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THE SUBTLETY OF WHITE RACISM: RACE OF VICTIM, DIFFUSION OF RESP--ETC(U)

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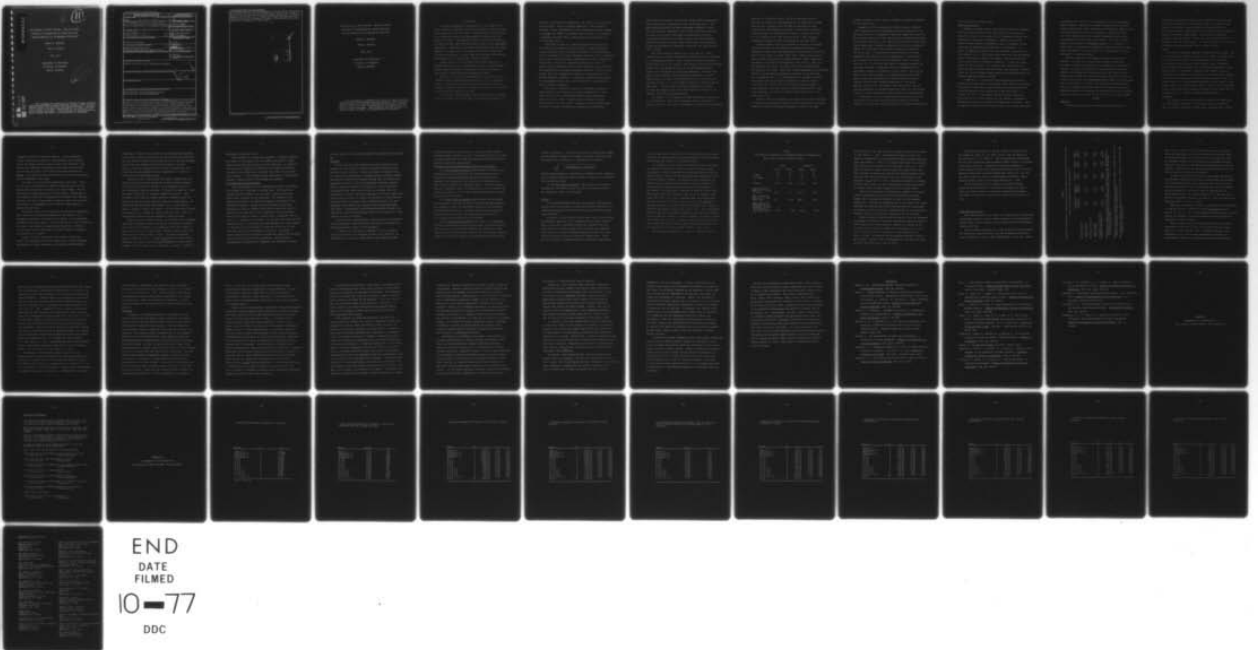
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The Subtlety of White Racism: Race of Victim,
Diffusion of Responsibility, Heart-Rate and
Helping Behavior in an Emergency Situation¹

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July, 1977

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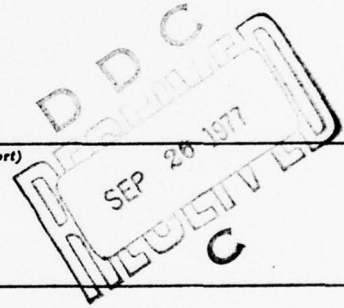
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Diffusion of Responsibility, Heart-Rate and
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Introduction

The Kerner Commission's investigation of the causes of the civil disorders, perpetrated primarily by blacks in several cities across America in the late 1960's, concluded that, "white racism," to a significant degree, was responsible for instigating this protest by blacks. Individually, however, after the publication of these findings, white Americans did not seem to feel personally responsible. Apparently, most whites believe that they have never behaved in a manner which intentionally served to disadvantage a single black person. Further, they often protest against being held accountable for the actions of their ancestors.

Perhaps today at the individual level white America's responsibility may lie not in hurting but rather in being reluctant to help those oppressed by institutional racism as readily as they would if these victims were regarded as family.

However, in a society with egalitarian values even this reluctance to help disadvantaged minorities may not be recognized easily. Instead this reluctance may be expressed indirectly by affecting a person's ability to recognize the extent of victimization and thus the necessity for help.

In addition, although helping these groups may be considered to be an important goal, there may be an unwitting propensity to

displace its hierarchical importance, too readily, in the face of other national, local or personal ambitions. Thus, national security, fiscal responsibility or the neighborhood school concept, not racism, may become the apparent justifications for curtailing or opposing programs aimed at ameliorating the consequences of institutional racism.

This study is part of a research program which focuses on the anti-black attitudes of whites to test a proposed indirect process by which these attitudes, may result in the perpetuation of the victimization of blacks and other minorities while insulating whites from feeling personally responsible for these consequences. To provide a context with immediate consequences to both the subject and the apparent victim, subject bystanders systematically are presented with a standard emergency involving a black or white victim, while the frequency and latency of intervention are the primary dependent variables. In addition continuous monitoring of Ss' psychophysiological reactivity throughout is facilitated by radio telemetry equipment.

The indirect attitudinal process is presumed to operate in those regions of the country or in those institutions in which official norms favor nondiscrimination yet where Ambivalent racism (see Katz, 1970) or latent racism or Aversive racism (see Gaertner, 1976) may exist. According to this Indirect model, the white bystander witnessing an emergency may discriminate

unwittingly thus failing to help black victims under circumstances which would elicit intervention if the victim were white. The model basically depicts the white bystander attempting to deal with the situation according to one of three response tendencies, the first two of which leads toward discriminatory behavior. A substantial portion of the model suggests that the processes detailed by Latane and Darley (1970) which might lead bystanders toward nonintervention in emergency situations, are amplified for black victims.

The first tendency suggests that in the case of a black victim there is a greater likelihood of misperceiving the situation or its psychophysiological impact, leading the white bystander to believe that help is not needed. This tendency would be particularly evident when the emergency itself or its psychophysiological impact on the bystander is unclear and ambiguous. When the emergency is more clear-cut and unambiguous, precluding a no help needed definition, then a white bystander with a black victim is presumed to shift to a second response tendency in which he/she is especially motivated by an unwitting propensity to search for some justifiable reason which would reduce the necessity for personal involvement and intervention.

For example, if the presence of other bystanders is noted and it is obvious that these other bystanders have no intention of helping, they are, in a sense, establishing a norm of non-intervention.

