1974

High Risk Pro-Social Behavior: Who Will Respond Heroically in an Emergency

Ira Silverman
University of Rhode Island

Follow this and additional works at: https://digitalcommons.uri.edu/oa_diss

Recommended Citation

Silverman, Ira, "High Risk Pro-Social Behavior: Who Will Respond Heroically in an Emergency" (1974).
Open Access Dissertations. Paper 1015.
https://digitalcommons.uri.edu/oa_diss/1015

This Dissertation is brought to you for free and open access by DigitalCommons@URI. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu.

HIGH RISK PRO-SOCIAL BEHAVIOR: WHO WILL
RESPOND HEROICALLY IN AN EMERGENCY?

BY

IRA SILVERMAN

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
PSYCHOLOGY

UNIVERSITY OF RHODE ISLAND

1974

ABSTRACT

The purpose of this study was to examine how males and females who were categorized as prone to high or low risk behavior in pro-social situations would react when alone or in the presence of another to a simulated emergency where intervention to aid the victim appeared to entail considerable risk.

A group of subjects (Ss) took a pro-social Risk Taking Situations Scale (RTS), constructed for this experiment, that required indicating what type of pro-social response the S believed he/she would make to another individual in distress. On the basis of the S's response to this set of risk-taking situations, the S was assigned to a high or low risk-taking group. These two groups were subdivided into either an "alone" or a "presence of other" condition prior to exposure to the simulated emergency. The specific concepts being investigated were: (1) how well could we predict how an individual would react in aiding a stranger in an emergency from knowing his/her preference for risk on a paper and pencil test, that is, how well could we predict pro-social behavior from a pro-social scale; (2) whether there would be a diffusion or infusion of responsibility to act when the S believed there was another witness to the emergency; and (3) whether males and females differed in the degree of risk

they would be willing to undertake in response to a simulated high risk emergency.

Supplemental information was gathered from each subject with three objective personality measures (Personality Research Form, Internal-External Control Scale, and Security-Insecurity Inventory). These measures were used post factum in order to (1) examine relevant correlations between organismic traits and pro-social, risk-taking behavior; (2) provide an additional dimension of explanation in analyzing the results obtained from the independent variables, and (3) compare their correlations to the RTS Scale and investigate the feasibility of including such measures in the development of a discriminant function that could reliably predict high risk, pro-social behavior.

Statistical analyses of the results confirmed that two of the main variables, RTS score and Sex, were significantly related to type of behavioral response. High RTS scores were associated with direct higher risk-taking behavior, and low RTS scores with less risky, more indirect forms of help. Males were more likely to exhibit direct intervention than females; the latter were about evenly split between direct and indirect forms of action. The Alone vs Other Condition did not appear to be an influential determinant. Some scales from the Personality Research Form and a few Demographic variables were found to significantly relate to behavioral response.

The findings were considered from the different per-

spectives offered by some major theoretical positions and each of the main variables were discussed. The relative efficacy of the RTS Scale was evaluated and ways in which the measure could be used in future research were suggested.

ACKNOWLEDGEMENTS

My thanks and appreciation to my Dissertation Committee, Al Lott, Wayne Velicer, and Robert Lynch, each of whom made important suggestions and took a sincere interest in this study. Al Lott in particular, who has been my mentor, senior advisor and main committeeman, deserves much credit. It was out of his Altruism seminar a few years ago, that the seeds of the present study developed.

Much gratitude and love to Louis and Jacqueline Sherman, who scored tests, sent money, and who have, in general, shown endless patience with a thirty-three year old son-in-law who never seemed to graduate. Rejoice!

I must thank my friends: Herb Wax, with whom I've shared a 15 year relationship, has given me much to think about and a sustaining comradeship; Allen Schor, who did a superb job as the "victim" in this study, has been consistently supportive, encouraging and, who, in spite of being from Brooklyn, seems to know how to guide a person through the impossibility of a doctoral dissertation; Andy (Roo) Siegal, besides having a great research head, was able to give me what I needed most whenever I would take this absurd endeavor seriously: laughter.

My sincerest thanks to Alan Chadsey and Daniel Shapiro, who were great assistants. They contributed productive ideas and spent many evenings working with this study when they could have been out raping and pillaging.

If it weren't for Stan Berger and his incredible ability

to find me employment, I probably would have starved to death long before graduation.

My nephew, Bruce Molay, lent a hand, and my sister Marcia Molay, by virtue of being the fine person that she is, contributed immeasurably to this project. Her confidence in me, at times exceeded my own.

It is amazing to me that a young lad by the name of Todd still seems to love me, in spite of all the crap that a harrassed, irritable and neglectful father dished out during this year. My apologies, thanks, and love.

