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ABSTRACT

Male and female bystanders witnessed a violent theft in the course of a bogus "ESP Experiment." In addition to the subjects' sex, two experimental manipulations were orthogonally crossed. The subject was either the only one to witness the emergency, or witnessed it with an additional participant (diffusion of responsibility), and the subject's presence was either known or unknown to the other participants (evaluation apprehension). Both manipulations affected the bystanders' response latencies: participants whose presence was known responded more quickly than those whose presence was unknown, and lone bystanders responded more quickly than those witnessing the theft with another participant. Further, bystanders whose presence was unknown and who witnessed the emergency with another participant were significantly slower to respond than subjects in the other three experimental conditions. Since 1/3 of the bystanders' reactions did not lead to immediate helping attempts, latencies for effective helping were also analyzed. There were no independent effects of the two experimental manipulations on helping latencies. Only the statistical interaction was reproduced-- i.e., unknown bystanders who witnessed the theft with another participant were also slower to help than those in the other three conditions. The implications of these findings for the understanding of bystanders' decision process during an emergency are discussed. (Author)

They Know I Saw It: Evaluation Apprehension and Diffusion of Responsibility in Bystander Reactions to a Violent Crime[1]

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Models of bystander decision making in emergencies (e.g., Latané & Darley, 1970) specify several steps necessary prior to a helping response. The present paper concerns two processes which may be involved in such a decision.

Diffusion of responsibility refers to the spreading of responsibility to act among bystanders. The presence of additional bystanders who are able to intervene reduces the necessity for each to react and hence reduces the responsibility of any one witness. The fact that bystanders inhibit each others' helping, presumably through this process, is well-documented in the literature (e.g., Darley & Latané, 1968; Bickman, 1971; Schwartz & Gottlieb, Note 1).

The second process of concern here, evaluation apprehension, has been researched less extensively. It refers to bystanders' concern with what reactions to the emergency others expect of them, and with how they may be judged by others.

Concern with social expectations is likely whenever a bystander's conduct is or may be exposed to others. When witnesses to an emergency are mutually aware of each others' behavior, however, the additional process of social influence may operate: The other bystanders' behavior may provide a social definition of the situation and a model for appropriate behavior. Consequently, it is not possible to isolate a pure evaluation apprehension effect in studies where bystanders interacted directly with each other (e.g., Latané & Rodin, 1969; Clark & Word, 1972) or in field studies of emergencies in which bystanders were mutually aware (e.g., Piliavin, Rodin & Piliavin, 1969).

To examine evaluation apprehension without confounding by other effects, others' awareness of what the bystander does must vary independently of what the bystander knows about the others' behavior.

Three studies have employed designs that meet this condition. In these studies communication arrangements were manipulated in order to create either no awareness of each others' behavior among bystanders, one-sided awareness or mutual awareness. The findings for evaluation apprehension effects are somewhat contradictory. A reanalysis of Latané & Darley's (1976) data suggests that evaluation apprehension alone had no significant impact on helping. Beaman, Frazer, Diener, Kelem & Westford (Note 2) found that evaluation apprehension inhibited helping, but only when combined with negative social influence (i.e., exposure to another unresponsive witness). Schwartz and Gottlieb (Note 1) found that evaluation apprehension facilitated helping regardless of whether the bystander was aware of other witnesses' inaction or not.

One possible explanation for these discrepancies is that the conditions for evaluation apprehension may not have been operationalized adequately in previous studies. Concerns about being evaluated are not necessarily allayed by the fact that one's conduct is not publicly known during the time the emergency occurs. Bystanders may feel that their behavior can be discovered subsequently, and that they are yet accountable to other witnesses, the victim, or formal authorities. The elimination of evaluation concerns can only be assured if bystanders can deny entirely that they witnessed the emergency--that is, when their presence can neither be detected nor proven.

This reconceptualization underlies the present study. Bystanders whose presence was either known or unknown to another participant and to the victim witnessed a violence-precipitated emergency. This variation was crossed with a manipulation of conditions conducive to diffusion of responsibility--the other participant was either aware that the emergency

was occurring (hence sharing responsibility) or unaware thereof. It should be noted that this design permits the isolation of evaluation apprehension from diffusion of responsibility effects. This may not have been the case in previous studies (e.g., Beaman et al., Note 2; Schwartz & Gottlieb, Note 1), since there the bystanders who witnessed an emergency alone (no diffusion of responsibility) may at least have been concerned about the victim's evaluation of their behavior.