According to the indirect model, the white bystander would be more apt to succumb to group pressures not to intervene for black than for white victims. Here the goal of rescuing the black victim may be superceded by the desire to avoid being regarded as a deviate before the non-responsive others, a concern which may not be as important when the victim is white. This reasoning is perfectly compatible with the findings of Gaertner (1975).

Another example, which is to become the focus of the present research concerns the likelihood for bystanders diffusing responsibility among other bystanders more readily for black than for white victims. Darley & Latane (1968, 1970), suggest that the presence of other bystanders with whom bystanders cannot communicate nor observe may affect the likelihood of intervention. When only one bystander is present, she bears 100% of the responsibility for assisting the victim. When other capable bystanders are available, however, the individual bystander is no longer the unique focus of all responsibility (i.e., responsibility is diffused or shared with others) and the pressure to intervene is thereby reduced. In the case of a black victim, the indirect model may expect a white bystander to be more likely to diffuse responsibility among other bystanders and thereby intervene less readily than if the victim were white.

However, when the bystander is the only witness, the likelihood of finding some justifiable reason to avoid intervention is thereby reduced and he/she then would be expected to shift to the 3rd

response tendency in which help is extended, presumably regardless of the victim's race.

Supportive of the hypothesized indirect process, Gaertner (1975) observed that white bystanders believing themselves to be the only witness to an unambiguous emergency helped both black and white victims 100% of the time; whereas, when bystanders witnessed the identical emergency in the face-to-face presence of three other passive bystanders (actually accomplices of E) white victims were helped 90% of the time, while black victims were helped only 30% of the time. In the present study the presence of other bystanders with whom the S can not communicate is introduced so as to present our subject with a justifiable reason to remain inactive, (i.e., the belief that one of the other bystanders may intervene and help), a propensity which is hypothesized to be particularly strong in the case of a black victim. Thus, on the basis of the indirect model, it is expected that Ss will help white victims more frequently and faster than black victims when they believe other capable bystanders are available.

However, they will not discriminate when they believe they are the only witness to an emergency since the search for justifiable reasons to avoid intervention is more likely to be unsuccessful.

Furthermore, to avoid confounding the perceived race of the victim with the victim's perceived social status, the social status of the black and white victims will be varied systematically

from lower class to middle class.

Arousal and Helping

Recently, Piliavin, Rodin, and Piliavin (1969) have suggested that the primary motivation for responding to an emergency is related to a desire to rid oneself of an unpleasant arousal state generated by witnessing an emergency. Indeed, results from several studies support the assumption that an emergency is subjectively and physiologically arousing to a bystander. In a series of experiments Lazarus and his colleagues (Lazarus et al., 1965; Nomikos et al., 1968) report that heart rate and GSR changes, as well as subjective reports of arousal, occur while subjects view a film involving industrial accidents. In addition, Berger (1962) has found evidence that subjects show GSR changes when observing others receiving electric shock, and similarly, Stotland (1969) has found increased palmar sweating and vasoconstriction in subjects observing another in pain.

In addition, in a study which measured both physiological arousal and helping, Byeff (unpublished, 1970) observed a relationship between a decrease in skin resistance and the occurrence of a helping response for Ss witnessing an emergency alone. It appears then that (1) bystanders typically react to emergency situations with increased arousal and (2) somehow a bystander's helpfulness seems to be related to the magnitude of arousal. Thus, an additional purpose of the present study is to provide additional

information with regard to the relationship between psychophysiological arousal, specifically changes in heart-rate and helping. Dovidio and Gaertner (1976) noted that the subjective impact of the emergency could be more easily attributed to some other event (i.e., the administration of a placebo supposedly with arousal side-effects) for black than white victims. The present study, however, will examine the objective impact (i.e., changes in heart-rate) of witnessing an emergency to black and white victims, while the bystander is either alone or in the presence of other bystanders in locations nearby.

Specific questions with regard to changes in heart-rate include: (1) What is the correlation between the magnitude of change in heart-rate induced by the emergency and the speed of helping? (2) Does the presence of other bystanders reduce the impact of the emergency initially and over time relative to bystanders who believe that they are the sole witness? (3) Does the victim's race affect the psychophysiological impact of the emergency upon the bystander? (4) Would the victim's race differentially affect the psychophysiological impact of the emergency only when bystanders witness the emergency in the presence of other potential helpers, as might be expected on the basis of the indirect model?

Method

Subjects

Seventy-five white female subjects who were enrolled in

introductory psychology classes at the University of Delaware were selected to participate in the present study. All subjects were chosen on the basis of their scores on an eleven item Likert format questionnaire, administered at the beginning of the semester, regarding attitudes toward blacks. This scale for assessing prejudice correlates highly ($r=.83$) with three subscales from the Woodmansee and Cook (1967) scale: (1) ease of inter-racial contacts, (2) subtle derogatory beliefs, and (3) private rights.

Design

The present experiment employs a $2 \times 2 \times 2 \times 2$ factorial design. One factor manipulated included the race of the victim. Subjects were led to believe that they were participating in the experiment with another subject who was either black or white. Whether or not the subject had an opportunity to diffuse responsibility was a second factor in the design. Subjects were informed that they alone would be attempting to receive E.S.P. messages from a sender, or that two other subjects were also trying to receive E.S.P. As another factor, the socioeconomic background, either upper or lower middle class, was systematically varied. Finally, the Ss prejudice score on the eleven item inventory was used to select high and low prejudiced Ss, i.e., upper and lower quartile scorers.

Procedure

All subjects were received under the guise of an experiment in Extra-Sensory Perception. Each subject was led to believe that she would be trying to receive E.S.P. messages from a sender,

another female across the hall. The sender was always described as Brenda Evans, another randomly selected subject. Actually, Brenda Evans, who later became the victim, was only a tape recorded voice sent over the intercom system. To prepare each S for the eventual "emergency," E first apologized to the S for the extreme disarray of the laboratory. However, he also mentioned that the S was indeed fortunate because the sending room, for example, was in much worse shape--particularly given the stack of chairs piled to the ceiling.

The purpose of the experiment, as explained to the subject, was to test out the "physiological synchrony" theory of E.S.P. which proposed that if E.S.P. was indeed a sense, then it was likely that some physiological correlate existed. In particular, it was hypothesized that when a subject successfully received an E.S.P. message from a sender their autonomic nervous systems would be in synchrony. Consequently, a test of this theory necessitated monitoring the heart rates of the sender and the receivers.

