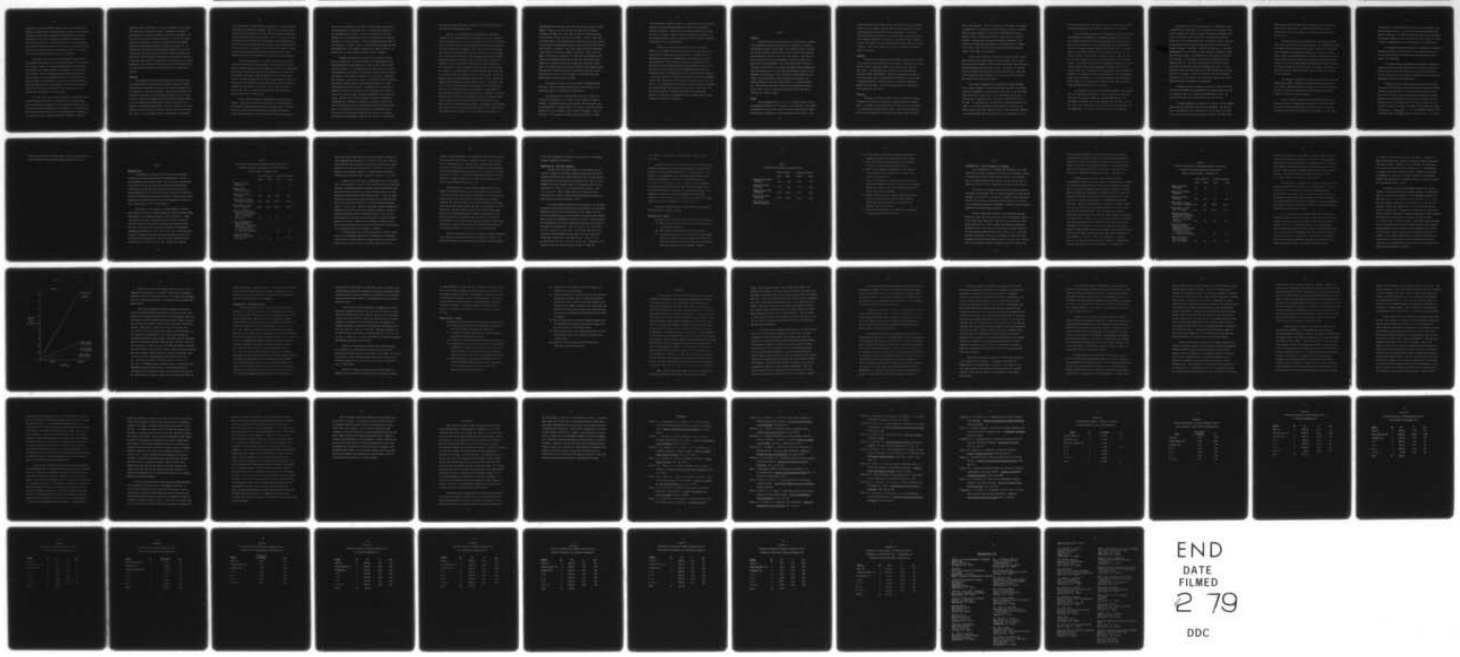
AD-A061 774 DELAWARE UNIV NEWARK DEPT OF PSYCHOLOGY F/G 5/11
THE SUBTLETY OF WHITE RACISM: DIFFERENTIAL SUSCEPTIBILITY TO CO--ETC(U)
OCT 78 G JOHNSON, S L GAERTNER, J F DOVIDIO N00014-76-C-0062
UNCLASSIFIED TR-5 NL

| OF |
AD A061774



END
DATE FILMED
2 79
DDC

LEVEL II

The Subtlety of White Racism: Differential Susceptibility to Conformity Pressures to Remain Inactive During an Emergency Involving a Black or White Victim

Gary Johnson
Samuel L. Gaertner
John F. Dovidio

Technical Rept.

Oct. 1978

TR-5

Department of Psychology
University of Delaware
Newark, Delaware

This research was funded by the Office of Naval Research, Organizational Effectiveness Research Programs, under Contract Number N00014-76-C-0062. Reproduction in whole or in part is permitted for any purpose of the United States Government. This document has been approved for public release and sale; its distribution is unlimited.

403 944

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: TR#5	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE *(and Subtitle)*: The Subtlety of White Racism: Differential Susceptibility to Conformity Pressures to Remain Inactive During an Emergency Involving Black & White Victims.	5. TYPE OF REPORT & PERIOD COVERED: Technical Report
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): Johnson, G., Gaertner, S. L. and Dovidio, J. F.	8. CONTRACT OR GRANT NUMBER(s): N00014-76-C-0062
9. PERFORMING ORGANIZATION NAME AND ADDRESS: University of Delaware	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: NR 170-84
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE: October, 1978
	13. NUMBER OF PAGES
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)*	15. SECURITY CLASS. *(of this report)*
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for Public Release; Distribution Unlimited.

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

Racial Attitudes, Helping Behavior, Racism, Prejudice, Conformity

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

Two studies in which an emergency was presented via audio only (Study 1) and audio + video (Study 2) revealed that when white bystanders witnessed an emergency alone, black victims were helped as frequently as white victims. In the face-to-face presence of other passive bystanders, however, white victims were helped more frequently than black victims. Arousal, as measured via telemetered heart-rate indicated that arousal is positively related to speed of helping when no other bystanders were present. The results suggest strongly

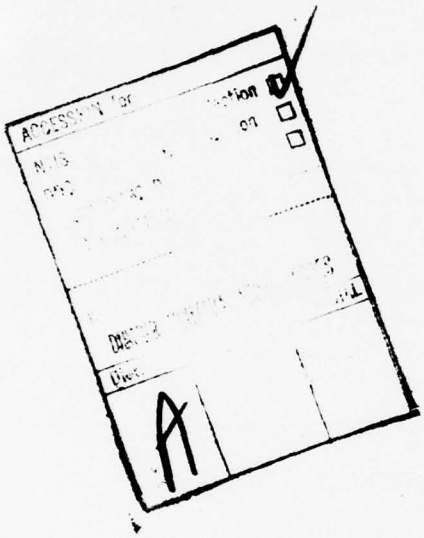
DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

S/N 0102-LF-014-6601

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

20. ABSTRACT (continuation)

that people are more susceptible to conformity pressures to remain inactive when an emergency involves a black than a white victim.



The Subtlety of White Racism: Differential Susceptibility to Conformity Pressures to Remain Inactive During an Emergency Involving a Black or White Victim

Gary Johnson

Samuel L. Gaertner

John F. Dovidio

Studies where the emergency victim is black and the bystanders white have not yielded a simple pattern of results. A few studies have shown that when the bystanders are white, white victims are more likely to receive assistance than black victims (Benson, Karabenick, and Lerner, 1976; Gaertner and Bickman, 1971). Some research has shown that this discrimination against blacks depends on situational factors (Gaertner, 1975; Piliavin, et al., 1969). Finally, several studies have shown either no discrimination against blacks or greater helping for blacks than whites (Dutton, 1971; Dutton and Lennox, 1974; Katz, Cohen, and Glass, 1975; Thayer, 1973). Gaertner (1975) has suggested that there are two classes of hypotheses to explain these data: (a) direct hypotheses and (b) indirect hypotheses.

The direct hypothesis suggests that the race of the victim of the emergency directly affects the white bystander's motivation to intervene. According to this hypothesis, the bystander notices the race of the victim and decides to act according to this information, tending to help the white victim and tending not to help the black victim. This effect is hypothesized to occur independently of other factors in the emergency situation.

Viewed from the Piliavin, et al., model, this direct hypothesis would argue that the costs for helping responses increase whenever the victim of an emergency is black. Similarly, the costs for not helping would be reduced. The net effect would be to decrease the likelihood of helping responses when the victim is black. This reduced rate of helping responses would be hypothesized to occur whenever the victim was black, and would occur independently of other situational factors. Thus, regardless of other factors in the emergency, whites will always be helped more often or more quickly than blacks in a given experimental situation, according to the direct hypothesis. In this sense, the race of the victim directly affects the helping behavior of white bystanders.

The indirect hypothesis suggests that the race of the victim of the emergency affects the white bystander in a more subtle and more indirect manner. In this case, the bystander notices the race of the victim, and this information affects situational or personal factors perceived by the bystander; the effect on these secondary factors may

lead to a greater likelihood of the white victim receiving assistance. For example, the white bystander may be less likely to define the situation as one where help is needed when the victim is black. Or, if there are other bystanders present, the bystander may be more willing to diffuse responsibility for giving assistance to the black victim. Or, if there are other bystanders present who, by their failure to intervene in the emergency, are establishing an immediate norm of non-intervention, the bystander may be less willing to violate this norm when the victim is black. Finally, the indirect model suggests that these secondary factors may not have equal significance in all experimental situations; that is, the model hypothesizes an interaction between the race of the victim and the situation in which the emergency occurs.

Again, viewed from the perspective of the Piliavin, et al. model, the indirect hypothesis argues that the costs for helping may vary depending on the context of the emergency. That is, there may be a special cost for failing to intervene when the emergency victim is black: the bystander's awareness that his failure to give aid maybe due to racial antipathy. However, it may well be that this specific cost is not equally perceived in all situations. In situations where other non-race related reasons for failing to give assistance are present, this cost associated with racial prejudice may not be felt by the bystander. However, if these non-race related reasons are not present, this cost of racial antipathy may be very high, leading to a net cost which is lower when the black victim is assisted.

Thus, the indirect model has somewhat more complex predictions. Certain situations will make available to the bystander non-race related reasons for his failure to assist the black victim. In these situations whites will be helped more often or more quickly than blacks. In other situations, when not helping the black victim would be attributed to racial antipathy, whites and blacks will be helped equally often and equally quickly.

An indirect model of the effects of race on helping behavior has been proposed by Gaertner and Dovidio (1977). This model proposes that white bystanders, when witnessing an emergency involving a black or white victim, may under certain circumstances unwittingly discriminate against the black victim. According to this model, the response of the white bystander to the emergency depends upon which of three response tendencies is available to the bystander. Two of these tendencies lead to behavior which is discriminatory against the black victim.

The first tendency involves differential definitions of the emergency situation as a function of the victim's race. Unwittingly, the white bystander tends to underestimate the seriousness of the situation to a greater extent when the victim is black. However, if the same emergency is presented with a white victim, the bystander tends to define the situation as one where his help is needed, and helps in a manner consistent with this definition of the situation. This tendency is more likely when the emergency situation includes

ambiguous elements which can be differentially interpreted by the bystander. These ambiguous elements may involve, for example, unclear evidence of the actual emergency itself, or responses by others which tend to define the situation as one where no help is needed. Thus, response tendency one, through differential definitions of the emergency situation, leads unwittingly to discrimination against blacks.