In accord with previous findings (e.g., Darley & Latané, 1968; Bickman, 1971; Schwartz & Gottlieb, Note 1), we hypothesized that diffusion of responsibility would inhibit intervention. We further hypothesized that evaluation apprehension would facilitate helping. The rationale for the latter hypothesis requires further elaboration.

When a bystander does not know how other witnesses are responding to an emergency, as is the case in the present study, inferences about their expectations might be difficult. We suggest, however, that bystanders usually assume that others do expect them to help. This view is based on the following arguments: Heberlein (Note 3) has found that most people tend to feel some obligation to help a needy other. Many bystanders do in fact act in accord with this obligation, when factors that inhibit helping are reduced (e.g., when diffusion of responsibility is not possible). This is evidenced by the high intervention rates of lone bystanders in a variety of studies (e.g., Darley & Latané, 1968; Schwartz & Clausen, 1970; Bickman, 1971). If bystanders project these self-expectations to others, they are likely to view intervention as socially expected of them.

The present study also varied the bystander's sex. Although no unequivocal predictions with respect to sex differences were made, the possibility that the impact of diffusion of responsibility and of

evaluation apprehension differs for male and female bystanders must be considered. Only one study (Schwartz & Gottlieb, Note 1) has revealed unconfounded diffusion of responsibility effects among males, and in another study (Schwartz & Clausen, 1970) this effect was not found. If sex-role stereotypes play an important role in the determination of socially accepted norms of conduct, male bystanders may perceive themselves as expected to exhibit competency and assertiveness while females do not (e.g., Broverman, et al., 1972). Evaluation apprehension might therefore facilitate intervention in emergencies by males, while inhibiting females. Sex-linked effects may depend on very specific elements in the situation.

Methods

Subjects and Design

One hundred twenty seven undergraduates at the University of Wisconsin, who were contacted by phone and offered $3.00 for their participation in an "ESP study," participated in the experiment. The subject's sex, another (fictitious) participant's awareness of the emergency (aware--unaware) and the other participants' knowledge of the subject's presence (known--unknown) were crossed in a 2 x 2 x 2 factorial design. The other participant's awareness of the emergency varied the likelihood of diffusion of responsibility, and the other participants' knowledge of the subject's presence varied the likelihood of evaluation apprehension.

Procedure

The experiment was conducted at night in a relatively isolated wing of a building on campus. Upon arrival, subjects were seated in a separate room in front of a TV monitor which showed a (video taped) male student filling out a questionnaire. They were instructed to serve as

observers to an interchange of "ESP" messages among two other participants. Participant 1, who was seen on the TV screen, would try to transmit ESP messages of geometrical forms displayed on cards to an unobservable participant 2. The latter's sex was matched with the subject's. The subject was instructed to try to pick up as many of these transmissions as possible. The ESP sender was visible on the screen to enhance reception of ESP transmissions.

Following the completion of 40 30-second trials, all participants were to fill out questionnaires evaluating their own and others' performance in the experiment. Subjects were given their pay and the questionnaire in advance, since the experimenter would not be present during the trials so as not to interfere with the ESP transmissions. The experimenter would not see them before they left, but she could be reached with a telephone they had seen in a room down the hall in case the equipment broke down.

After completing these instructions, the experimenter ostensibly left to an office at an unspecified location, and the subject observed participant 1 "practicing" ESP transmissions. Seven and one-half minutes later, a stranger was seen entering the transmitter's room. After a short conversation about the "ESP experiment" the intruder grabbed a pocket calculator that belonged to participant 1 and turned to leave. The participant's attempt to prevent the intruder from leaving escalated into a violent fight, which left him immobile on the floor, while the intruder escaped with the calculator. During the emergency subjects' reactions were monitored using concealed cameras and response latencies were recorded for exiting the room and for other actions taken by the bystander. Subjects who alerted the experimenter by phoning her were

instructed to wait in the room for her to come with her boss. Subjects who failed to respond within five minutes were contacted in their own room.

While the "research director" ostensibly saw to it that the victim was OK, the experimenter checked into the subjects' perception of the emergency, possible suspicions, and their intention when reacting. Subsequently, subjects were gradually and carefully debriefed and then completed two written questionnaires. The first checked perceptions of the experimental manipulations and the emergency and the second--not to be seen by the experimenter--anonymously solicited their evaluation of the ethics of the study on behalf of a departmental committee.

Experimental Manipulations

The manipulations of two of the three independent variables--the other bystander's awareness of the emergency and the other participants' knowledge of the subject's presence--were embedded in the oral instructions given to the subject prior to the onset of the "ESP practice trials."