After showing the subject the biotelemetric transmitter employed in the study and explaining the recording procedures, the experimenter then asked the subject if she was willing to continue in the study. All subjects who agreed to continue were asked to complete a brief background information form. This form contained a scale for estimating their socioeconomic status and a question concerning the head of their family's occupation.

The procedure for the E.S.P. task was explained by the experimenter in more detail. Subjects were told that they would be trying to receive E.S.P. messages from another subject in another room across the hallway. Half the subjects were informed that they would be the only receiver, while half the subjects were told that there would be two other receivers, each also in separate rooms. Furthermore, in order to be certain that the subject was oriented correctly for receiving E.S.P., the experimenter showed the subject the door to the sender's cubicle which bore the sign "Sending Room." In the conditions in which the subject was led to believe that two other receivers existed the experimenter also pointed out the doors of the two cubicles immediately adjacent to the sending room which, in these cases, had "Receiving Room" signs.

Upon returning to the experimental room, the experimenter then explained to the subject that it was important that the participants in the study not know each other well. Furthermore, to prevent non-verbal communication, a potential hazard for E.S.P. studies, it was necessary that the subjects not meet until the completion of the task. Consequently, to ascertain that the participants were strangers, subjects would exchange University identification cards which contained photographs. When subjects were told of the presence of two other receivers, they were briefly shown the identification cards, attached to the background

information forms, of two white females. In all conditions, though, subjects were shown the identification card of Brenda Evans, the sender, and were asked to look very carefully at the picture and background information form to make sure that they did not know her since it was crucial that they not know the sender. This card and form were then left in front of the subject for the remainder of the study.

The race of the victim was manipulated in two ways. First of all, half the subjects were shown an identification card for Brenda Evans containing the picture of a black female. For the other half the photograph was of a white female. Photographs of two different black and two different white females were employed. Secondly, the voice of the sender the subject heard over the intercom system on the subsequent E.S.P. task was identifiable as either black or white.

The social status of the victim was manipulated by systematically varying the information presented to the subject in the background information presented to the subject in the background information for Brenda Evans. In the higher social status conditions, the head of the family's occupation was identified as "Doctor". In the lowest status conditions, the head of family's occupation was presented as "Janitor".

After the subject determined that she did not know the sender, the experimenter left the subject with a female assistant who helped the subject position the electrodes and biotelemetry

transmitter. Before leaving, however, the experimenter explained to the subject that he would be in his office three rooms down the hall and that she should get him when the E.S.P. task was completed since it was not possible for him to hear when it was over. Finally, after the transmitter was in place, the assistant left to operate the physiograph which was supposedly in a room two floors above the experimental room.

During the E.S.P. task itself, the sender signaled over the intercom system the beginning and end of thirty second intervals in which the receiver, the subject, was to determine which of five alternative choices were sent. To signal the start of a trial, the sender would say, for example, "Number one, begin." This statement was followed by twenty seconds of silence in which the subject was led to believe that the sender was concentrating. At the end of this period the sender said, "O.K., circle your response...(pause)...Number two, begin." For the first twenty trials the subject was to attempt to receive words by E.S.P., while the second twenty trials concerned geometric shapes and forms.

After the first seventeen trials, as a prelude to the emergency (the last 60 seconds of which also served as the baseline period for the heart-rate measure), the sender got up to fix a stack of chairs in her cubicle, saying, "Wait a minute...Those chairs over there look like they're about to fall. I'd better straighten them out before we go on." During the emergency situation which followed, the sound of chairs falling/^{was} accompanied by the victim's screams, "They're falling on me...(scream)...(scream)...(scream)...",

followed by prolonged silence.

Three measures of helping were recorded. A helping response was scored if the subject left the sending room within a three-minute period from the occurrence of the emergency. In addition, the latency of the subject to stand and the latency for opening the door of the sending room, located 9 feet from the S's chair, were recorded. If the subject did not help within a three-minute period, a latency score of 180 seconds was assigned.

Post-Experimental Questionnaire

After participating in the experimental session, the subject was escorted by a debriefer to another room. After being reassured that the "Sender" was all right, subjects were asked about their reactions to the experience. One purpose of the debriefing period was to assess the subject's perception of the emergency situation. During the initial stages of the post-experimental session, subjects were asked to speculate about the purpose of the experiment so as to ascertain their suspicions. Then Ss were asked to rate on a scale from 1, indicating "not at all", to 7, indicating "very much", (1) how sure they were that the victim was hurt, (2) how much help they believed the victim needed, (3) how serious they assessed the situation to be, and (4) how real they believed the emergency to have been. On similar scales subjects were also asked to report how aroused and how upset they were during the emergency situation. After the post-experimental evaluations were completed, the debriefer revealed

the true nature of the study and answered any questions the subject had.

Equipment

The Ss heart-rate was monitored via radio telemetry which permits the investigator to monitor autonomic behavior without limiting the Ss' mobility. Wiring the S down to hardware would be a particular disadvantage in helping behavior research because Ss might be inhibited from helping through fear of injuring the equipment or herself. Thus our disposable Electrodes (Andover Medical Industries #83003) led directly to a Narco Biosystems Transmitter (Model #FM-1100-E2) which was attached, with the assistance of a female laboratory assistant, to the S's upper torso. Ss were led to believe the signal was received in a room located two floors above (to permit them to believe they were the sole bystander) when actually the receiver (Narco Biosystems Model #FM-1100-6), Biotachometer (Narco Biosystems Model #BT-1200) and Physiograph (Narco Biosystems Model #Six B) were located in a room adjacent to the S's location.

Recording began approximately 1 minute prior to the emergency which constituted a baseline period from which to calculate the psychophysiological impact of the emergency.

To permit the investigator knowledge of the S's movement during the baseline and emergency periods the S's behavior was monitored with a low light Video Camera (Sony Model #AV 1400)

concealed behind the grill cloth of a fully functional speaker located directly in front of the S. The camera then led to a video tape deck (Sony Model #AV 3600) and Monitor (Sony Model #CVM 950) located alongside the physiograph.

Calculation of Heart-Rate Changes Following the Emergency

(1) A Mean Overall Escalation (MOE) measure was obtained by calculating the mean heart-rate for each one-second interval during the sixty-second baseline period which precedes the emergency, and subtracting this from the mean heart-rate for each second following the emergency's onset. This post emergency period is concluded either one second prior to the S standing for those Ss who help, or at the end of the 180 second post emergency period for the nonhelpers.