How do you thank a person for going through the entire horrendous experience of a dissertation with you; for taking care of the kids while you're at the library; for cooking and washing while you're at the Computer Center, for sitting alone at night while you're writing at the office, who had to handle far too many problems by herself without any help, and, if that weren't enough, then typed three drafts of your dissertation manuscript. To Hedy, who, through it all, stood by her man, my love and gratitude.

Literally hundreds of University of Rhode Island students contributed their time, ideas and interest, and who have shared with me again and again, their marvellous richness and subtlety. Were it not for their altruism, this endeavor would have been impossible.

DEDICATION

This study is dedicated to the memory of my parents,
Abraham and Lillian Silverman, who would have been surprised,
and pleased.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION..... 1

Pro-Social Behavior

Heroism, Altruism & Helping

Diffusion of Responsibility

Sex Variable

Simulated Emergency

Predictions

Personality Measures

METHOD..... 19

Development of the Risk Taking Scale

Source of Items

Ranking of Options

Scale Pre-Testing

Subjects

Measures

Apparatus

Setting

Procedure

Pre-Test of Experimental Emergency Situation

Debriefing

RESULTS..... 35

Observations of Behavioral Responses

Subject's Perception of Emergency Situation

Test of Main Variables X Type of Response	
RTS Score X Type of Response	
Sex X Type of Response	
Condition X Type of Response	
Personality Correlates of Type of Response	
Other Correlates of Type of Response	
Correlates of the Risk Taking Scale	
Correlates of Latency	
DISCUSSION.....	57
General Theoretical and Empirical Considerations of the Behavioral Response	
Theoretical Consideration of Indirect Helping Behavior	
Theoretical Consideration of Non-Helping Behavior	
Theoretical Consideration of Direct Helping Behavior	
Risk-Taking Situations Scale and Type of Response	
Sex and Type of Response	
Condition and Type of Response	
Personality Variables and Type of Response	
Demographic Correlates of Type of Response	
Latency and Other Correlates of Type of Response	
Evaluation of the RTS Scale	
Further Research Considerations	
CONCLUSIONS.....	83
REFERENCES.....	84

APPENDICES..... 90

- Appendix A. Development Of The RTS Scale: Step 1
- Appendix B. Development Of The RTS Scale: Step 2
- Appendix C. Development Of The RTS Scale: Step 3
- Appendix D. Development Of The RTS Scale: Step 4
(First Scale)
- Appendix E. Development Of The RTS Scale: Step 5
(Final Scale)
- Appendix F. General Background Items
- Appendix G. Personality Research Form Scales
- Appendix H. Transcript Of "Victims'" Utterances
- Appendix I. Debriefing Sheet
- Appendix J. Post-Experimental Questionnaire
- Appendix K. RTS Item Intercorrelation Matrix
- Appendix L. Physical Layout of Experimental Setting

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Utilization Of Subject Pool	31
2	Main Variables X Type Of Response	37
3	Partitioned Chi Square	38
4	RTS Score X Type Of Response	39
5	RTS Score X Type Of Response: Male	40
6	RTS Score X Type Of Response: Female	40
7	RTS Score X Type Of Response: Alone	41
8	RTS Score X Type Of Response: Other	41
9	Sex X Type Of Response	41
10	Condition X Type Of Response: Male	42
11	Condition X Type Of Response: Female	42
12	Condition X Type Of Response	43
13	DH X IH X RTS Score: Other	43
14	Correlation Of Personality Variables With Type Of Response For Males And Females	44
15	Mean Scores, Standard Deviations, And t Values Comparing Direct Vs Indirect Intervening Ss On Each Personality Variable	46
16	Correlation Of Personality Variables With Type Of Response For Males And Females	49
17	Correlation Of Personality Variables To Type Of Response For High And Low RTS Scorers	50
18	Other Correlates Of Type Of Response	51

19	Correlation Of RTS Items With Type Of Response	52
20	Significant Correlates Of RTS Score	54
21	Correlation Of RTS Items With RTS Total Score	55

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Distribution Of Male RTS Scores	29
2	Distribution Of Female RTS Scores	30
3	Mean PRF Scores For The DH, IH, And NH Groups	48

INTRODUCTION

"'Courageous' is what somebody else thinks you are," noted a World War II Medal of Honor winner, "I wasn't brave. I was scared. I was looking for a hole to hide in and I had to kill a lot of Germans to find it." That quote from the New York Times (Streit, 1963), neatly condenses the conclusion drawn by social scientists regarding pro-social behavior, namely that it is situationally determined and situationally specific. There are no heroes, they infer, only heroic situations. The present study examined the neglected premise that the heroic tendency exists (and thus can be identified) prior to its overt manifestation in action. The assumption that learning a type of behavior may long precede any actual demonstration of that behavior in performance (Tolman, 1961), hardly makes the notion that some people have acquired "heroic" skills or traits which predate the heroic act seem novel, yet it has received scant empirical examination.