According to the indirect model, if the emergency is one where the ambiguous elements are not sufficient to allow differential interpretations of the necessity of aiding the victim, the bystander will continue to search for non-race related elements to avoid personal intervention. For instance, if there are others witnessing the emergency, the bystander may diffuse responsibility for aiding the victim. The indirect model suggests that this is more likely to occur for a black victim, and thus the black would be less likely to receive assistance. In addition, these other witnesses, if their presence is noted, and if they are not helping the victim, may be establishing an immediate norm of non-intervention. This indirect model suggests that the bystander may accept this norm, and be less likely to violate it, if the victim is black. Thus, the second response tendency, where help is seen as needed, but where the bystander finds non-race related reasons not to help, also leads to discrimination against blacks.

If these non-race related reasons for failing to help are not present, the bystander moves to the third response tendency. The bystander is now faced only with the compellingness of the emergency

situation. In this case, the bystander will tend to help regardless of the victim's race.

This model further predicts that this subtle form of discrimination will tend to occur independently of the individual's avowed racial attitudes. Katz and his associates (Katz, 1970; Katz, Cohen, and Glass, 1975; Katz, Glass, and Cohen, 1973) have characterized the racial attitudes of most whites as neither uniformly positive nor negative, but rather as ambivalent. Furthermore, this high level of ambivalence is suggested to occur both in individuals who indicate overt prejudice against blacks, and those who claim little prejudice. Gaertner (1976) has suggested that many of those individuals who score low on standard instruments to measure racial attitudes may be characterized by a special type of ambivalence, namely, aversiveness. For the aversive racist there is a conflict between negative feelings toward blacks, which are not always consciously salient, and a non-prejudiced self-image. Thus, while avowing non-prejudiced attitudes, the aversive racist may harbor negative attitudes toward blacks which are of the same magnitude as those who score high on attitude measures of anti-black feelings. For this reason, this indirect model suggests that discriminatory behavior may occur independently of stated attitudes toward blacks.

Nevertheless, while both high scoring and low scoring individuals may harbor significant anti-black attitudes, these attitudes will not be directly exhibited in their behavior. For the low scoring

individuals, to behave in a prejudiced manner would be contrary to their egalitarian self-image. In addition, many high scoring individuals, while willing to admit their negative feelings toward blacks, would not see themselves as so prejudiced that they would fail to aid a black individual in need of their help solely on the basis of the person's race. Again, from the perspective of the Piliavin, et al. model, the costs associated with not helping where this could be attributed to the individual's anti-black attitudes would be very high. However, as stated in the description of this indirect model, if non-race related reasons for not helping the black victim can be found, the bystander may escape personal involvement and also be insulated from seeing his behavior as caused by racial antipathy.

One situation which should allow these effects to operate is that used by Latane and Darley (1970). In this situation, a bystander receives data about the occurrence of an emergency either alone ("Alone" condition) or in the presence of non-responsive others ("Together" condition). The indirect model predicts that blacks and whites should be helped equally in the Alone condition, where the compellingness of the emergency should not allow for differential definition of the severity of the situation or allow for other non-race related reasons not to help. However, in the Together condition, the bystander not only receives information about the emergency, but also perceives that the other bystanders are not reacting to the situation. Thus, based on the non-intervention of the other bystanders, the bystander may reach different interpretations of the severity of the

emergency depending on the race of the victim. In addition, the bystander may find, in the presence of other non-responsive bystanders, other non-race related reasons not to help the black victim. These reasons might include a greater tendency to diffuse responsibility to the other bystanders when the victim is black, or a greater willingness to accept the implied norm of non-intervention when the victim is black. For any of these reasons when together with other bystanders, the white bystander would then be more likely to help the white victim than the black victim.

Gaertner (1975) has shown that this prediction of the indirect model is correct when the data about the emergency received by the bystander is a mildly ambiguous audio tape of a stack of chairs falling on the victim, and when in the face-to-face presence of non-responsive white bystanders. Gaertner and Dovidio (1977) have shown that this is also true if the bystander thinks that other people are overhearing the emergency in other rooms. This study also demonstrated relationships between the helping of victims of the emergency and the heart-r rate of the bystander. While these results are complex, they indicate a positive relationship between the speed of helping and the degree of change in the bystander's heart-rate elicited by the emergency.

The current research involves two studies in which bystanders will witness an emergency involving either a black or a white victim. The bystander will either witness the emergency alone or in the presence of three confederate bystanders who remain passive throughout

the emergency. In Study One, the bystander will merely overhear the emergency. In Study Two, however, the bystander will overhear and also visually observe on a television monitor the same emergency sequence presented in Study One.

Study One

In the first study, it is predicted that black and white victims will be helped equally in the Alone condition. In the Alone condition, the compellingness of the emergency, where there are no others present to influence the bystander, should be sufficient to insure a helping response. That is, the bystander cannot easily differentially define the severity of the emergency or find other non-race related reasons which would preclude the necessity for personal intervention to help the black victim. Thus the bystander must move to response tendency three and thus help the black and white victims equally.

However, in the Together condition, it is predicted that the black victims will be helped less than the white victims. The bystander will be presented with the same relatively compelling emergency. In this case, however, the bystander will be in the face-to-face presence of non-responsive bystanders who are confederates of the experimenter. As is suggested by the Latane and Rodin (1969) model of social influence, the presence of these nonresponsive bystanders should inhibit or retard a helping response by the subject when compared to Alone conditions. Furthermore, the Gaertner and Dovidio indirect model for racial attitude effects suggests that this reduced helping will be more

pronounced for black than white victims. With a black victim the bystander is presumed either to be more likely to accept a no help needed definition of the situation suggested by the passivity of the other bystanders, or to be more susceptible to conformity pressures not to intervene as defined by the non-intervention of the other bystanders. This situation allows the bystander to find non-race related reasons for not aiding the black victim, thus avoiding the high costs of viewing this non-intervention as being due to racial antipathy.

This first study is a partial replication of Gaertner (1975) which obtained the predicted race of victim by presence of others interaction effect. Using a post experimental question on the severity of the emergency, the subjects reported no difference for the white and black victims. Thus the different rates of helping black or white victims seemed to be due to differential levels of conformity to the immediate norm of non-intervention. That is, the other bystanders, by their non-intervention, were establishing a norm which differentially inhibited the subject's intervention. This norm was more readily violated when the emergency victim was white.

The heart rate of the subject is measured via telemetry throughout both studies reported here. The Piliavin et al. model suggests that the motivation to intervene to aid the emergency victim is due to the aversive arousal experienced by the bystander. It is possible that this heart-rate measure may be able to tap physiological correlates of this aversive arousal. Gaertner and Dovidio (1977) have shown that

heart-rate change, from before to after the emergency, was correlated with the time of the helping response. Furthermore, the impact of the emergency, as measured by changes in heart-rate, depended on the race of the victim in the Together condition. In the current study, heart-rate changes will be analyzed to determine the relationship between this physiological measure of arousal and helping. It is possible that this measure of physiological activity will allow some conjucture on the process which is occurring within the subject when she fails to help the victim. Particularly in the Together condition it may help clarify whether the bystander is accepting a no help needed definition of the situation or being influenced by the immediate norm of non-intervention defined by the inactivity of the confederate bystanders.

Study Two

The second study uses the same emergency as the first study, once again presented in both Alone and Together condition. However, in this study, the emergency is shown to the subjects through the use of a videotape of the staged emergency. This is done to minimize the bystander's likelihood of interpreting the situation as one in which no help is needed, thus eliminating from the subject response tendency one of the Gaertner and Dovidio model, where the severity of the emergency is differentially perceived. Thus this study may reveal why subjects failed to help black victims in Gaertner (1975) and in Study One. That is, it may suggest whether a redefinition of the severity

of the emergency, or a differential susceptibility to the non-intervention norm was inhibiting the helping. Subjects in the Together condition may continue to behave as in these previous studies, helping white victims more readily than black victims. If this is the case, it would seem reasonable to conclude that the presence of other bystanders defines a norm of non-intervention which is more easily violated in behalf of a white victim. If, however, the black and white victims are helped equally, it would seem that the results in Gaertner (1975) and in Study One were due to a redefinition of the severity of the emergency.

In the Alone condition, it is again predicted that the black and white victims will be helped equally. Even more than in the first study, the video presentation of the emergency should be very compelling. With no other bystanders present, it is predicted that the nature of the emergency will lead to equal helping of black and white victims. That is, the lone bystander will be unable to differentially define the seriousness of the emergency or find other non-race related reasons to preclude her intervention for the black victim. Thus the lone bystander will move to response tendency three and offer assistance without regard for the victim's race.

In the Together situation, the predictions are somewhat more complex. The Latane and Darley (1970) predicts that the presence of non-responsive bystanders should inhibit a helping response. However, the use of a video tape presentation of the emergency may remove enough ambiguous elements from the emergency to preclude this effect.

That is, it is possible that the impact of the emergency when seen by the bystander may be sufficiently great to overcome the influence of the non-responsive bystanders. The subject bystander may find the implied norm of non-intervention which is established by the other bystanders is not strong enough to inhibit her helping when the impact of the emergency is so great. Thus, it is predicted that helping frequency and helping time in the Together condition will either be equal to or greater than the Alone condition measures of these variables.

A similar prediction may be made for racial effects in this portion of Study Two. It is possible that the compellingness of the video presentation of the emergency will lead to equal help for black and white victims. It is predicted that the subject will not be able to misinterpret the severity of the emergency since the video presentation leaves very few ambiguous elements for the subject to differentially interpret. Thus in the presence of non-reactive fellow bystanders, the subject bystander should be precluded from accepting a no help needed definition of the situation. Similarly, since the subject bystander will be able to see that the other bystanders are not intervening, she will not be able to diffuse responsibility for aiding the victim. However, if the subject bystander is showing differential susceptibility to conformity pressures as a function of the victim's race, then the black victim will be helped less than the white victim. Thus it is predicted that helping frequencies and helping times for black victims in the Together condition will be equal to or greater than those for white victims. Which of these results is obtained will

hopefully give some indication of which of the above processes leads to the black victim being helped less.