(2) A Mean Initial Escalation (MIE) measure was calculated very similarly to the MOE but only the first ten seconds following the emergency's onset was considered relative to the preceding 60-second baseline period. For those Ss who helped within this 10-second interval the MIE was derived using that portion of the 10-second period prior to the S standing.

(3) The Mean Overall Deviation (MOD) score is the absolute difference between the mean heart-rate during the baseline period and heart-rate for each second following the emergency's onset, (until 1-second before S helps or for a full 360 seconds) ignoring whether the heart-rate change is an acceleration or deceleration

relative to baseline. The difference score is squared then summed across seconds, divided by the number of seconds, following which the square root is obtained, as indicated by the formula:

$$\sqrt{\frac{\sum (\bar{X} \text{ Emergency} - \bar{X} \text{ Baseline})^2}{i}}$$

This MOD then provides an indication of variability most compatible with a standard deviation score, except it focuses on the deviation from the baseline mean.

(4) The Mean Initial Deviation (MID) measure is calculated identically to the MOD but only the first ten seconds following the emergency's onset was considered.

Results

No differences between high and low prejudice scoring Ss or between high and low status victims were observed; therefore, the findings presented below have for the most part collapsed across these variables.

Altogether, eleven subjects, distributed fairly evenly across experimental conditions, were eliminated from the data analysis. Nine of these were eliminated because they admitted that they heard about this specific study (N=5) or because they admitted that they were initially extremely suspicious because they read detailed accounts of previous deception studies (N=4). Other Ss' data (N=2) were disregarded because of mechanical difficulties

with the physiograph system used for monitoring their heart-rates. Inclusion of these extremely suspicious subjects does not meaningfully change the results to be presented below.

An inspection of the relative proportions of Ss in the Alone and Together conditions assisting the black and white victims (See Table 1) strongly supports the predictions derived from the indirect model's account of the process by which attitudes toward the victim affects helping. An analysis of the frequencies of helping and not helping with Sutcliffe's (1957) technique for partitioning Chi Square reveals the following information: A main effect for being Alone or Together in which Ss in the Alone Conditions helped more frequently than Ss in the Together Conditions ($X^2=7.729$, 1 df, $p<.01$); although there is no main effect for Race of Victim ($X^2=1.237$, 1 df, $p = n.s.$), the expected interaction between the victim's race and situation (i.e., Alone or Together) was obtained ($X^2_{ab}=4.94$, 1 df, $p<.05$). This interaction revealed that when bystanders believed they were the only witness, black victims were helped 13.7% more frequently than white victims ($X^2=1.1428$, 1 df, $p = n.s.$); whereas, when they believed that two other bystanders were available, white victims were helped 37.5% more frequently than black victims ($X^2=4.57$, 1 df, $p<.05$).

The two latency measures, i.e., time to stand and time to

Table 1
The Effects of Witnessing an Emergency Alone or Together and
The Victim of Which is Black or White

	Alone		Together	
	Black V.	White V.	Black V.	White V.
# Help	15	13	6	12
# No Help	1	3	10	4
% Help	93.7%	81%	37.5%	75%
Mean Latency to Help (i.e., Stand up) sec.	36.6	55	124.9	72.4
Mean Latency to Help (i.e., Open door) sec.	45	62.6	128.5	89.2
Mean rating of how <u>real</u> was the Emergency (1=not at all real; 7= very real; N=64).	4.69	3.25	4.00	3.06

open the door to the laboratory, were highly related to one another ($r=.98$, $df=62$, $p < .001$). Multivariate analysis of these two measures corroborated the partitioned Chi-Square findings presented above (see Table 1). That is, Ss helped faster when they believed they were the only bystander to the emergency ($F=5.58$, $p < .007$); also, the extent to which white victims were helped faster than black victims was greater when Ss believed other bystanders could help than when they believed they were the only witness to the emergency ($F_{AXB}=3.20$, $p < .049$). Univariate analyses for standing time and time to open the door obtained nearly identical patterns of results, again strongly supportive of the indirect model.

Given the recognizable difficulties of attempting to deceive today's experimentally sophisticated Introductory Psychology student the investigators attempted to deal with this problem empirically. Although our method may not be infallible it at least addresses this problem objectively which permits the investigator and others to decide whether Ss' suspiciousness of the experimental deception offers an alternative explanation for the findings.

After eliminating those Ss who were positive that the emergency was staged by E because of previous information about this study or other studies which used deception, analysis of variance of the 64 remaining Ss' suspicion ratings of the emergency (i.e., 1=not real; 7=very much real) revealed only a main effect for the Race of Victim. As indicated by the suspicion ratings in Table 1, Ss were more confident that the emergency was real when the victim was black than when the victim was white.

Correlational analysis of the Ss' ratings of suspicion and the latency to stand ($r=-.10$, $df=62$, $p=n.s.$) and the latency to open the door ($r=-.21$, $df=62$, $p < .10$) indicated that although Ss who were more suspicious helped somewhat slower overall, no reliable relationship obtained. Furthermore, co-variance analyses in which suspicion ratings were removed statistically from the latency measures reveal that the Alone-Together main effect ($p < .01$) and the critical Race of Victim x Alone-Together interaction effect reported earlier remain statistically reliable ($p < .056$).

The Ss evaluations of the emergency situation assessed during the post-experimental interview are presented in Table 2 along with their respective correlation coefficients assessing the degree to which these measures were related to the latency to help.

Heart-Rate and Helping

The findings indicate that there is a statistically significant relationship between the four cardiac measures of the psychophysiological impact of the emergency and the speed with which bystanders intervene to help.

The two overall measures (i.e., MOE and the MOD) which consider the entire post emergency phase yield the following correlations with the latency to open the door respectively: $r=-.61$ ($p < .001$),

Table 2
 Subjects' Evaluations of the Emergency Situation Based on the Race of the Victim and
 Belief of the Presence of Other Bystanders*

	Seriousness of the Situation	Degree of Help Needed ¹	Certainty of Injury	Degree Of Upset ²	Degree Of Arousal
ALONE CONDITION					
White Victim	3.19	3.75	3.44	4.13	5.13
Black Victim	4.06	4.94	4.00	5.06	4.88
DIFFUSION CONDITION					
White Victim	3.25	3.75	3.50	3.81	4.50
Black Victim	3.13	3.19	3.13	3.50	4.13
Correlation with Latency to Help: Open Door $r =$					
	-.21	-.34	-.10	-.31	-.21
	$p < .10$	$p < .02$	$p = N.S.$	$p < .02$	$p < .10$

¹Analysis of variance yielded a main effect ($F(1,48)=4.52, p < .05$) for opportunity to diffuse responsibility and a significant race by diffusion interaction ($F(1,48)=4.52, p < .05$).