The description of participant 2's location and readiness for the experiment constituted the manipulation of whether the other bystander was aware of the emergency, thereby determining whether diffusion of responsibility might be operative.

Other unaware.

Upon arrival, subjects overheard a phone call to the experimenter which implied that participant 2, who was to be located in a room on another floor, had not yet arrived. After delivering instructions to the subject, the experimenter received another call reporting the participant's arrival. Subjects were told that since participant 2 had come late s/he was still filling out a preliminary questionnaire and had not been

tuned into the system yet (i.e., could not see participant 1). Later they overheard and saw the experimenter instruct participant 1 to get up and flip a switch on a console located at the far corner of his room at the time appropriate for activating participant 2's TV monitor. Since the intrusion occurred prior to this clearly visible act, subjects believed that participant 2 could not have witnessed the attack, so that they were the only bystanders to the emergency.

Other aware. The phone calls to the experimenter at the subjects' arrival gave no information about the presence of the other participants. Subjects were told that participant 2, who was located in the room right next to their's, had arrived earlier and received full instructions. Since participant 2 was already viewing participant 1 on his/her TV screen, subjects believed that s/he could witness the later intrusion, and that they were therefore not the only bystander to the emergency. Participant 2 was located close by and matched with the subject on sex to ensure that s/he would be seen as equally able to intervene. Subjects could not know how the other bystander reacted, since they could neither hear nor see him/her during and after the emergency.

The manipulation of others' knowledge that the subject was present, which determined whether or not evaluation apprehension might be operative, was implemented as follows.

Presence known. Subjects were told that the two other participants were aware of their presence and their role in the experiment, but had been instructed to avoid directing ESP transmissions to them. In addition, all three participants were encouraged to meet in the subject's room after the experiment to exchange impressions on their performance and accuracy. Thus subjects believed others might have expectations of them

during the emergency and that they would have to account for their behavior in later face-to-face interaction.

Presence unknown. Subjects were told that the two other participants were being kept ignorant of their presence and role in the experiment so that no ESP transmissions would be directed to them. In addition it was noted that they could leave before the other participants, because the others' final questionnaires were much longer than their own. Thus subjects believed that noone present would hold expectations of them and that they could leave without having to account for their behavior.

Measurement and Analysis

Nonparametric analyses of the distribution of responses over time are used whenever possible in this paper. Schwartz & Gottlieb (Note 1) have shown that parametric analyses of various transformations of response latencies are sensitive to when the differentiation of responses among conditions occurs. For example, the commonly used speed score (the reciprocal of response latency) tends to emphasize differences in responses which occur shortly after the emergency, and to deemphasize later differences in responses and differences in the proportion of bystanders who react.[2] Nonparametric tests relying on an ordinal (i.e., ranking) rather then interval scale do not emphasize early or late differences in responses disproportionately.

Results

Perception of the Situation and the Manipulations

Manipulation checks and questions about perceptions of the emergency were embedded both in the verbal debriefing and in the written questionnaire. Whether or not another bystander witnessed the emergency was correctly perceived by 91% of the subjects, and 98% of those in the

presence of another bystander correctly perceived that they could not know how the other responded. Whether or not others knew of their presence was correctly perceived by 96%, and the second component of this manipulation--anticipation of future interaction with the others--was perceived correctly by everyone. To avoid a self-selection bias, all misperceivers were retained in the analysis. Their exclusion would not alter the results reported below.

Participants' suspicions, if any, were elicited during the verbal debriefing. Seven persons who immediately and spontaneously told the experimenter that they disbelieved the authenticity of the attack were excluded from the analysis. Total disbelief was somewhat more likely when the subject's presence was unknown to others. For the remaining sample, self-ratings of belief on a 100-point scale were unrelated both to experimental treatment and to helping.

Effects of Independent Variables

a. Type of Response

Eighty-nine percent of the bystanders responded to the emergency: 25% attempted to confront the attacker, 33% tried to help the victim directly after the attacker's disappearance, and the remaining 31% responded indirectly by phoning the experimenter.

The proportion of bystanders responding was unrelated either to experimental treatment or sex. Type of helping exhibited was significantly influenced, however, by whether subjects believed their presence was known to others. Among those who responded, 79% of the bystanders whose presence was known vs. 52% of those whose presence was unknown tried to help the victim directly ($\chi^2=7.70$, $p < .01$, Table 1).