Finally, it is predicted that avowed degrees of anti-black attitudes of the subjects may have an effect in this study. Gaertner's (1976) discussion of the aversive racist suggests that nearly all whites harbor anti-black attitudes, and that given an appropriate opportunity, they will express these attitudes. This is true even for those whites who claim not to be prejudiced on reactive measures of racial prejudice. This is why earlier portions of this study have not prejudiced response differences based on prejudice scores. In the Together condition of Study Two, it has been predicted that subjects may help regardless of the victim's race. This is particularly true for the aversive racist, who claims to be non-discriminatory in her attitudes, and who will have no acceptable reason for failing to help the black victim. That is, in Study One there were some ambiguous elements which could be used by the aversive racist bystander to explain why she failed to intervene. However, in Study Two these ambiguous elements have been removed through the use of a video presentation of the emergency. Thus, failing to help an obviously injured black victim would have a special cost for the individual who claims not to be prejudiced; namely, by failing to help a black victim, where there are no non-race related reasons not to help, she would be showing racial antipathy. Furthermore, the continuous video image of the victim lying unconscious might be too compelling for low prejudice scores to ignore. Thus, the subjects who claim to be

low prejudiced on the pretest may help black victims and white victims equally. However, for those subjects who admit their prejudiced attitudes this added video image would not have as liberating effect from conformity pressures as for the low scores. That is, these subjects admit their racial antipathy, and failing to aid the black victims in this relatively unambiguous situation should not add special costs to their failure to intervene. Thus, these subjects would be responding to the costs for intervening similar to Study One. Thus, unless the impact of the video presentation is so great that the conformity pressures to the non-intervention norm are overcome, these high scoring subjects are predicted to aid black victims less than white victims. Thus it is predicted that those scoring higher on the prejudice pretest may help black victims less often or less quickly than white victims, while those who score low on the pretest will help both blacks and whites equally often and equally quickly.

Once again, the heart-rate of the subject is measured during Study Two. The same variables mentioned in the description of the heart-rate measure for Study One are studied here.

An additional use of this heart-rate data is to indicate the utility of the Piliavin et al. model of arousal effects in helping behavior. As mentioned earlier in this paper, this model argues that the motivation for a helping response is to reduce an aversive arousal experienced by the bystander who has viewed the emergency. Using an audiotape as the emergency, Gaertner and Dovidio (1977) have shown

that bystanders do experience arousal, as measured by an arousal symptom checklist, and that increased heart-rate, prior to the bystander's moving to intervene, is associated with increased frequency of helping responses. The present studies, using an audiotape or a videotape as the emergency stimulus, allow, by use of heart-rate measures of arousal, this hypothesis to be tested further.

A final use of this heart-rate data is only conjectural. However, it is possible that the heart-rate data may suggest why subjects who fail to intervene act in this manner. Gaertner (1975) recognized that diffusion of responsibility or conformity to a norm of non-intervention, if more readily accepted for a black rather than white victim in the Together condition, could explain his data. It is important to note that both of these explanations require that the bystander accept the definition that help is needed, and then choose not to intervene. However, an alternative explanation is that the bystander receives the information on the emergency and decides that no help is needed. It is possible that two distinctly different heart-rate patterns are associated with these two reasons for failing to intervene. The heart-rate data will be analyzed to determine if any consistent patterns of heart-rate are associated with the reasons stated for not helping the victim of the emergency.

Method

Subjects

One hundred and one white females who were enrolled in introductory psychology classes at the University of Delaware were chosen to participate in these two experiments. Two subjects refused to participate in the experiment when they were told of the heart-rate measures and extrasensory perception task used in the studies. Fifty-four subjects were used in the first experiment. Forty-three subjects were used in the second experiment. All of the subjects were selected on the basis of their scores on an eleven item Likert format questionnaire which was administered to all introductory psychology students at the beginning of each semester during which the two experiments were conducted. This questionnaire regards attitudes toward blacks, and assesses prejudical attitudes towards blacks. It correlates highly (r = +.83) with the three best subscales of the Woodmansee and Cook (1967) scale: "Ease of interracial contacts," "Subtle derogatory beliefs," and "Private rights."

Design

Both experiments employ a 2 x 2 c 2 factorial design. One factor manipulates the race of the victim. In one condition of the studies the emergency victim is black, and in the other condition she is white. Another factor manipulates the avowed prejudice of the subject. High

prejudice subjects were chosen from the upper quartile on the prejudice pretest, and low prejudice subjects from the lower quartile. The final factor manipulates the presence of other bystanders. In the Alone condition the subject perceives the emergency with no one else present. In the Together condition, the subject is in the face-to-face presence of three white female non-responsive bystanders at the time of the staged emergency. These three factors were balanced factorially yielding two eight cell designs.

Apparatus

Heart-rate was measured by radio telemetry equipment which allowed the movement of subjects during the experiment. Disposable electrodes (Andover Medical Industries #83003) were attached to the subject's upper torso. The electrodes were connected to a Narco Biosystems Transmitter (Model #FM-1100-E2). The signal transmitted was detected by an FM receiver (Narco Biosystems Model #FM-1100-6), and converted to a continuous measure of heart-rate with a Biotachometer (Narco Biosystems Model #BT-1200). These data were recorded on a physiograph (Narco Biosystems Model #6B).

Procedure

The subject, the black or white victim, and other white female bystanders (if present) were taken into a room labeled the "Sending Room." The subject and confederates were told they were to participate in an extrasensory perception (ESP) study. They were told that each would have the opportunity to receive ESP messages, while the others

sent the ESP messages. They were told that the experiment was designed to measure ESP in a controlled, scientific manner, and that the experiment was further designed to evaluate the "Physiological Synchrony Theory" of ESP. To evaluate this theory, they were told it would be necessary to measure their heart-rates during the experiment. The subject and confederates were asked in turn if they chose to continue in the study. They were told that they would receive participation credit if they chose not to continue.

If the subject agreed to continue in the study, the male experimenter left the room, and a female assistant entered. She said that she had just come downstairs from two floors above where the biotelemetry receiving equipment was supposedly located. The subject and confederates were assisted in placing the heart-rate transmitters. Those used by the confederates were inoperative, so that in fact the only heart-rate monitored was that of the subject.

After these transmitters were attached, the female assistant left to return "upstairs," and the experimenter returned. The subject, victim, and confederates (if present) were then taken to the "Receiving Room" located out a door, across a hall, and behind a second door. In this room were a desk and chair, a microphone, and five ESP cards on the desk. In experiment two, there was also a television camera in the corner. In the corner opposite from this desk was a large stack of chairs leaning precariously against the wall. The experimenter commented in a surprised manner that the janitors must be cleaning this area of

the building, and if they come into the room to continue their cleaning during this experiment, to ask them to come back in a few minutes.

The entire group returned to the Sending Room, and the details of the experiment were explained. These details included the fact that only one-way communication would be allowed, with the receiver able to speak into the microphone in the Receiving Room, and the senders able to hear her through a speaker located in the Sending Room. In experiment two, the subjects were told that the senders could also see the receiver through a closed circuit television circuit. They were told that this was being done to see if it improved the quality of the ESP sending. The specific ESP task in both experiments involved the senders looking at Zenner symbols and attempting to transmit them. The receiver, at the end of a predetermined time interval, would announce her judgment of the symbol sent into the microphone, and one of the senders would record her judgment. It was further explained that the experimenter would be in a hallway apart from both rooms, since his presence during the ESP task might affect the results.

The subject, by virtue of the seating arrangement in the Sending Room, was always the first receiver. She was taken to the Receiving Room where she proceeded through ten uneventful ESP trials. The experimenter, summoned by one of the senders, would then take the subject back to the Sending Room. The second receiver was then taken from the Sending Room. This person became the victim of the emergency.

Rather than go to the Receiving Room, the experimenter started an audiotape (for experiment one) or a videotape (for experiment two). In both of these, the receiver proceeded through seven uneventful ESP trials. After this trial, the receiver interrupted the procedure saying the stack of chairs looked like it was about to fall. She said she was going to adjust them; however, after about five seconds the receiver screamed: "(Scream) ... they're falling on me ... (Scream)." Overlapping this was the sound of chairs crashing, followed by a loud thud, and then silence. In experiment one, this event was overheard by the senders. In experiment two, subjects overheard and saw the emergency ofer T.V. The actual scene showed the receiver leaving the field of television coverage to straighten the chairs. At this point the screams followed, and then the chairs crashed into the field of view of the camera. Finally, the receiver fell (from beyond the field of view of the camera) to the floor within camera range and lay motionless until the experiment was completed.

During and after this emergency, and for one minute before it, the subject's movements were monitored by a videotape camera concealed in the Sending Room, and a videotape recording made of this. Her heart-rate was also recorded during this same time interval.

A helping response was recorded if the subject left the Sending Room within three minutes of the end of the emergency. The time for her to stand from her chair ("stand time") and the time to reach the door to leave the room ("door time") were recorded. This three minute

interval was chosen in light of Darley and Latane's (1969) findings. Their results showed that if a person did not help within three minutes of the end of the emergency, the person was very likely not to help at all.

Following the subject's response to the emergency, the experimenter and victim returned to the Sending Room. The experimenter assured the subject that the victim was not injured. Before the true purpose of the experiment was extensively explained to the subject, she was asked a series of questions about the emergency. These included rating on seven-point scales the extent that the subject throught the victim was hurt, and the extent the subject throught that the other bystanders (if present) thought the victim was hurt. The subject also rated, on a 100-point scale, how suspicious she was that the emergency was staged for the experiment.

Four measures of heart-rate response to the emergency were used during these studies: immediate heart-rate response, overall heart-rate response, immediate heart-rate deviation, and overall heart-rate deviation. These four measures were shown by Gaertner and Dovidio (1977) to be related to helping behavior.

After the subject returned from the Receiving Room, she sat quietly for about six minutes while the person to become the victim was taken into the Receiving Room, given instructions, and the tape recording of the second set of sending trials started. At this time,

the recording of the subject's heart-rate was started yielding a one-minute baseline prior to the victim's prerecorded interruption which began the emergency. The subject's heart-rate was recorded throughout the emergency either until she stood from the chair to help the victim, or until the experimenter and victim returned to the Sending Room.

The immediate heart-rate response was calculated by finding the difference between the mean heart-rate for the baseline period, and the mean heart-rate for the ten-second period following the final scream of the emergency.

The overall heart-rate response was calculated by finding the difference between the mean heart-rate for the baseline period, and the mean heart-rate for the interval from the end of the emergency until one second prior to the subject's standing to help or until the experimenter returned to the Sending Room.

Immediate and overall mean heart-rate deviations were also calculated. The deviation values represented the absolute difference between the mean heart-rate for the baseline period and the heart-rage for each second following the onset of the emergency, ignoring whether the heart-rate change was an increase or decrease from the baseline value. The difference score was squared, summed over the seconds, divided by the number of seconds, and the square root taken, $\left(\left[\Sigma \right] x_{\text{second } i} - x_{\text{baseline}} \right|^{2} / {}_{i}{}^{1/2})$. The immediate deviation score was for the first ten seconds after the emergency onset. The overall

deviation score was for the entire period until one second before the subject helped, or until the experimenter returned to the room.

Results

Experiment One:

No significant differences between high and low prejudiced scoring subjects were found, either in helping measures or on the post-experimental questionnaire items. Thus the results reported have combined the data from the high and low prejudiced scoring groups. Furthermore, no significant differences were found between the two black confederates who served as the emergency victims, nor between the two white confederates who served this function. Therefore, the results presented also combined the data for the two confederates of each race into a single black or white victim category.