²Analysis of variance revealed a marginally significant effect ($F(1,48)=3.80, p = .057$) for the opportunity to diffuse responsibility.

*All ratings are based on a seven point scale for which 1 indicates "not at all" and 7 represents "very much so".

and $-.45$, ($p < .001$). Thus considering the overall increase (minus any decreases) in heart-rate relative to baseline (MOE) or the overall change one way or the other from baseline (MOD) the findings indicate that the greater the psychophysiological impact of the emergency the faster the bystander emits a helpful response. Almost identical correlations were obtained using the Time to Stand as the measure of helping.

Although the previous correlations were based upon changes in heart-rate recorded for the entire period after the emergency, the relationship between these changes and the speed of intervention was actually in full force during the initial 10-second period following the emergency's onset as indicated by the correlations between the latency to help (i.e., open the door) and the Initial Mean Escalation ($r = -.056$, $p < .001$) and the Initial Deviation score ($r = -.45$, $p < .001$).

Although, as indicated in Table 2, the latency of intervention is related to the Ss' estimates of their perceived degree of arousal ($r = -.21$, $p < .10$) no significant correlations were obtained between the objective heart-rate measures and the Ss subjective evaluations of their arousal.

Table 3 presents the mean change scores across each major experimental condition for each of the four heart-rate change scores (i.e., MOE, MOD, MIE, MLD). Baseline levels are also presented so as to provide some perspective to evaluate the psychophysical impact of the emergency across the experimental

Table 3
 Mean Changes in Heart-Rate as a Function
 of Alone:Together and Race of Victim

	Alone		Together		ANOVA Results
	Black Victim	White Victim	Black Victim	White Victim	
Baseline Means ^{*1} (Before Emergency)	77.48	83.98	86.30	84.13	Main Effect: Alone vs. Together Interaction Race x Alone:Together p<
Mean Overall Escalation (MOE)	14.52	11.39	2.40	10.84	F=3.14 p<.08 F=2.62 p<.11
Mean Overall Deviation (MOD)	21.09	15.60	11.36	16.97	F=2.03 p<.16 F=3.59 p<.06
Mean Initial Escalation (MIE)	10.71	8.39	-1.04	6.93	F=3.41 p<.07 F=2.07 p<.16
Mean Initial Deviation (MID)	18.43	11.12	9.92	14.65	F=0.75 p<.39 F=4.35 p<.04

¹Race x Diffusion interaction = p<.18 for Baseline Means; Correlation of baseline levels with MOE (r=-.01), p=n.s. See text for evidence suggesting that findings can not be explained by initial baseline differences.

conditions. With regard to Baseline means, ANOVA revealed a trend prior to the emergency for a Race x Diffusion interaction ($F=1.816$ $p < .18$). Nevertheless, the change scores following the emergency were not affected by initial baseline differences given the correlation between Baseline levels and amount of change (MOE) was not statistically reliable ($r=-.01$, $N=64$, $p=n.s.$). Similar correlations were obtained with the other three measures of cardiac activity. Thus change in heart-rate following the emergency was not affected by basement or ceiling effects related to initial baseline levels. Furthermore, Baseline levels were not related to the Ss' latency of intervention ($r=.01$, $p=n.s.$).

Analysis of variance of the mean changes in heart-rates across experimental condition generally paralleled the pattern of findings obtained with the helping behavior measures. That is, no main effects were obtained for victim's race, victim's status or Ss' prejudice score while a main effect for Alone:Together is suggested in 3 of the 4 heart-rate change measures (see Table 3). Furthermore, the critical Race x Alone:Together interaction effect seemed to emerge within each of the heart-rate change scores while no other interactions were obtained consistently across these measures.

In addition a frequency analysis of the heart-rate change for

the entire post emergency period indicated that whether this change was an escalation or deceleration from baseline is related to the victim's race and also to whether the S is Alone or Together with other bystanders. A greater number of Ss displayed as escalation of heart rate when they were Alone (81.25% escalated) than when they were Together (59.38% escalated) with other bystanders ($\chi^2 = 3.67$, $df=1$, $p < .10$). Similarly, 81.25% of the Ss' heart-rates escalated when the victim was white while only 59.38% of the Ss' heart-rates escalated for black victims ($\chi^2 = 3.67$, $df=1$, $p < .10$). No other main effects or interactions were noted and also these effects did not emerge when only the initial 10-second period was considered. However, Ss whose heart-rates accelerated during the initial 10-second period after emergency helped (i.e., opened door to laboratory) faster than Ss whose heart rates decelerated during this period (Means = 61.5 seconds vs. 112.2 seconds, $t = -3.04$, $df=62$, $p < .01$). Considering the entire post-emergency period, Accelerators similarly helped faster than Decelerators (Means = 54.8 vs. 144.1, $t=-5.81$, $df=62$, $p < .001$).

Furthermore, correlational analysis reveals that for Accelerators, the greater the degree of heart-rate change within the first 10-seconds and over the entire post emergency period the shorter their latency of intervention ($r=-.54$ $df=37$, $p < .01$; $r=-.42$, $df=43$, $p < .01$, respectively). However, among Decelerators, the greater the degree of change (i.e., deceleration) the longer

their latency of intervention for both the initial 10-second period and over the entire post emergency period ($r=+.31$, $df=23$, $p < .15$; $r=+.39$, $df=17$, $p < .10$). Thus heart-rate acceleration and deceleration seem to relate quite differently to the latency of intervention. Thus, the direction of change may be a more sensitive measure of activation than the absolute deviation from baseline.

Discussion

The pattern of findings obtained are consistent with prediction derived from the indirect model's account of the manner in which racial attitudes of most whites affect the likelihood of intervention in behalf of black victims. In this study, when white bystanders believed themselves to be the only witness to an emergency, thus requiring them to shoulder 100% of the responsibility for the victim's well being, their helping behavior and psychophysiological responsiveness were quite high for both black and white victims. In fact, in just about every instance their responsiveness was somewhat higher for black than for white victims, but not by an amount that was statistically significant. The presence of other apparent bystanders, however, radically altered this pattern of findings in a manner which was of particular disadvantage to the black victims. No longer did high proportions of Ss intervene quickly in behalf of black victims, as they did when Ss were alone. Also, when the victim was black, cardiac responsiveness (across all 4 measures) decreased by an average of

4 49%. In the case of a white victim, the presence of other bystanders decreased the proportion of helpers somewhat, but had a more marked inhibitory effect upon the latency measures of intervention. However, cardiac reactivity to the emergency for white victims was approximately equivalent to that of Ss witnessing the emergency alone.