Table 1 about here

The presence of another witness and the bystander's sex had no effects on the type of helping response. A further distinction among responses--confronting the intruder vs. helping the victim after his disappearance--also showed no reliable effects of the experimental treatments or the bystander's sex.

b. Response Latency

The fastest response came four seconds after the onset of the fight, and the slowest after 252 seconds. Subjects were rank-ordered in terms of the time it took before they exited their room. The 13 bystanders who failed to respond after 300 seconds--the time at which the experimenter entered their room--were all assigned the highest rank.

The response distributions for the various conditions were compared by Mann-Whitney tests. Bystanders' sex did not affect the distribution of responses over time, nor did it interact with the experimental treatments ($z < 1$ for all relevant comparisons). Figure 1 shows the mean ranks of response latencies for exiting the room in the four experimental conditions collapsed across sex.

Figure 1 about here

As suggested by Figure 1, bystanders who witnessed the emergency together with another participant exited their room significantly more slowly than those who were alone ($z=2.13$, $p < .04$). In addition, bystanders whose presence was known to the other participants tended to emerge earlier than those whose presence was unknown ($z=1.81$, $p < .10$), although this effect was significant only for females ($z=2.21$, $p < .03$).

It is also apparent from Figure 1 that exiting was particularly slow in the other aware-presence unknown condition. Comparisons of the

response distributions in the four conditions (Table 2) revealed that bystanders whose presence was unknown and who witnessed the emergency together with another participant reacted significantly more slowly than those in the other three conditions. The other conditions did not differ significantly among themselves.

Table 2 about here

The experimenter recorded latencies both for exiting the room and for actual helping. Note that previous laboratory studies of bystander intervention have not drawn this distinction and may have assumed that the two were equivalent. Interestingly, 35% of the bystanders who responded to the emergency did not help immediately upon exiting their room. These subjects commonly wandered aimlessly around the hall or returned to their room before trying to help. To identify whether delay between exiting and helping followed any meaningful patterns, the effects of the independent variables on delay were examined. Bystanders who witnessed the emergency with another participant were more likely to act immediately upon leaving their room (74% vs. 57%, $\chi^2=2.88$, $p < .10$). Furthermore, female bystanders, but not males, were more likely to exhibit delay when their presence was unknown rather than known to the other participants (78% vs. 57%, $\chi^2=3.04$, $p < .10$). There were no additional effects on delay.

These findings for delay between exiting and helping suggest that it may be important to examine the effects of the experimental manipulations on helping as well as exiting. Figure 2 shows the means ranks of helping latencies. In contrast to the findings for exiting, Mann-Whitney

Figure 2 about here

tests revealed that only the interaction between diffusion of responsibility and evaluation apprehension was significant for helping. Bystanders whose presence was unknown and who witnessed the emergency together with another participant were slower to help than those in the other three conditions. The relevant z-value [illegible] Table 3. The main effect

Table [illegible]re

on helping for the presence of another bystander was only marginal (z=1.33, $p < .10$), and the effect of one's presence being known was not reliable (z=1.25, n.s.). Even when the analysis was limited to females, the latter effect was still only marginally significant (z=1.33, $p < .10$).

Subjective Perceptions

In the written questionnaire following the debriefing, participants rated the seriousness of the victim's need and the dangerousness of the attack, described their spontaneous thoughts and feelings during the emergency, indicated whether various characteristics of the situation influenced their behavior, and checked a list of thoughts and feelings. These measures must be interpreted with caution, since they may partly reflect retrospective justifications and distortions.

Both the seriousness of the victim's need and the dangerousness of the attack were rated somewhat above the midpoint of a 7-point scale. The perceived danger of the emergency is further indicated by the fact that "fear" was mentioned spontaneously by 29% of the bystanders. Forty-one percent also reported that they considered not intervening, although more than four-fifths of these finally did.

Bystanders did not perceive the experimental manipulations as having an impact on their behavior: 86% claimed that the presence of another bystander did not affect them; 93% denied they were influenced by the other participants' awareness of their presence.

More indirect measures revealed, however, that the manipulations did affect several theoretically relevant perceptions. Twenty percent of the bystanders whose presence was known felt that others' expectations exerted some pressure upon them to help; noone thought that they were expected not to intervene. None of the unknown bystanders felt that others held any expectations of them.