The results of the frequency of helping responses indicated that subjects in the Alone condition helped the victim more often (100%) than subjects in the Together condition (67.8%; see Table 1). Using a partitioned chi square technique (Sutcliffe, 1957; see Appendix, Table A), subjects who witnessed the emergency by themselves helped more often than those in the face-to-face presence of nonresponsive confederate bystanders ($X^2 = 10.72$, df = 1, $p < .01$). A main effect for the race of the victim indicated that when the victim was white, she was helped more frequently than when she was black (96.4% and 71.4%, respectively; $X^2 = 6.49$, df = 1, $p < .02$). Finally, the expected

Table 1

Effects of Witnessing an Audiotaped Emergency Either Alone or Together with Other Bystanders, the Victim of Which is Black or White: Experiment One

	Alone Condition		Together Condition	
	Black	White	Black	White
Number of Helping Responses	13	15	7	12
Number of No Helping Responses	0	0	8	1
Percent of Helping Responses	100	100	46.7	92.3
Mean Latency to Stand from Chair in Seconds	8.08	10.00	102.50	67.85
Mean Latency to Reach Door in Seconds	12.18	14.04	104.20	75.05
Subject's Appraisal of Seriousness of Victim's Injury (1 = not hurt at all, 7 = hurt very seriously)	4.0	3.9	3.2	3.5
Subject's Estimate of Other Bystander's Appraisal of Seriousness of Victim's Injury (1 = not hurt at all, 7 = hurt very seriously)	-	-	1.7	1.5
Subject's Suspicion (0 = sure real, 100 = sure hoax)	37	36	29	50

interaction between the victim's race and the absence or presence of other bystanders was obtained (X^2 = 4.26, df = 1, $p < .05$). These results indicated that as expected black and white victims were helped equally often in the Alone condition (X^2 = 0.00, df = 1, p = n.s.). However, in the Together condition, the wyite victims were helped 45.6% more often than the black victims (X^2 = 6.73, df = 1, $p < .01$).

Similar results (see Table 1 and Appendix, Table B) were found when the two measures of latency to help (stand time and door time) were analyzed. Multivariate analysis showed that stand time and door time were faster when the subjects were alone than when they were in the presence of other bystanders (multivariate $F(2,47) = 14.58$, $p < .0001$). Multivariate analysis also showed that stand time and door time were less if the victim were white than if she were black (multivariate $F(2,47) = 3.97$, $p < .03$). Finally, multivariate analysis revealed the predicted race of the victim by the absence or presence of other bystanders interaction effect (multivariate $F(2,47) = 3.91$, $p < .03$). This interaction showed that the black and white victims were helped equally in the Alone condition; in the Together condition, however, white victims were helped faster than the black victims, thus replicating the pattern found for the frequency of helping.

Univariate analyses of these two measures of latency, however, were not as consistently supportive of the hypotheses (see Appendix, Tables C and D). When hearing the emergency alone, the subject stood from her chair faster ($F = 26.92$, $p < .0001$), than she did in the

presence of other bystanders. The analysis for the race of the victim was not reliable for the time to stand ($F = 2.12$, $p < .15$) or for the time to leave the room ($F = 1.69$, $p < .20$). The interaction between the race of the victim and the absence or presence of other bystanders failed to reach significance for stand time ($F = 1.64$, $p < .21$) and for door time ($F = 1.26$, $p < .27$); the obtained interaction was in the same direction as earlier chi square and multivariate analyses, but here it did not reach accepted significance levels.

Further analysis of these latencies suggested that the non-significant interaction effect was in part caused by a large variance in the helping times in the Together conditions. As indicated earlier, subjects tended not to help the black victim when in the Together condition (53.3% did not help); however, those who did help the black victim did so quite quickly (mean door time of 17.6 seconds). For the white victim, the vast majority (92.3%) of the subjects helped when they were in the Together condition; however, those who helped the white victim did so less quickly (mean door time of 64.3 seconds). This difference in door time, between those who helped the black victim and those who helped the white victim in the Together condition, was statistically reliable ($t = 2.14$, $df = 17$, $p < .05$, two-tailed).

Finally, the results (see Table 1) showed no reliable differences in the suspicion across the experimental conditions. Similarly, the subjects' evaluation of the severity of the emergency and the estimate

of the other bystanders' evaluation of the severity of the emergency showed no significant differences.

Experiment One: Heart-Rate Measures

The immediate heart-rate response to the emergency was calculated by finding the difference between the mean heart-rate in the one-minute baseline period, and the mean heart-rate for the first ten seconds after the final scream of the emergency (see Table 2). This immediate heart-rate response tended to be reliably related to both stand time (r = -.213, df = 52, $p < .06$) and door time (r = -.207, df = 52, $p < .07$). These findings showed that greater changes in heart-rate were related to faster helping times, and were similar to those found by Gaertner and Dovidio (1977).

The overall heart-rate response to the emergency was calculated by finding the difference between the mean heart-rate in the one-minute baseline period, and the mean heart-rate for the interval from the end of the emergency until one second before the subject stood from her chair or until the experimenter returned to the room. Unlike Gaertner and Dovidion(1977) this overall heart-rate response was not related to the subject's stand time (r = -.087, df = 52, p = n.s.) or her door time (r = -.073, df = 52, p = n.s.). In the Alone conditions, these correlations were somewhat more pronounced, but again failed to be statistically reliable for both stand time (r = -.181, df = 25, $p < .18$) and door time (r = -.147, df = 25, $p < .23$). Similarly for all subjects, heart-rate deviation was not related to stand time

(r = -.056, df = 52, p = n.s.) or door time (r = -.053, df = 52, p = n.s.).

Analysis of variance of the overall heart-rate response to the emergency (see Appendix, Table E) showed a marginal race by absence or presence of other bystanders interaction ($F = 3.04$, $p < .09$). In the absence of other bystanders, the overall heart-rate response of the subject was approximately the same for black and white victims ($t = .012$, df = 25, p = n.s.). In the presence of other bystanders the overall heart-rate response for white victims was higher than it was for black victims ($t = 2.45$, df = 25, $p < .03$, two-tailed). This suggested interaction paralleled the helping behavior findings. Furthermore, this interaction was not found for the heart-rate response immediately after the emergency ($F = 0.31$, p = n.s.).

Heart-rate deviation showed no relationship to the behavioral and questionnaire variables examined.

Experiment One: Summary

In summary, the following results were found in experiment one:

(1) Subjects in the Alone condition helped more than subjects in the Together condition.

(2) White victims were helped more than black victims.

(3) A significant race by absence or presence of nonresponsive bystanders interaction was found; black and white victims were helped equally in the Alone condition, but whites were helped more than blacks in the Together condition.

Table 2

Mean Heart-Rate Changes in Experiment One

	Alone Condition		Together Condition	
	Black	White	Black	White
Immediate Heart-Rate Response	3.13	3.18	-1.01	1.52
Overall Heart-Rate Response	3.70	3.66	2.11	9.76
Immediate Heart-Rate Deviation	9.61	10.37	13.17	8.67
Overall Heart-Rate Deviation	10.01	10.37	13.11	15.22

(all values are in beats per minute)

(4) In the Together condition, blacks who were helped were helped more quickly than those whites who were helped.

(5) There were no significant differences in the behavior of subjects based on prejudice pretest scores.

(6) There were no significant differences in the subjects' rated suspicion of the emergency, nor in their rated severity of the emergency.

(7) Across all experimental conditions, subjects who showed the greatest immediate heart-rate response to the emergency helped most quickly; this effect was not present when the overall heart-rate was examined.

(8) Overall heart-rate response showed a marginally significant race by absence or presence of other bystanders interaction; this interaction was not found for the immediate heart-rate response.

(9) Heart-rate deviations were not related to any behavioral or questionnaire data in this study.

Results

Experiment Two: Video Presentation of Emergency

As in experiment one, no significant differences were found between the two black confederates who served as the emergency victims, or between the two white confederates who served in this capacity. Thus, the results presented have combined the data from the two confederates of each race into a single black or white victim category.

The results of analyses on the frequency of helping responses (see Table 3 and Appendix, Table F) showed no difference in the helping responses as a function of the absence or presence of other bystanders, the race of the victim, the prejudice pretest scores of the subject, or as an interaction among these variables. Almost all subjects helped, regardless of the experimental condition.

However, multivariate analysis of the two latency measures showed that stand time and door time were less (see Appendix, Table G) if the subject were alone than if she were in the presence of others (multivariate $F(2,34) = 6.07$, $p < .006$), and indicated a marginally significant effect for the race of the victim, with faster latencies for white victims (multivariate $F(2,34) = 2.92$, $p < .07$). Stand time and door time failed to show a race by absence or presence of other bystanders interaction (multivariate $F(2,34) = 2.18$, $p < .13$). Finally, these latency measures showed a prejudice by absence or presence of

other bystanders interaction (multivariate $F(2,34) = 3.12$, $p < .06$), indicating that high and low prejudice subjects helped approximately equally fast in the Alone conditions, but that low prejudice scorers helped more quickly in the Together conditions. The interaction for absence or presence of others by race of victim by prejudice was not statistically significant (multivariate $F(2,34) = 1.63$, $p < .21$).

Univariate analyses on these two measures of latency (see Appendix, Tables H and I) were similar to the multivariate analyses. The univariate analyses of these latency measures showed the predicted effect of seeing the emergency with or without the presence of others. When the subject saw the emergency by herself, she left her chair more quickly ($F = 8.82$, $p < .005$) and left the room more quickly ($F = 9.45$, $p < .004$) than she did in the presence of nonresponsive confederate bystanders. When the victim was white, the subjects stood more quickly ($F = 5.21$, $p < .03$) and left the room more quickly ($F = 5.43$, $p < .03$) than when the victim was black. This same analysis also showed a significant race by presence or absence of other bystanders interaction for stand time ($F = 3.95$, $p < .05$). In the Alone condition, the subject stood more quickly when the victim was white than when she was black (difference of 2.6 seconds; $t = 2.15$, $df = 16$, $p < .05$, two-tailed). However, in the Together condition, the subjects stood considerably more quickly for the white victim than for the black victim (difference of 41.9 seconds; $t = 2.21$, $df = 18$, $p < .05$, two-tailed). A similar trend for the race of victim by presence or absence of others interaction was found when door time was analyzed ($F = 3.77$, $p < .06$).

Table 3

Effects of Witnessing a Videotaped Emergency Either Alone or Together with Other Bystanders, the Victim of Which is Black or White: Experiment Two

	Alone Condition		Together Condition	
	Black	White	Black	White
Number of Helping Responses	10	12	8	11
Number of No Helping Responses	0	0	2	0
Percent of Helping Responses	100	100	80	100
Mean Latency to Stand from Chair in Seconds	6.53	3.94	54.30	12.41
Mean Latency to Reach Door in Seconds	11.21	7.76	58.21	17.45
Subject's Appraisal of Seriousness of Victim's Injury (1 = not hurt at all, 7 = hurt very seriously)	3.2	4.1	3.7	4.6
Subject's Estimate of Other Bystander's Appraisal of Seriousness of Victim's Injury (1 = not hurt at all, 7 = hurt very seriously)	-	-	3.6	4.0
Subject's Suspicion (0 = sure real, 100 = sure hoax)	53	26	68	37

Finally, the interaction of the subject's prejudice pretest score, the race of the victim,aand the absence or presence of other bystanders suggested that the predicted effects for prejudice scores was present. High prejudice scoring subjects showed a more pronounced race by presence or absence of others interaction than did low prejudice scoring subjects. This marginal effect was present both for stand time ($f = 2.96$, $p < .09$) and door time ($F = 3.08$, $p < .09$).