In any event the statistically significant Race-by-Alone:Together interaction effects indicated that the presence of other bystanders had a more inhibiting effect upon helping and cardiac responding of Ss with black than with white victims. In accord with the indirect model, whites were highly responsive to the needs of blacks until some justifiable reason to avoid personal involvement became salient. In the present context, a justifiable reason is one which either permits non-involvement without connoting bigotry or harshness or one which is of such overriding personal importance that the suffering of others is recognized as unfortunate and undesirable but as necessary. In this study, the opportunity to diffuse responsibility among other bystanders is presumed to represent sufficient justification for Ss to avoid intervention in behalf of the black victim. This justification does not connote harshness given that Ss may assume that the victim will not be left to suffer without someone offering assistance. Although some diffusion of responsibility was noted in behalf of the white victim also, this is assumed to represent a baseline level from which attitudinal factors may begin to exert their influence.

Of particular significance in this study is the dampening of cardiac responsiveness for black victims initiated by the belief that other bystanders are available to intervene. This dampening did not only emerge over time, but was present almost instantaneously following the onset of the emergency. Thus, the victim's race did not merely affect the Ss decision to intervene or to remain inactive, but indeed inhibited the psychophysiological impact of the emergency itself, but only when the S believed other bystanders were present.

These findings are perfectly compatible with and offer strong support for portions of a model of bystander intervention proposed by Piliavin, Rodin, and Piliavin (1969) and more exhaustively by Piliavin, Piliavin, and Rodin (1975). According to this model the primary motivation for responding in an emergency is not an altruistic one but, is instead, a hedonistic drive to reduce the subjectively unpleasant state of arousal generated by witnessing the emergency. An important proposition of this model, which is strongly supported by the present findings, is that a state of psychophysiological arousal must precede a bystander's intervention and that the bystander's speed of responsiveness will be a function of the magnitude of this arousal. The statistically significant correlations between the latency of intervention and the magnitude heart-rate change (which range from $r=-.45$ to $r=-.61$) most clearly support the Piliavin et al., model. In addition, Ss' subjective reports of their degree of upset and degree of arousal

following the emergency similarly are related to their latency of intervention. However, given that these self-report measures may represent post hoc attempts on the part of the Ss to justify their helping behavior responsiveness, we do not regard the findings here as representing unequivocal support for the Piliavin et al., model nor for the Indirect model which instigated the present research. However, it is somewhat problematic to explain why both the subjective measures of arousal and the objectively recorded measures of arousal (i.e., changes in heart-rate) both relate to the latency of intervention, yet they fail to relate to one another. Perhaps, the inclusion of several psychophysiological parameters in addition to heart-rate would resolve this apparent inconsistency, assuming that Ss' subjective reports are based upon some estimate of generalized activation.

Furthermore, the findings of the present investigation are entirely compatible with a study by Dovidio and Gaertner (1976) which also investigated race, arousal and helping behavior. Consistent with the Piliavin et al., assumption that a helping response represents a hedonistic desire to reduce arousal generated by the emergency, Dovidio and Gaertner report that Ss who could attribute all of their arousal to an ambiguous emergency helped faster than Ss who could attribute some of their arousal to a previously administered placebo described as having arousal side effects. In the latter condition, therefore, helping was inhibited when Ss perceived that responding to the emergency may not be

instrumental in reducing their state of arousal.

Supportive of the indirect model, additional findings of Dovidio and Gaertner indicate that when no other justification to avoid intervention was available while the bystander was the sole witness to an unambiguous emergency, white Ss given the opportunity to misattribute their arousal to the previously administered placebo with arousal side effects helped black victims more slowly than white victims. However, when the Ss' arousal could be attributed only to the unambiguous emergency, they helped apparently without regard for the victim's race, just as they did in the Alone Condition of the present study.

In addition to the high correlations between the magnitude of heart-rate change and the latency to intervene in the present research, the results also suggest that whether this change was an acceleration or deceleration was related to the experimental conditions of the study. Specifically, a greater proportion of Ss' heart-rates decelerated when they witnessed the emergency Together than Alone; similarly, deceleration occurred more frequently for black than for white victims, although no Race x Alone:Together ^{was} interaction effect/obtained.

We suggest, albeit speculatively, that the results of the present study are compatible with earlier findings (Lacy, et al., 1963; Elliot, 1972) which demonstrate that acceleration in heart-rate often accompanies a preparation for mental or physical action while a deceleration is often associated with the intake of

information from the environment. In fact, the results of the present study indicate that the greater the degree of acceleration the faster the bystander responded to the emergency. On the other hand, the greater the magnitude of deceleration, the longer the latency for bystanders to intervene. Indeed, the diffusion of responsibility concept implies that the bystander is in a temporary state of confusion looking for information to resolve the dilemma of whether or not to intervene. In addition, the indirect model proposes that a white bystander with a black victim is motivated by a propensity to seek information which will justify non-involvement. Thus, the finding that decelerations in heart-rate were more frequent with black than white victims and also among Ss together with others is consistent with the processes suggested by the indirect model as well as with the diffusion of responsibility concept.

In general the overall findings of this study support predictions derived from the indirect model's account of the manner in which racial attitudes among whites affect the likelihood of their intervening in behalf of black victims. However, although no differences between high and low prejudice scoring subjects obtained the investigators continue to speak of the role of "racial attitudes." Do the findings then, relate to "racial attitudes"? The answer to this question might appear to be no, if it is assumed that these attitudes must be conceptualized primarily as univalently positive or negative.

However some contemporary investigators (Katz, 1970; Gaertner, 1976) have already obtained evidence suggesting the basic validity of Mydal's (1944) conclusion that racial attitudes of many whites may be ladden with conflict. Katz and his associates (Katz, Glass & Cohen, 1973; and Katz, Cohen & Glass, 1975) suggest that ambivalence characterizes the attitudes of most whites. Gaertner, on the other hand (1973, 1976), suggests that the racial attitudes of low prejudice scoring people are marked by a special type of ambivalence (i.e., aversiveness, see Kovel, 1970) in which there is a conflict between negative feelings toward blacks, which are rarely very salient and a conscience which seeks to repudiate or dissociate such feelings from their behavior and more importantly from their egalitarian self-image. In the present study, the particular pattern of discriminatory and non-discriminatory behavior of high and low prejudice scoring subjects, which was predicted from the proposed indirect model, may be interpreted as offering further support for these "multivalent" conceptualizations of racial attitudes.