In line with the hypothesis that the presence of an additional bystander reduces responsibility, feelings of obligation to help were mentioned spontaneously more frequently by bystanders who witnessed the emergency alone (28% vs. 7%, $\chi^2=8.30$, $p < .01$). In response to the checklist, 68% of the lone bystanders also indicated that they thought that responsibility to act was focused upon themselves. Thirteen percent of those who witnessed the emergency with an additional bystander had the opposite thought--i.e., that responsibility was shared by the other bystander, and thus reduced.

Discussion and Conclusions

This study has demonstrated that two processes by which bystanders to an emergency might influence each others' behavior do indeed have unconfounded effects on their reactions. First, bystanders were slower to react when an additional witness was present than when they were alone--that is, when responsibility to act could presumably be diffused. This finding parallels similar effects previously demonstrated in the literature (e.g., Darley & Latané, 1968; Schwartz & Clausen, 1970; Schwartz & Gottlieb, Note 1). Second, bystanders reacted faster when their presence was known to others than when it was unknown--that is, when evaluation apprehension is presumably more likely. This finding replicates Schwartz & Gottlieb (Note 1), although the conditions conducive to evaluation

apprehension were operationalized differently here. It suggests that the exposure of bystanders' presence to others' is a sufficient condition for evaluation apprehension to be aroused. Our finding also lends some indirect support to the argument that in the absence of contrary evidence, bystanders tend to assume that others do expect them to help. The presence of a facilitation effect for female bystanders suggests that they too were likely to a[illegible]ite positive expectations to others. Note that this study matche[illegible]he [illegible] participant's sex with the subject's, while the victim was always male. Different sex compositions of groups may well lead to different attributions, as suggested by Schwartz & Clausen (1970).

Previous reports have not attended to the possible delay between bystanders' initial emergence from their room and effective helping responses. Several studies have treated exit latency as equivalent to helping latency (e.g., Darley & Latané, 1968; Schwartz & Clausen, 1970; Schwartz & Gottlieb, Note 1), and others have measured only the latter (e.g., Bickman, 1971). Our findings suggest that the two processes tested here have no independent effects on helping. One might speculate that lone bystanders, feeling that they are responsible to act, may be motivated to react immediately without necessarily planning what helping action to take. Similarly, female bystanders whose presence is known to others who presumably expect them to help, may respond to these expectations by exiting their room before deciding about an effective helping response. Further research is obviously required to demonstrate that such patterns of delay in helping are not only specific to the present study.

The only consistent pattern found for both exiting and helping latencies was the interaction between diffusion of responsibility and

evaluation apprehension. The relatively slow reactions of unknown bystanders who witnessed the emergency with another participant were to be expected: Both diffusion of responsibility and the lack of evaluation apprehension may have contributed to the inhibition of helping in this condition. Two other points are of more interest, however. First, helping by lone bystanders was not affected by whether their presence was known to others. Since the victim was the only immediate source of evaluation when a bystander was present, it might be suggested that his expectations were of less importance in the bystander's decision. Second, bystanders who witnessed the emergency with another participant and whose presence was known helped as fast as lone bystanders. The inhibiting effect of diffusion of responsibility and the facilitating effect of evaluation apprehension may have cancelled each other in this condition.

Ethics

The possible emotional impact of a violent emergency and the possibility of self-deprecation for failure to help necessitated very careful debriefing. To assess any lingering negative feelings as well as the ethical evaluation of the research by participants, an anonymous "ethics questionnaire" was administered after the debriefing.

Current feelings were measured on 5-point self-descriptive scales. Mean ratings for all 7 negative feelings (upset, angry at the experimenter and self, depressed, embarrassed, nervous, and guilty) fell below between "not at all" and "slightly." Positive feelings (calm, proud, pleased with self) were rated higher. Only guilt varied with response: Non-helpers rated themselves as feeling more guilty, although their mean guilt rating was still below "slightly" on the scale.

Ninety-seven percent of the subjects felt the explanations given after the experiment were satisfactory, and 98% advocated that the experiment be continued. Finally, 56% believed that this experience would increase the likelihood of their helping a real victim in the future while 1% (two respondents) thought they might be somewhat less likely to help in "high-risk" situations.

Although concerns about the ethics of the study cannot be allayed completely by responses to an anonymous questionnaire, the continuous positive feedback to our purposes and procedures encouraged us to continue the research to its conclusion.

Reference Notes

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Footnotes

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[2]For a more extensive discussion see Schwartz & Gottlieb (Note 1).