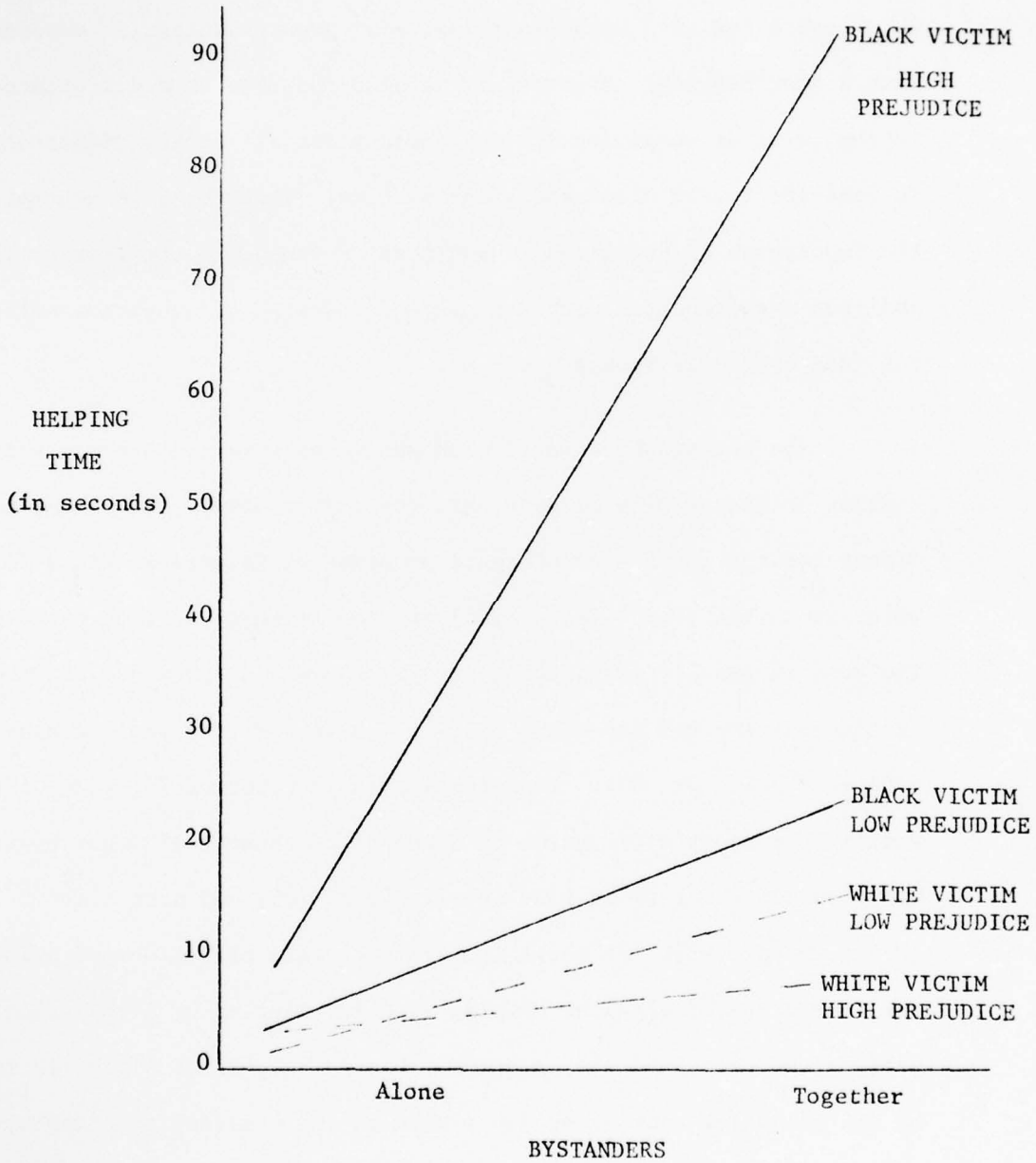
Thus the analyses of variance for latency to help measures were generally consistent with the indirect model predictions. There were effects for: (1) the presence or absence of other bystanders, (2) the race of the victim, and (3) an interaction between these two variables indicating that anti-black behavior was primarily present when other bystanders were present. Furthermore, there were suggestions that prejudice pretest scores might be valuable in predicting the help accorded black victims in this study.

It is consistent with the proposed model that subjects could experience greater suspicion with a black victim, and that this greater suspicion would then allow the bystanders to have a nonrace related reason for failure to aid the black victim. In fact, univariate analysis showed that subjects' suspicion that the emergency might have been a hoax (see Table 3) was greater when the victim was black than when she was white ($F = 7.07$, $p < .01$). Furthermore, it is possible that this felt degree of suspicion accounted for the variance in the helping times notes earlier. For instance, latency to stand

(r = .308, p< .03) and latency to leave the room (r = .318, p< .03) were both correlated with suspicion, with greater suspicion associated with slower helping. However, it is also possible that differences in the level of suspicion did not account for all of the differences in behavior toward black and white victims. Therefore, to determine the importance of suspicion in subjects' response to the emergency, analyses were repeated with the subject's degree of suspicion covaried out (see Appendix, Tables J and K).

The pattern of results with suspicion covaried out was very similar to the results without this variable removed. The significant effect for the absence or presence of other bystanders remained for both stand time (F = 7.21, p< .01) and door time (F = 7.74, p< .01). The same marginally significant race by absence or presence of other bystanders remained for stand time (F = 3.66, p< .06) and for door time (F = 3.48, p< .07). Importantly, an interaction for race of the victim by subject's prejudice by absence or presence of other bystanders was found both for stand time (F = 4.00, p< .05) and door time (F = 4.22, p< .05). As shown in Figure 1, this effect seemed primarily due to the relatively slow helping of black victims by high prejudice scoring subjects, and the relatively faster helping of black victims by low prejudice scoring subjects when in the presence of other bystanders. These results indicated that the effects predicted by the indirect model of racial effects occurred even when the subject's stated degree of suspicion regarding the veracity of the emergency was removed through analysis of covariance.

Figure 1


BLACK VICTIM
HIGH
PREJUDICE
BLACK VICTIM
LOW PREJUDICE
WHITE VICTIM
LOW PREJUDICE
WHITE VICTIM
HIGH PREJUDICE
HELPING
TIME
(in seconds)
90
80
70
60
50
40
30
20
10
0
Alone
Together
BYSTANDERS

Analysis of variance (see Appendix, Table L) of the subject's appraisal of the severity of the victim's injury showed a marginally significant effect for the victim's race ($F = 3.14, p < .09$), indicating that black victims were described as being less seriously injured than white victims.

Given that the presence of other bystanders was expected to have a particularly profound effect when the victim was black, other variables (for example, perceived severity of the emergency) might have been expected to have diminished influence on the bystander's response. Thus, correlational analyses indicated that in the Alone condition the subjects' stand time ($r = -.480$, $df = 16$, $p < .02$) and door time ($r = -.463$, $df = 16$, $p < .03$) were both related to their perception of the severity of the emergency; in both cases, faster helping was associated with greater rated severity. Similarly, when the victim was white in the Together condition, stand time ($r = -.683$, $df = 9$, $p < .01$) and door time ($r = -.689$, $df = 9$, $p < .01$) were both reliably correlated with rated severity, again with more serious emergencies being associated with faster helping. However, when the victim in the Together condition was black, the relationships were not found for stand time ($r = .265$, $df = 7$, p = n.s.) or for door time ($r = .266$, $df = 7$, p = n.s.). If anything, longer latencies tended to be associated with emergencies perceived as more serious. Thus faster helping was associated with the perceived severity of the emergency when the subject experienced the emergency alone, or when the victim was white and

others were present. However, when others were present and the victim was black, this relationship was not present, suggesting that the helping behavior in this condition was determined by factors other than the perceived severity of the emergency.

Experiment Two: Heart-Rate Measures

Analysis of variance of the baseline heart-rates revealed a reliable race by absence or presence of other bystanders interaction ($F = 5.63$, $p < .02$). Examination of this pre-emergency baseline interaction revealed that subjects who were alone had somewhat higher initial baseline levels for black (mean of 87 beats per minute) than for white victims (mean of 80 beats per minute; $t = 1.41$, $df = 16$, p = n.s.). However, in the presence of other bystanders, baseline heart-rates were slightly lower for black (mean of 75 beats per minute) than for white (mean of 82 beats per minute) victims ($t = 1.57$, $df = 18$, p = n.s.). Preliminary analyses revealed that baseline heart-rate levels were related to the amount of immediate heart-rate change ($r = -.220$, $df = 38$, $p < .09$) and to overall heart-rate change ($r = -.255$, $df = 38$, $p < .06$) following the emergency. Therefore, subsequent analyses designed to examine the effects of other variables on heart-rate change statistically removed these initial baseline effects using covariance and partial correlational procedures. In addition, correlational analyses revealed that subjects' ratings of suspicion were also related to heart-rate change measures ($r = -.277$, $df = 36$, $p < .05$) suggesting that higher levels of suspicion were

associated with lesser amounts of heart-rate change. Therefore, subsequent analyses of heart-rate change used covariance and partial correlational procedures to remove statistically the effects of both subjects' suspicion regarding the reality of the emergency and initial baseline heart-rate levels.

In the absence of other bystanders, the immediate and overall heart-rate changes (see Table 4) were related to the latency of intervention with greater heart-rate responses associated with faster helping for both black and white victims. For white victims in the Alone condition, the immediate and the overall heart-rate responses were reliably correlated, controlling for baseline mean and suspicion, with door time (both $\underline{r} = -.722$, $df = 5$, $\underline{p} < .03$). Similarly, immediate and overall heart-rates were related to the door time ($\underline{r} = -.727$, $df = 5$, $\underline{p} < .03$; $\underline{r} = -.694$, $df = 5$, $\underline{p} < .04$, respectively) for subjects witnessing the emergency alone with a black victim.

However, in the Together condition, these correlations were not reliable, but if anything larger changes in heart-rate were associated with longer latencies to intervene. For example, the correlations between overall heart-rate change and door time for the black and white victims were: $\underline{r} = +.337$, $df = 5$, $\underline{p} < .19$; $\underline{r} = +.520$, $df = 5$, $\underline{p} < .12$, respectively.