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APPENDIX A

Supplement to the Methods for
The Subtlety of White Racism: *Race, Diffusion*

SENDER'S BACKGROUND INFORMATION FORM

Name: _____

Date: _____

Sex: _____

Date of Birth: _____

Residence: City: _____

State: _____

Head of Family's Occupation: _____

Employer: _____

Estimated Socioeconomic Status (Income Bracket):

1	2	3	4	5
Lower	Lower	Middle	Upper	Upper
Class	Middle	Class	Middle	Class
	Class		Class	

E.S.P. Task: Section One

Instructions: This section will contain twenty intervals. The "sender" will signal the beginning and end of each. At the end of each interval, circle the letter corresponding to the word you feel was sent.

- 1) (a) house (b) dog (c) cat (d) table
- 2) (a) cow (b) moose (c) mouse (d) horse
- 3) (a) run (b) jump (c) hop (d) skip
- 4) (a) on (b) under (c) around (d) in
- 5) (a) boat (b) plane (c) cow (d) train
- 6) (a) cold (b) peaceful (c) oak (d) tranquil
- 7) (a) angry (b) mad (c) upset (d) annoyed
- 8) (a) happy (b) joyful (c) good (d) nice
- 9) (a) boat (b) joyful (c) calm (d) run
- 10) (a) helpless (b) hear (c) hair (d) here
- 11) (a) fly (b) ski (c) good (d) strong
- 12) (a) gentle (b) mild (c) calm (d) kind
- 13) (a) envy (b) need (c) bed (d) hope
- 14) (a) word (b) red (c) loud (d) pain
- 15) (a) red (b) white (c) blue (d) green
- 16) (a) tease (b) beach (c) ice (d) grass
- 17) (a) meadow (b) flower (c) stream (d) sunset

APPENDIX B

Supplement to the Results for
The Subtlety of White Racism: Race, Diffusion

Partitioned Chi Square: Frequency of Helping.

Source	df	χ^2
Race (A)	1	1.237
Diffusion (B)	1	7.729**
Status (C)	1	0.417
Prejudice (D)	1	1.237
A x B	1	4.944*
A x C	1	1.129
A x D	1	0.309
B x C	1	0.202
B x D	1	0.000
C x D	1	1.129
A x B x C	1	0.112
A x B x D	1	0.314
B x C x D	1	0.106
A x B x C x D	1	0.615

* $p < .05$; ** $p < .01$

Multivariate Analysis of Variance of the Time to Stand and the Time to Open the Door.

Source	F(2,45)	p
Race (A)	1.62	.208
Diffusion (B)	5.58	.007
Status (C)	0.59	.558
Prejudice (D)	1.52	.229
A x B	3.20	.049
A x C	0.52	.600
A x D	0.44	.649
B x C	0.55	.578
B x D	0.09	.911
C x D	0.45	.643
A x B x C	0.23	.793
A x B x D	0.25	.782
A x C x D	0.83	.443
B x C x D	0.06	.939
A x B x C x D	0.23	.797

Univariate Analysis of Variance on the Time to Stand

Source	df	ms	F	p
Race (A)	1	4658.06	0.99	.324
Diffusion (B)	1	44732.25	9.56	.003
Status (C)	1	5220.06	1.12	.296
Prejudice (D)	1	3481.00	0.74	.393
A x B	1	20093.06	4.29	.044
A x C	1	4761.00	1.02	.318
A x D	1	3164.00	0.42	.415
B x C	1	5292.56	1.13	.293
B x D	1	812.25	0.17	.679
C x D	1	3451.56	0.74	.395
A x B x C	1	552.25	0.12	.733
A x B x D	1	473.06	0.10	.752
A x C x D	1	5625.00	1.20	.279
B x C x D	1	0.56	0.00	.991
A x B x C x D	1	1640.25	0.35	.557
Error	48	4680.85		

Univariate Analysis of Variance on the Time to Open
the Door.

Source	df	ms	F	p
Race (A)	1	1892.25	0.43	.517
Diffusion (B)	1	48510.06	10.94	.002
Status (C)	1	4160.25	0.94	.338
Prejudice (D)	1	1190.25	0.27	.606
A x B	1	12939.06	2.92	.094
A x C	1	4692.25	1.06	.309
A x D	1	2209.00	0.50	.484
B x C	1	4865.06	1.10	.300
B x D	1	637.56	0.14	.706
C x D	1	2500.00	0.56	.457
A x B x C	1	945.56	0.21	.646
A x B x D	1	138.06	0.03	.861
A x C x D	1	3782.25	0.85	.360
B x C x D	1	33.06	0.01	.932
A x B x C x D	1	1139.06	0.26	.615
Error	48	4434.63		

Multivariate Analysis of Helping (Time to Stand and Time to Open the Door) with Subject Suspicion as a Covariate.

Source	F(2,46)	p
Race (A)	1.472	.240
Diffusion (B)	5.154	.010
Status (C)	0.597	.555
Prejudice (D)	1.489	.237
A x B	3.071	.056
A x C	0.500	.610
A x D	0.421	.659
B x C	0.513	.602
B x D	0.069	.933
C x D	0.382	.685
A x B x C	0.216	.806
A x B x D	0.240	.787
A x C x D	0.788	.461
B x C x D	0.052	.950
A x B x C x D	0.198	.821

Analysis of Variance of Subjects' Heart-Rates During
the Baseline Period.

Source	df	ms	F	p
Race (A)	1	74.24	0.45	.507
Diffusion (B)	1	322.97	1.94	.170
Status (C)	1	427.09	2.57	.116
Prejudice (D)	1	559.50	3.36	.073
A x B	1	302.11	1.82	.184
A x C	1	30.21	0.18	.672
A x D	1	1032.58	6.21	.016
B x C	1	38.98	0.23	.631
B x D	1	512.17	3.08	.086
C x D	1	58.54	0.35	.556
A x B x C	1	675.95	2.86	.097
A x B x D	1	7.72	0.05	.830
A x C x D	1	126.14	0.76	.388
B x C x D	1	26.51	0.16	.692
A x B x C x D	1	227.44	1.37	.248
Error	48	166.34		

Analysis of Variance on Heart-Rate: Mean Overall Acceleration.