Table 1

Type of Helping Response

as a Function of Others' Knowledge of S's Presence

Type of response	Others' Knowledge of S's Presence		
	Presence known	Presence unknown	Total
Indirect	11	26	37
Direct	42	28	70
Total	53	54	107

$\chi^2 = 7.70$, $p<.01$

Note: Entries in table are frequencies.

Table 2

Pair-wise Comparisons of Latencies

for Exiting Room in Four Experimental Conditions

Conditions compared	z = value for comparison 1
Other aware-presence unknown vs. other aware-presence known	2.40*
Other aware-presence unknown vs. other unaware-presence known	2.44*
Other aware-presence unknown vs. other unaware-presence unknown	2.53*
All other comparisons	<1

1 based on Mann-Whitney test

* $p<.01$

Table 3

Pair-wise Comparisons of Helping Response Latencies in Four Experimental Conditions

Conditions compared	z = value for comparison 1
Other aware-presence unknown vs. other aware-presence known	2.45**
Other aware-presence unknown vs. other unaware-presence known	1.75*
Other aware-presence unknown vs. other unaware-presence unknown	2.49**
All other comparisons	<1

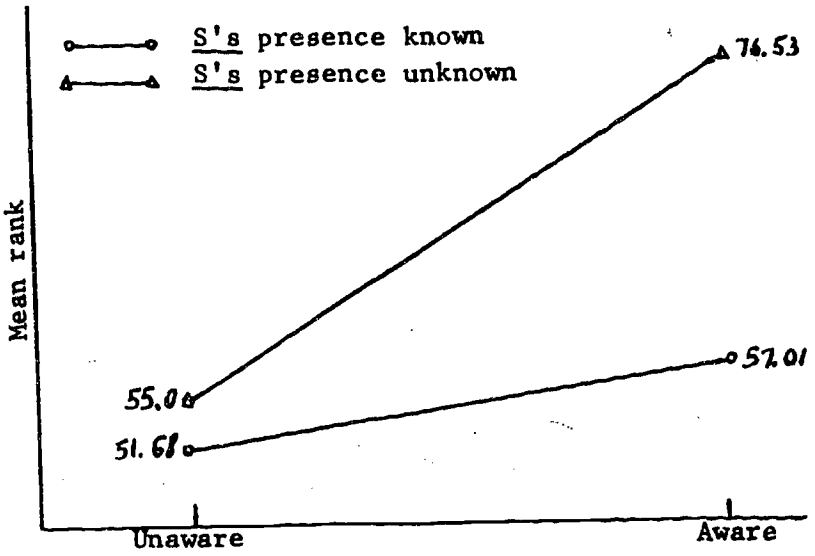
1 based on Mann-Whitney test

* $p<.05$

** $p<.01$

Figure 1

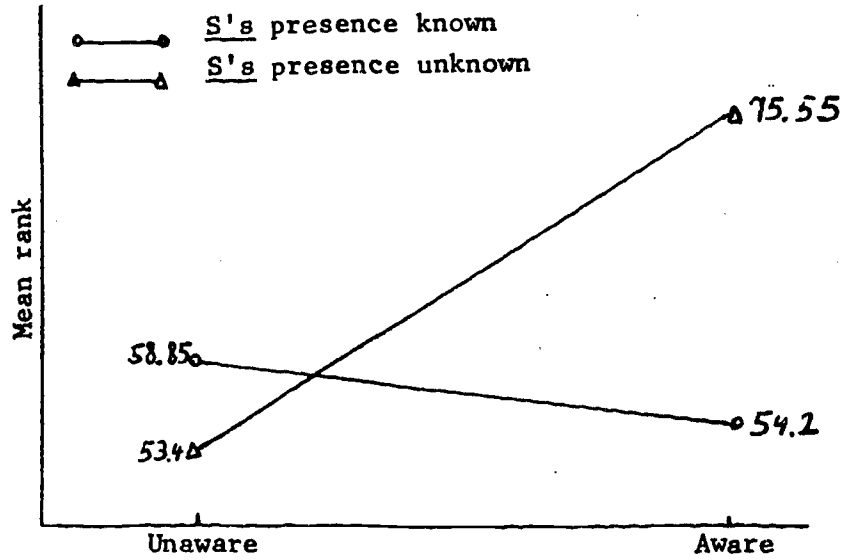
Mean Latency Ranks for Exiting Room by Others' Knowledge of S's Presence and Other Bystander's Awareness of Emergency



Other bystander's awareness of emergency

Figure 2

Mean Latency Ranks for Helping by Others' Knowledge of S's Presence and Other Bystander's Awareness of Emergency



Other bystander's awareness of emergency