Analysis of variance of the overall heart-rate change (see Appendix, Table M) revealed a main effect for the presence or absence

of other bystanders ($F = 5.03$, $p < .03$). Inspection of the means indicated that arousal was greater for subjects together with others than for subjects alone at the time of the emergency. No other main effects or interactions obtained for overall heart-rate change. Furthermore, no main effects or interactions were found when immediate heart-rate changes were analyzed. In addition, heart-rate deviation measures showed no relationship to the behavioral and questionnaire variables examined.

Experiment Two: Summary

In summary, the following results were found in experiment two:

(1) Frequency of helping showed no significant relationship to the other variables investigated in this study.

(2) Victims in the Alone condition were helped more quickly than those in the Together condition.

(3) White victims were helped more quickly than black victims.

(4) A significant race by absence or presence of nonresponsive bystanders was found; black and white victims were helped equally quickly in the Alone conditions, but whites were helped more quickly than blacks in the Together conditions.

(5) Prejudice pretest scores were significantly related to several behavioral and questionnaire data; high prejudice scoring subjects helped black victims more slowly, especially in the Together condition.

(6) Subjects were more suspicious that the emergency was a hoax when the victim was black.

(7) Subjects tended to see the white victim as more seriously injured than the black victim. In the Alone condition, this greater rated severity led to faster helping for all victims; in the Together condition, this relationship also held for the white victims, but when the victim was black, there was no relationship between rated severity and speed of helping.

(8) When the subject was in the Alone condition, higher heart-rate responses were associated with faster helping; this was true for both black and white victims.

(9) When the subject was in the Together condition, there was no significant association of heart-rate changes with helping latency.

(10) Heart-rate deviation showed no relationship with behavioral and questionnaire data.

Discussion

Previous studies have, with few exceptions, shown that when an emergency is experienced in the presence of nonresponsive bystanders help occurs less often or less quickly than when the emergency is experienced alone (Darley and Latane, 1968; Latane and Darley, 1968, 1969, 1970a, 1970b; Latane and Rodin, 1969; Bickman, 1971). Study One showed this effect for both frequency and latency of helping responses, with victims in the Alone condition helped both more frequently and more quickly than those in the Together condition. In Study Two in which there were perhaps fewer ambiguous elements given the audio plus video presentation of the emergency, no effect was found when the frequency of helping was considered, as almost all victims were helped regardless of the presence of other bystanders. However, when the latency measures were analyzed, subjects showed a highly significant difference in helping, with victims in the Alone conditions being helped more quickly than victims in the Together conditions. These findings closely parallel Clark and Word's (1972; 1974) who showed that the proportion of subjects helping in an emergency was reduced by the face-to-face presence of other bystanders only when the emergency was relatively ambiguous. However, with some equivocation, Clark and Word report that regardless of ambiguity the presence of others influenced the latency to respond.

Again, several studies have shown that the race of the victim affects helping behavior of bystanders (Piliavin, et al. 1969;

Dutton, 1971; Dutton and Lennox, 1974; Gaertner and Bickman, 1971; Gaertner, 1975; Thayer, 1973; Katz, Cohen, and Glass, 1975; Benson, Kar Karabenick, and Lerner, 1976), with several showing that white bystanders help black victims less frequently than white victims (Benson, Karabenick, and Lerner, 1976; Gaertner and Bickman, 1971). Once again, Study One showed a main effect for race of the victim in both helping frequency and in multivariate analysis of latency; the white victims were helped more often and more quickly than the black victims. Study Two failed to show an effect for race when frequency to help was analyzed, but did show the effect for helping latencies; white victims were helped more quickly than black victims.

In addition, it was predicted on the basis of the indirect model that victims would be helped regardless of their race in the Alone condition, but that black victims would be helped less than white victims in the Together condition because here nonrace related reasons (the presence of others) for failure to intervene would be present. Study One showed this interaction effect for both helping frequency and latency (multivariate analysis). As with the main effects for these variables, Study Two failed to show this interaction when helping frequency was analyzed, but did show the effect when helping latencies were examined. Thus both studies showed the predicted race of victim by absence or presence of other bystanders interaction. Black and white victims were helped equally in the Alone condition, but black victims were helped less than white victims in the Together condition.

Thus, in Study One (audio presentation), main effects for race and presence of others, as well as the predicted interaction between these variables, were revealed in both proportion of subjects helping and response latency. These effects, however, were indicated only by latency measures, not frequency, when the emergency was less ambiguous in Study Two (audio and video presentation).

The preceding analysis has shown that the predicted social influence and racial effects occur. The basic question posed in this research is how do racial attitudes mediate helping behavior. Specifically this research tests and the usefulness of the Gaertner and Dovidio indirect model for racial attitudes and the Piliavins cost/benefit model of bystander intervention.

The initial response tendency suggested by the Gaertner and Dovidio model is that the subject differentially perceives the severity of the emergency depending on the victim's race. This does not appear fully to explain the results in either study. Following the emergency, each subject reported her estimate of the severity of the emergency. It is important to note that these severity ratings were solicited after the emergency, and while they hopefully reflect the actual perceived severity at the time of the emergency, they may also reflect the subjects' attempt to justify their behavior after the fact by rating the severity in a manner which was consistent with their behavior. Nevertheless, in Study One, there were no significant differences in ratings of severity across the various experimental conditions.

Study Two, however, was designed, through its use of a video, and thus less ambiguous, presentation of the emergency, to minimize the possibility of subjects differentially perceiving the emergency's severity depending upon the experimental condition. Nevertheless, subjects in Study Two tended overall to see the black victims as less seriously injured than the white victims ($p < .09$). Interestingly, however, rated severity was related to the latency to intervene in all conditions expect that with a black victim with other bystanders present. In the Alone conditions, the more severe the subject rated the emergency, the faster she stood ($p < .03$) and the faster she left the room ($p < .03$). Similarly, when the victim was white and the subject was in the Together condition, this relationship of faster helping in more severe emergencies was present ($p < .01$). However, when the victim in the Together condition was black, this relationship of faster helping in more severe emergencies was not present. Thus, discriminatory behavior was apparent not only in a tendency to see blacks being involved in less serious emergencies overall, but also by the fact that latency to respond to blacks was independent of rated severity when the subject was together with other bystanders.

Thus, Study One showed no evidence for differential definition of the severity of the emergency. Furthermore, while Study Two suggested that this process might be operating, there appear to have been other reasons for not helping the black victims in the Together condition, given that the severity ratings showed no relationship to helping speed.

It is hypothesized that if bystanders cannot misperceive the severity of the emergency, they will seek other nonrace related reasons which would preclude personal intervention. One possibility would be differential suspicion in the veracity of the emergency; that is, if the subject were differentially convinced that the emergency was staged as a part of an experiment, she would have a nonrace related justification to remain inactive. This, however, does not appear to have been the case in these two studies.

In Study One, the ratings of suspicion showed no differences across the several experimental conditions. In Study Two, however, the subjects were more suspicious that the emergency was staged when the victim was black than when she was white ($p < .01$). This was true even though the audio portion of the emergency in this study was the same as that used in Study One. Nevertheless, when analyses of covariance, with suspicion covaried out, were used to re-examine the data, significant differences in helping time for blacks and whites remained. Thus it does not appear that differential suspicion explains entirely the reason black victims were helped more slowly.

A second nonrace related reason for failing to help would be that the presence of other bystanders allowed the subject to diffuse the responsibility for aiding the victim. This concept has been invoked to explain the nonintervention of subjects in other helping behavior studies, primarily when subjects were not in the face-to-face presence of, and could not communicate with, other bystanders. It seems likely

that the subjects in the current studies could initially diffuse responsibility among the other bystanders. However, the confederate bystanders were instructed to behave in a way which suggested no intention on their part to help, thus limiting the subjects' opportunity to diffuse responsibility for more than a few moments. Furthermore, it seems difficult for the subject to assume that someone else was going to assist the victim when she could clearly see that the other bystanders were in fact doing nothing. Subjects were asked during the post-experiment period of Study Two if they expected that anyone else would help the victim if they did not, and only four of the 43 subjects suggested that one of the other bystanders might (9.3%). However, Table 3 reveals that subjects thought that the other bystanders believed the emergency to be moderately severe. Thus the confederate bystanders appear to have successfully communicated to the subject that they thought that the victim was hurt, but that they had no intention of helping.

Another nonrace related reason that the subject could find for failing to intervene depends on the inactivity of the other bystanders. Subjects frequently reported that they failed to aid the victim because the other bystanders were not doing so, and that the subject did not want to appear different. Stated more formally, the nonresponsive bystanders may have been implicitly defining a norm of nonintervention. For the subject to violate this norm she would incur an additional cost, of appearing deviant, for her helping the victim. It is suggested that this additional cost made helping the black victim

unlikely, but was not a great enough cost to preclude helping of the white victim. Furthermore, the results for the Alone conditions, where blacks and whites were helped equally, argue that it was not simply that the cost of aiding blacks in all conditions was higher than for helping whites. Rather, when the subject was faced with other bystanders, she found the cost of being deviant from this group was less when the victim was white than when she was black. Furthermore, responding to this norm of nonintervention for the black victim offered the white bystander a nonrace related reason for not helping, thus permitting her to perceive that conformity pressure and not the victim's race was the salient justification for not helping or for helping slowly.

Further evidence in support of the idea that subjects were differentially conforming to a nonintervention norm came from an unexpected finding in Study One. Overall, the Together condition showed the expected effect that blacks were helped less often and less quickly than white victims. However, when the data from only those subjects in the Together condition who helped were analyzed, it was found that black victims were helped more quickly than white victims (19 and 64 seconds, respectively, $p < .05$). This finding implies two conclusions: firstly, it was possible to quickly define the situation as an emergency, and response with help, even when others were present; secondly, subjects responded to the black victim by either (1) apparently disregarding the other bystanders and helping as quickly as if they were alone, or (2) accepting the presence of others as a salient

feature of the situation, and not helping the black victim at all. However, although all of the subjects helped the white victim in the presence of other bystanders, they helped with an average latency (mean of 64 seconds) that was longer than the latency for subjects who witnessed the emergency alone ($p < .05$). Thus, when the victim was white, the presence of other bystanders affected the subjects by retarding, not precluding, a helping response. With a black victim the presence of other bystanders had either no effect or completely precluded helping.