Source	df	ms	F	p
Race (A)	1	113.16	0.55	.460
Diffusion (B)	1	642.24	3.14	.083
Status (C)	1	10.34	0.05	.823
Prejudice (D)	1	187.42	0.92	.343
A x B	1	535.81	2.62	.112
A x C	1	202.78	0.99	.324
A x D	1	0.22	0.01	.974
B x C	1	171.22	0.84	.365
B x D	1	18.62	0.09	.764
C x D	1	29.24	0.14	.707
A x B x C	1	123.10	0.60	.442
A x B x D	1	141.61	0.69	.409
A x C x D	1	112.63	0.55	.462
B x C x D	1	52.31	0.26	.615
A x B x C x D	1	58.94	0.29	.594
Error	48	204.31		

Analysis of Variance on Heart-Rate: Mean Initial Acceleration.

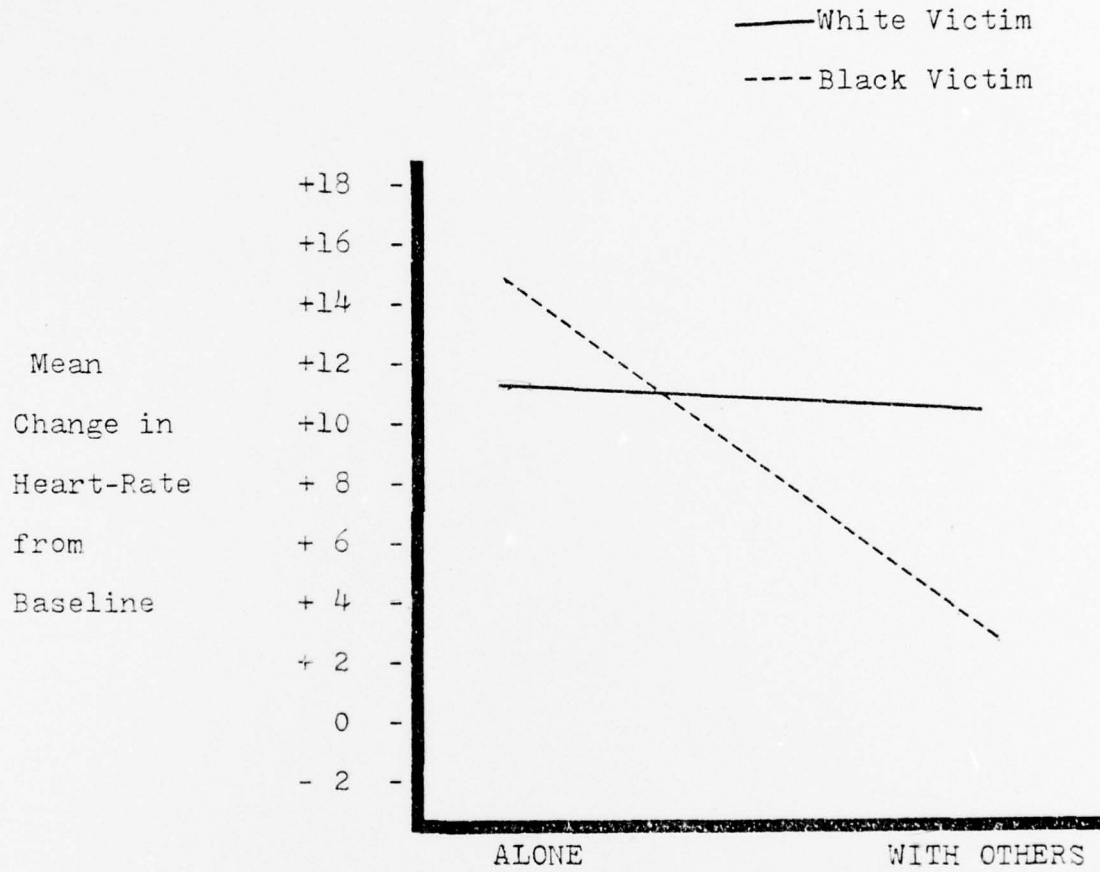
Source	df	ms	F	p
Race (A)	1	128.71	0.63	.437
Diffusion (B)	1	698.68	3.41	.071
Status (C)	1	96.97	0.47	.495
Prejudice (D)	1	127.69	0.62	.434
A x B	1	424.05	2.07	.157
A x C	1	350.91	1.71	.197
A x D	1	35.64	0.17	.678
B x C	1	546.16	2.67	.109
B x D	1	34.55	0.17	.683
C x D	1	149.51	0.73	.397
A x B x C	1	29.48	0.14	.706
A x B x D	1	136.13	0.67	.419
A x C x D	1	37.79	0.18	.669
B x C x D	1	103.43	0.51	.481
A x B x C x D	1	123.43	0.60	
Error	48	204.64		

Analysis of Variance on Heart-Rate: Mean Overall Deviation.

Source	df	ms	F	p
Race (A)	1	0.06	0.00	.984
Diffusion (B)	1	279.64	2.03	.160
Status (C)	1	3.21	0.02	.879
Prejudice (D)	1	277.64	2.02	.162
A x B	1	494.28	3.59	.064
A x C	1	445.74	3.24	.078
A x D	1	6.80	0.05	.825
B x C	1	86.58	0.63	.431
B x D	1	1.77	0.01	.910
C x D	1	21.11	0.15	.697
A x B x C	1	114.70	0.83	.366
A x B x D	1	89.97	0.65	.423
A x C x D	1	33.06	0.24	.626
B x C x D	1	23.02	0.17	.684
A x B x C x D	1	156.81	1.14	.291
Error	48	137.49		

Analysis of Variance on Heart-Rate: Mean Initial Deviation.

Source	df	ms	F	p
Race (A)	1	26.69	0.201	.656
Diffusion (B)	1	99.08	0.745	.393
Status (C)	1	39.90	0.300	.587
Prejudice (D)	1	165.22	1.242	.271
A x B	1	597.30	4.354	.042
A x C	1	330.47	2.484	.122
A x D	1	62.39	0.469	.497
B x C	1	308.93	2.321	.134
B x D	1	12.68	0.095	.779
C x D	1	95.72	0.719	.400
A x B x C	1	4.66	0.035	.850
A x B x D	1	72.87	0.548	.463
A x C x D	1	0.13	0.001	.970
B x C x D	1	11.40	0.086	.770
A x B x C x D	1	119.88	0.901	.347
Error	48	133.06		



The effects of the race of the victim and the belief that others are present on subjects' change in heart-rate during the post-emergency period.

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