[i]Tested using as error term, Pooled error term VI.

[j]Tested using as error term, Pooled error term VII.

[k]Tested using as error term, Pooled error term VIII.

[l]Tested using as error term, Pooled error term IX.

[m]Tested using as error term, Pooled error term X.

*$p < .10$

**$p < .0001$

main effects. This was also true in the interactions between main effects with the exception of the interaction between the nested factor experimenter within race of experimenter and the nested factor of confederate within race of confederate which was marginally significant ($p < .10$). This indicates that some influence was maintained even in the absence of confederates.

The analysis of variance reveals one other significant factor which was blocks of trials ($p < .0001$). Referring back to Figure 1, graph of the mean estimates shows that in each condition, conforming behavior started low, increased greatly as trials progressed, and decreased considerably toward the final trials. This reveals a degree of uncertainty which possibly existed during transfer session.

Table 3

Mean Estimates As A Function of Experimental Treatment, Acquisition and Transfer

	Acquisition Means	Transfer Means
Ex-Cf		
W-W	457.80	218.64
W-B	439.32	211.66
B-W	441.47	221.74
B-B	435.97	212.31

The mean estimates reported above were utilized in determining the differences in performance in acquisition session as opposed to performance in transfer session. The graphic picture in Figure 1 was derived from this table.

DISCUSSION

The results indicate that in the acquisition session the main effects were not significant. The more significant interactions were those involving the blocks of trials in relationship to race of experimenter and confederate. These significances are believed to be basically due to the presence of confederates, irrespective of race.

The interaction that occurred during acquisition session disappeared in the transfer session when confederates were removed. It can be argued here that this occurrence was due mainly to the removal of confederates. Subjects were then in a "pressure-freed" situation and could either continue to conform or report their actual observation. However, as indicated in Figure 1 in the Results, in transfer session, subjects seemed to be inconsistent in their responses. Initially, estimates were generally low which was an indication that subjects were more observant in the beginning of the transfer session. As the number of trials progressed, subjects seemed to become less sure of their perceptual judgment and returned to reporting their overestimates as was the case when

confederates were present. However, toward the end of the trials, estimations were generally low again as those reported during the initial trials.

The condition in which subjects were observed in the presence of white experimenter and confederates indicated less compliance in his performance than when experimenter and confederate were black. White subjects were more like a control. One explanation for this result is, this could possibly be due to the tenseness and suspiciousness of the white subject when entering the situation involving members of the opposite race, therefore he complied more. However, as the trials progressed, subjects relaxed and became more concerned with what they were doing and conforming behavior decreased. The opposite was true in the condition where experimenter and confederates were of the same race as subjects.

SUMMARY

The present study involved the use of 112 white male students enrolled in social science at Michigan State University. The study was designed with the intent to determine if race is an influencing factor in conforming behavior.

The study was divided into two parts: acquisition session and transfer session. The acquisition trials were conducted in the presence of confederates of both Caucasian and Black race. In the transfer session, confederates were removed and subjects were able to perform in a "pressure-freed" situation. The subject's task was to observe the flash of dots on a screen and report his observation orally in the acquisition session but he was asked to record his estimate on paper in the transfer session.

The analysis of variance was employed in reporting the results. The results indicated that race of confederate and experimenter did not influence the conforming behavior of subjects. More significant were the blocks of trials in relationship to the interaction of the factors nested within the main effects ($p < .001$).

REFERENCES

REFERENCES

Bray, D. W., The prediction of behavior from two attitude scales. Journal of Abnormal & Social Psychology, 1950, 45, 64-84.

Crano, W. D., "The informational foundations of conformant dispositions." Unpublished dissertation, Northwestern University.

Crutchfield, R. A. Correlates of individual behavior in a controlled group situation. American Psychologist, 1953, 8, 338 (Abstract).

Endler, N. S. "The effects of verbal reinforcement on conformity and deviant behavior." Journal of Social Psychology, 1966, April: 147-154.

Festinger, L. "An analysis of compliant behavior." Pp. 232-256 in M. Sherif and M. O. Wilson (eds) Group Relations At the Crossroads. New York: Harper, 1953.

French, J. R. P., Jr. A formal theory of social power. Psychological Review, 1956, 63, 181-194.

Helson, H., An experimental approach to personality. Psychiatry Res. Rep., 1955, 2, 89-99.

Hoffman, M. L., Conformity as a defense mechanism and a form of resistance to genuine group influence, Journal of Personality, 1957, 25, 412-424.

Klein, M. H., Compliance, consistent conformity, and personality. Journal of Personality and Social Psychology, 1967, 5(2), 239-245.

Lewin, K., Behavior and development as a function of the total situation. In D. Cartwright (ed) Field Theory in Social Sciences. New York: Harper, 1951.