Further evidence for this differential conformity notion comes from the race by absence or presence of others by prejudice interaction ($p < .05$, with suspicion as covariate). It was hypothesized that a video presentation would reduce the ambiguity of the emergency, leaving fewer nonrace related reasons for failing to help the black victim. Thus for those subjects claiming to be nonprejudiced, failure to aid the black victim would incur a special cost--namely, seeing that their nonintervention might be due to racial antipathy. That is, the salience of the victim's condition presented by the continuous video image of the victim lying unconscious might have been too compelling for those with a low prejudiced self image to ignore without having to question their egalitarianism. However, for those subjects who admit their negative feelings about blacks, this additional cost imposed by the victim's continued salience might not be as overwhelming. As was shown in Figure 1, the predicted interaction effect was generated by the difference between the high and low prejudice scoring subjects'

responsiveness to the black victim when other bystanders were present. Here, low prejudiced scoring subjects helped almost as quickly as when the victim was white. This finding lends further support to the notion that cost of intervention mediates helping behavior, as proposed by Piliavin et al. (]969) and Latane and Darley (]970). More specifically, however, it suggests that these costs are felt by the subject bystanders differently depending on how prejudiced they see themselves. For those subjects who see themselves as nonprejudiced, the costs for not helping a black victim are high, particularly when the victim's condition is continuously salient as in the video presentation. For the subjects willing to admit their anti-black feelings, these costs for not helping, even with a video presentation, may not be as high as the costs for violating the norm of nonintervention.

The other data consistent with the differential susceptibility to a nonintervention norm explanation are those from heart-rate measurements. For Study One, when immediate heart-rate response was greater, the victim was helped more quickly, regardless of the victim's race. However, there were racial differences when the subjects' overall heart-rate changes were analyzed. Paralleling the findings for the helping measures, analysis of variance revealed that the overall heart-rate response was similar across races in the Alone condition, but higher for white victims than for black victims in the Together condition. However, this race by absence or presence of others interaction was not found for the immediate heart-rate responses. These different

patterns for measures of arousal as a function of victim's race and time will be used to support the differential susceptibility to conformity argument. Once again, it appears that there were two processes operating here. In general, the heart-rate data of Study One suggested that the greater the arousal experienced by the subject initially, the faster the helping of the victim. Thus in the Alone conditions, higher immediate impact of the emergency was associated with faster helping times. Furthermore, in the Together conditions, there were no differences in immediate heart-rate response for black or white victims, as bystanders initially responded to the impact of the emergency regardless of the victim's race. In fact, the blacks who were helped in the Together condition of Study One were helped quickly with behavioral and heart-rate data similar to the Alone condition. Thus the first process suggested was that some subjects (those in the Alone condition and those who help the blacks in the Together condition) respond to the impact of the emergency and help with latencies related to the arousal measured by heart-rate changes.

The second process deals with those who do not help immediately, which included most of the subjects in the Together condition. In this case both the behavioral and heart-rate data indicate a race of victim effect, with whites being helped more readily than blacks and with subjects showing a greater overall, but not immediate, heart-rate response to the white victims. Thus it is only after the bystander has sat in the face-to-face presence of other nonresponsive bystanders that

heart-rate responses are different for the black and white victims. While these data do not argue that the bystander must be more willing to biolate an implied norm of nonintervention when the victim is white, they are consistent with this explanation. If the subject aids the victim quickly, there is little opportunity for her to become aware of the inactivity of the confederates. Thus, the results for the immediate heart-rate response indicate that greater heart-rate change is associated with faster helping. If, however, her helping latency is greater, she likely becomes aware of the inactivity of the other bystanders. In the case of the black victim, the subject showed smaller overall heart-rate changes than for white victims. These heart-rate changes would be consistent with the notion that the subject was experiencing less discomfort for not assisting the black victim. That is, the confederates' nonintervention norm was accepted by the subject with few arousing elements. This is certainly consistent with the Piliavins concept that less aversive arousal leads to less likelihood of helping. However, when the victim is white these heart-rate changes are large. These data are consistent with the notion that the subject was experiencing conflict over the implied nonintervention norm and her desires to help the victim. In this case, the conflict is usually resolved by the subject leaving to help the white victim, thus overcoming the established norm. In addition, these findings are consistent with the Piliavins notion that greater aversive arousal leads to greater helping.

There are several heart-rate findings from these studies which are difficult to explain. In Study Two, when the victim was white in the Together condition, greater arousal was associated with slower, rather than faster, helping. Also in Study Two, mean heart-rate responses in the Alone condition all showed deceleration after the emergency, whereas Study One and Gaertner and Dovidio (]977) showed increases in heart-rate mean in these conditions. Finally, Gaertner and Dovidio (1977) found effects for heart-rate deviation as well as for increasing versus decreasing of heart-rate after the emergency, with deceleration more likely to occur when the emergency victim was black and when the emergency was witnessed with others present; neither of these effects were present in the current studies.

Conclusions

What do these two studies suggest about the process by which racial attitudes affect helping behavior? Initially, it can be concluded that the effects are not simple and direct. It is not the case that black victims are always helped less than white victims. Rather, there appears to be an interaction between the situation in which the bystander finds herself and the race of the victim, which leads to discriminatory behavior only in certain situations. In these two studies, the anti-black behavior was exhibited only when the nonresponsive bystanders were present. In this situation, it is suggested that the subjects were able to find nonrace related reasons to justify reduced helping, and thus they were able to avoid the costs associated with realizing that their behavior was due to racial antipathy. It has been argued that this nonrace related reason for helping blacks less readily than whites was the cost associated with violating the norm of nonintervention imposed by the inactivity of the other bystanders. In any event, white bystanders are more susceptible to group pressure to conform to the norm of nonintervention, established by the passivity of other bystanders, for black than for white victims.

Furthermore, these studies support the notion that most whites have ambivalent attitudes toward blacks, given that bystanders seem to show genuine concern for the black victim when they witness the emergency alone, but that when other bystanders are present, there is not

the same evidence of concern for the well-being of blacks. In addition, there seems to be a difference, perhaps qualitatively, between those who profess nonprejudice and those who score as more highly prejudiced on questionnaire inventories. Both groups are ambivalent, as indicated by their behavior in Study One. However, the interaction of prejudice score by victim's race by experimental condition in Study Two suggests that a distinction between ambivalent and aversive types of racism may be useful. Evidently, high and low scorers will discriminate against blacks so long as they can avoid the self-attribution of bigoted intent. However, low scorers (aversive racists) may be more sensitive to factors (such as, the continuous video image of the black victim lying unconscious) which may threaten their nonprejudiced self-image.

References

Benson, P. L., Karabenick, S. A., & Lerner, R. M. Pretty pleases: The effect of physical attraction, race and sex on receiving help. Journal of Experimental Social Psychology, 1976, 12, 409-415.

Bickman, L. The effect of another bystander's ability to help on bystander intervention in an emergency. Journal of Experimental Social Psychology, 1971, 7, 367-379.

Borofsky, G. L., Stollak, G. E., & Messe, L. A. Sex differences in bystander reactions to physical assault. Journal of Experimental Social Psychology, 1971, 7, 313-318.

Bryan, J. H., & London, P. Altruistic behavior by children. Psychological Bulletin, 1970, 73, 200-211.

Clark, R. D., & Word, L. E. Why don't bystanders help? Because of ambiguity? Journal of Personality and Social Psychology, 1972, 24, 392-400.

Clark, R. D., & Word, L. E. Where is the apathetic bystander? Situational Characteristics of the emergency. Journal of Personality and Social Psychology, 1974, 29, 279-287.

Darley, J. M., & Latane, B. Bystander intervention in emergencies: Diffusion of responsibility. Journal of Personality and Social Psychology, 1968, 8, 377-383.

Dutton, D. G. Reactions of restauranteur to blacks and whites violating restaurant dress requirements. Canadian Journal of

Dutton, D. G. & Lennox, V. L. Effect of prior "token" compliance on subsequent interracial behavior. Journal of Personality and Social Psychology, 1974, 29, 65-71.

Gaertner, S. L. The role of racial attitudes in helping behavior. Journal of Social Psychology, 1975, 97, 95-101.

Gaertner, S. L. Nonreactive measures in racial attitudes research: A focus on "liberals." In Katz, P. A. (Ed.), Toward the elimination of racism. New York: Pergamon Press, 1976.

Gaertner, S. L. & Bickman, L. Effects of race on the elicitation of helping behavior: The wrong number technique. Journal of Personality and Social Psychology, 1971, 20, 218-222.

Gaertner, S. L. & Dovidio, J. F. The subtlety of white racism, arousal, and helping behavior. Journal of Personality and Social Psychology, 1977, 35, 691-707.

Katz, I. Experimental studies of Negro-white relationships. In L. Berkowitz (Ed.), Advances in experimental psychology (Vol. 5) New York: Academic Press, 1970.

Katz, I., Cohen, S., & Glass, D. Some determinants of cross-racial helping behavior. Journal of Personality and Social Psychology, 1975, 32, 964-970.

Katz, I., Glass, D. C., & Cohen, S. Ambivalence, guilt and the scapegoating of minority group victims. Journal of Experimental Social Psychology, 1973, 9, 423-436.

Kazdin, A. E. & Bryan, J. H. Competence and volunteering. Journal of Experimental Social Psychology, 1971, 7, 87-97.

Korte, C. Group effects on help-giving in an emergency. Proceedings, 77th Annual Convention, A.P.A., 1969, 383-384.

Latane, B. & Darley, J. M. Group inhibition of bystander intervention in emergencies. Journal of Personality and Social Psychology, 1968, 10, 215-221.

Latane, B. & Darley, J. M. Bystander "apathy." American Scientist, 1969, 57, 244-268.

Latane, B. & Darley, J. M. The unresponsive bystander: Why doesn't he help? New York: Appleton-Century-Crofts, 1970. (a)

Latane, B. & Darley, J. M. Social determinants of bystander intervention in emergencies. In J. M. Macaulay and L. Berkowitz (Eds.), Altruism and helping behavior. New York: Academic Press, 1970. (b)

Latane, B. & Rodin, J. A lady in distress: Inhibiting effects of friends and strangers on bystander intervention. Journal of Experimental Social Psychology, 1969, 5, 189-202.

Midlarsky, E. Some antecedents of aiding under stress. Unpublished Doctoral Dissertation, Northwestern University, 1968.

Piliavin, I. M., Piliavin, J. A., & Rodin, J. Costs, diffusion, and the stigmatized victim. Journal of Personality and Social Psychology, 1975, 32, 429-438.

Piliavin, I. M., Rodin, J., & Piliavin, J. A. Good samaritanism: An underground phenomenon? Journal of Personality and Social Psychology, 1969, 13, 289-299.

Schwartz, S. H. & Clausen, G. T. Responsibility, norms, and helping in an emergency. Journal of Personality and Social Psychology, 1970, 16, 299-310.

Staub, E. A child in distress: The effects of focusing responsibility on children on their attempts to help. Developmental Psychology, 1970, 2, 152-153.

Sutcliffe, J. P. A general method of analysis of frequency data for multiple classification designs. Psychological Bulletin, 1957, 54, 134-137.

Test, M. A. & Bryan, J. H. Dependency, reciprocity and models. Journal of Social Psychology, 1969, 78, 205-212.

Thayer, S. Lend me your ears: Racial and sexual factors in helping the deaf. Journal of Personality and Social Psychology, 1973, 28, 8-11.

Tilker, H. A. Socially responsible behavior as a function of observer responsibility and victim feedback. Journal of Personality and Social Psychology, 1970, 14, 95-100.

Wispe, L. G. & Freshley, H. B. Race, sex, and sympathetic helping behavior: The broken bag caper. Journal of Personality and Social Psychology, 1971, 17, 59-65.

Woodmansee, J. J. & Cook, S. W. Dimensions of verbal racial attitudes: Their identification and their measurement. Journal of Personality and Social Psychology, 1967, 7, 240-250.

Appendix A

Partitioned Chi Square: Frequency of Helping

Black and White Victims in Experiment Due

Source	df	Chi Square	p <
Alone:Together (A)	1	10.7231	.01
Black:White (B)	1	6.4869	.02
High:Low Prejudice (C)	1	0.1319	
A x B	1	4.2628	.05
A x C	1	0.5858	
B x C	1	0.1832	
A x B x C	1	0.9051	
Total	7	23.2842	.01

Appendix B

Multivariate Analysis of Helping Measures (Time to Stand and Time to Leave Room) in Experiment One

Source	Multivariate F(2,47)	p<
Race (A)	3.97	.026
Alone-Together (B)	14.58	.0001
Prejudice (C)	1.35	.269
A x B	3.91	.027
A x C	0.10	.901
B x C	0.45	.638
A x B x C	1.03	.364

Appendix C

Univariate Analysis of Helping Measures (Time to Stand) in Experiment One

Source	df	MS	F	p <
Race (A)	1	6644.64	2.12	.15
Alone-Together (B)	1	80701.34	25.73	.0001
Prejudice (C)	1	2374.77	0.76	.39
A x B	1	5167.45	1.64	.21
A x C	1	458.38	0.15	.70
B x C	1	2845.71	0.91	.35
A x B x C	1	96.68	0.03	.86
Error	48	3137.07		

Appendix D

Univariate Analysis of Helping Measures (Time to Leave Room) in Experiment One

Source	df	MS	F	p <
Race (A)	1	5114.98	1.69	.20
Alone-Together (B)	1	81567.04	26.92	.0001
Prejudice (C)	1	2775.28	0.92	.34
A x B	1	3824.26	1.26	.27
A x C	1	474.77	0.16	.69
B x C	1	2788.80	0.92	.34
A x B x C	1	21.88	0.01	.93
Error	48	3033.29		

Appendix E

Univariate Analysis of Variance for Overall Heart Rate Change in Experiment One

Source	df	MS	F	p <
Race (A)	1	196.82	2.52	.12
Alone-Together (B)	1	68.69	0.93	.34
Prejudice (C)	1	129.66	1.75	.19
A x B	1	225.05	3.04	.09
A x C	1	3.67	0.05	.82
B x C	1	1.03	0.01	.91
A x B x C	1	10.18	0.14	.71
Error	46	74.04		

Appendix F

Partitioned Chi Square: Frequency of Helping Black and White Victims in Experiment Two

Source	df	Chi Square	p <
Alone:Together (A)	1	2.1962	.15
Black:White (B)	1	2.4130	.15
High:Low Prejudice (C)	1	2.4130	.15
A x B	1	2.3132	.15
A x C	1	2.3132	.15
B x C	1	1.4897	.25
A x B x C	1	2.8036	.10
Total	7	15.9419	.05

Appendix G

Multivariate Analysis of Helping Measures (Time to Stand and Time to Leave Room) in Experiment Two

Source	Multivariate F(2,34)	p ≤
Race (A)	2.92	.068
Alone-Together (B)	6.07	.006
Prejudice (C)	1.32	.281
A x B	2.18	.129
A x C	2.05	.145
B x C	3.12	.057
A x B x C	1.63	.210

Appendix H

Univariate Analysis of Helping Measures (Time to Stand) in Experiment Two

Source	df	MS	F	p <
Race (A)	1	4929.95	5.21	.029
Alone-Together (B)	1	8334.55	8.82	.005
Prejudice (C)	1	2525.90	2.67	.111
A x B	1	3733.07	3.95	.054
A x C	1	2845.10	3.01	.092
B x C	1	2224.14	2.35	.134
A x B x C	1	2800.16	2.96	.094
Error	35	945.44		

Appendix I

Univariate Analysis of Helping Measures (Time to Leave Room) in Experiment Two

Source	df	MS	F	p <
Race (A)	1	4888.60	5.43	.026
Alone-Together (B)	1	8501.58	9.45	.004
Prejudice (C)	1	2429.42	2.70	.109
A x B	1	3392.78	3.77	.060
A x C	1	2897.85	3.22	.081
B x C	1	1804.23	2.01	.166
A x B x C	1	2769.59	3.08	.088
Error	35	899.82		

Appendix J

Analysis of Covariance of Helping Measures (Time to Stand) in Experiment Two: Suspicion Covaried Out

Source	df	MS	F	p ≤
Race (A)	1	2351.51	2.53	.121
Alone-Together (B)	1	6710.90	7.21	.011
Prejudice (C)	1	2647.78	2.84	.101
A x B	1	3403.43	3.66	.064
A x C	1	1640.07	1.76	.193
B x C	1	2874.56	3.09	.088
A x B x C	1	3723.91	4.00	.054
Error	34	930.92		

Appendix K

Analysis of Covariance of Helping Measures (Time to Leave Room) in Experiment Two: Suspicion Covaried Out

Source	df	MS	F	p ≤
Race (A)	1	2288.72	2.60	.116
Alone-Together (B)	1	6827.12	7.74	.009
Prejudice (C)	1	2552.08	2.89	.098
A x B	1	3072.50	3.48	.071
A x C	1	1657.07	1.88	.180
B x C	1	2420.62	2.74	.107
A x B x C	1	3719.73	4.22	.048
Error	34	881.85		

Appendix L

Analysis of Variance of Subject's Appraisal of the Severity of the Victim's Injury: Experiment Two

Source	df	MS	F	p ≤
Race (A)	1	9.43	3.14	.085
Alone-Together (B)	1	3.59	1.19	.282
Prejudice (C)	1	3.82	1.27	.267
A x B	1	0.44	0.15	.706
A x C	1	3.43	1.14	.293
B x C	1	15.84	5.27	.028
A x B x C	1	7.06	2.35	.134
Error	35	3.01		

Appendix M

Analysis of Covariance of Overall Heart Rate Response in Experiment Two: Suspicion and Baseline Mean Heart Rate Covaried Out

Source	df	MS	F	p <
Race (A)	1	111.99	2.37	.14
Alone-Together (B)	1	237.25	5.02	.03
Prejudice (C)	1	7.68	0.16	.69
A x B	1	56.25	1.19	.28
A x C	1	23.83	0.50	.48
B x C	1	57.58	1.22	.28
A x B x C	1	23.93	0.51	.48
Error	33	52.74		

Distribution List

Office of Naval Research (3 copies)
(Code 452)
800 N. Quincy St.
Arlington, VA 22217

Director
U.S. Naval Research Laboratory
(6 copies)
Washington, DC 20390
ATTN: Technical Information Division

Defense Documentation Center
(12 copies)
Building 5
Cameron Station
Alexandria, VA 22314

Library, Code 2029 (6 copies)
U.S. Naval Research Laboratory
Washington, DC 20390

Science & Technology Division
Library of Congress
Washington, DC 20540

Psychologist
ONR Branch Office
495 Summer St.
Boston, MA 02210

Psychologist
ONR Branch Office
1030 E. Green St.
Pasadena, CA 91106

Research Psychologist
ONR Branch Office
536 S. Clark St.
Chicago, IL 60605

Dr. James A. Bayton
Department of Psychology
Howard University
Washington, DC 20001

Dr. H. Russell Bernard
Dept. of Sociology and
Anthropology
West Virginia University
Morgantown, WV 26506

Dr. Arthur Blaiwes
Naval Training Equipment Center
Orlando, FL 32813

Dr. Harry R. Day
University City Science Center
Center for Social Development
3508 Science Center
Philadelphia, PA 19104

Dr. Fred E. Fiedler
Dept. of Psychology
University of Washington
Seattle, WA 98105

Dr. Richard Hackman
Dept. of Administrative Sciences
Yale University
New Haven, CT 06520

Dr. Edwin P. Holander
The Research Foundation of
State University of New York
P.O. Box 7126
Albany, NY 12224

Dr. Charles L. Hulin
Department of Psychology
University of Illinois
Champaign, IL 61820

Dr. Rudi Klauss
Syracuse University
Public Admin. Dept Maxwell School
Syracuse, NY 13210

Dr. Morgan W. McCall, Jr.
Center for Creative Leadership
5000 Laurinda Drive
P. O. Box P-1
Greensboro, NC 27402

Distribution List (Cont.)

Dr. Chester M. Pierce
Harvard University
Nichols House
Appian Way
Cambridge, MA 02138

Dr. Manuel Ramirez
Systems and Evaluations
232 Swanton Blvd.
Santa Cruz, CA 95060

Dr. John Ruhe
University of North Carolina
Dept. of Business Administration
Charlotte, NC 28223

Dr. Barry R. Schlenker
Dept. of Psychology
University of Florida
Gainesville, FL 32611

Dr. Richard E. Sykes
Minnesota Systems Research, Inc.
2412 University Ave.
Minneapolis, MN 55414

Dr. Lorand B. Szalay
American Institutes for Research
Foxhall Square
3301 New Mexico Ave., NW
Washington, DC 20016

Dr. Paul Wall
Division of Behavioral Science
Tuskegee Institute
Tuskegee, AL 36088

AFOSR (NL)
1400 Wilson Blvd.
Arlington, VA 22209

Air University Library/LSE-8110
Maxwell AFB, AL 36112

Army Research Institute (2 copies)
Commonwealth Bldg.
1300 Wilson Blvd.
Rosslyn, VA 22209

Chief, Psychological Research Branch
U.S. Coast Guard (G-P-1/62)
400 7th Street, S.W.
Washington,DC 20590

Chief of Naval Personnel
Assistant for Research Liaison
(Pers-Or)
Washington, DC 20370

Bureau of Naval Personnel (Pers-6)
Assistant Chief of Naval Personnel
for Human Goals
Washington, DC 20370

Cdr. Paul D. Nelson, MSC, USN
Head, Human Performance Division
(Code 44)
Navy Medical R & D Command
Bethesda, MD 20014

Scientific Director
Naval Health Research Center
San Diego, CA 92152

Navy Personnel R & D Center
(5 copies)
Code 10
San Diego, CA 92152

Commanding Officer
Naval Training Equipment Center
Technical Library
Orlando, FL 32813

HumRRO (ATTN: Library)
300 N. Washington St.
Alexandria, VA 22314

Journal Supplement Abstract Service
APA
1200 17th St., N.W.
Washington, DC 20036

Division Director for Social Science
National Science Foundation
1800 G St., N.W.
Washington, DC 20550

Mr. Luigi Petrullo
2431 N. Edgewood St.
Arlington, VA 22207