The main purpose of this study was to examine some antecedents of responsiveness to an emergency situation; that is, asking who will react and how when faced with an emergency in which another person's life seems to be endangered and to intervene directly would entail considerable risk.

Pro-Social Behavior

The entire sphere of pro-social behavior, of which heroism is only a part, was virgin territory until the famous Hartshore and May (1928-30) studies on the Nature of Character. They examined a variety of behaviors in children, (i.e., helpfulness and charitableness, among others) and, because they found little consistency in the behaviors they studied, they were forced to conclude that:

there is no such thing as a unified trait....
The notion that a child 'possesses' honesty or charity or self-control in the sense that he possesses a knife or a pocketbook is all wrong. Honesty is simply a name used to describe conduct as observed in specific situations. (p.754)

The lack of consistency across situations is hardly surprising considering that they were working with elementary school children whose personalities were still in formative stages. More recent research has indicated that age is clearly related to pro-social behaviors (Staub & Feagans, 1969; Ugurel-Semin, 1952).

The area of helping behavior became one of intense interest following the 1963 Kitty Genovese murder in New York City. This terrible event, wherein a young woman was repeatedly stabbed over a period of 35 minutes while 38 bystanders watched, but did not intervene or notify the police, served to focus attention on a serious indictment of our society. The public outcry that followed also drew the interest of social scientists who, dissatisfied and unconvinced by the media's simplistic explanations ("apathy," "non-

involvement"), began to empirically explore the area.

Under the generic term "Pro-Social Behavior," a broad spectrum of behavior has been encompassed, ranging from children sharing marbles (Grusec & Skubiski, 1971) to German rescuers of Jews during World War II (London, 1970). Although studies have attempted to define and operationalize the term in a variety of ways (Krebs, 1970; Midlarsky 1968), what they all seem to include is an individual who attempts to voluntarily aid another without expectation of reward. This covers an immense range of behaviors and does nothing to distinguish an Audie Murphy from a Martin Luther King, a person who donates \$10 to the United Fund from a kidney donor, or a VISTA volunteer from a man running into a burning building to save a stranger. There seems to be a need for finer discrimination and meaningful categorization of pro-social behavior that would allow for more specific examination and analysis.

Heroism, Altruism and Helping

Although it has a long history in legend and myth, heroism has enjoyed little popularity in the laboratory. Either because it has failed to generate interest among the scientific community or because the problems attendant to its study have seemed insurmountable, the realm of heroism has been clearly neglected. The few publications available in the area have been either merely descriptive of the heroic deeds for which individuals were cited (Carnegie Hero Fund Commission 1924-1972; "Medal of Honor, 1863-1968")

or historical-biographical accounts of adventurous people (Baldwin, 1939; Fishwick, 1954; Hook, 1955). One might suppose that an in-depth scientific exploration and cultivation of heroic behavior would be a project of some priority in the United States Armed Forces, yet a search of indices to government publications and research projects failed to provide a single reference. If the Army has found a way of predicting who will behave heroically, they are keeping the information to themselves. Of some interest was a government technical report using Korean War Aces which found a positive correlation between adventurousness displayed as a child and young adult, and risk taking in combat (Torrence & Ziller, 1957).

Prior to further discussion, heroism had best be defined and established as a separate subcategory within the pro-social framework. Midlarsky (1968) is helpful in this regard in that she identifies at least two types of aiding: one type, a "sharing of the wealth," meaning time, money or the other favors, and another type, which might be termed a "sharing of risk or pain." In the latter instance, the giving of help entails a degree of risk or pain in order to "ease or prevent the suffering of another." Midlarsky notes that "few studies have dealt with those manifestations of aiding behavior that requires [sic] risk to the individual... it is quite conceivable that the mechanisms involved in eliciting them differ significantly from those which are related to a 'sharing of the wealth' (p. 252.) In reviewing

the exploits of individuals cited for heroism (and in interviewing a few of them) and in eliciting approximately 500 written pro-social situations of varying degrees of risk from college students, this writer would suggest that the hero is an individual who aids another (1) spontaneously, (2) in a high risk situation, (3) of brief duration. These factors would tend to separate heroism from its pro-social cousin "altruism" where the behaviors generally involve pre-planning, a lesser degree of risk and a longer time commitment. Thus, one might categorize donating a kidney, actively working for civil rights, adopting a child of a different race, and other behaviors of this type as altruistic rather than heroic. It is suggested that there is a third reasonably distinct type of pro-social action that can be called "helping" behavior that involves little or no risk and the amount of planning and time commitment is variable (i.e., giving a dime to a panhandler, helping a friend study for an exam, collecting for the Heart Fund). The present study will focus on the relation between the degree of risk a subject believes he would take to aid another in hypothetical pro-social situations and how he actually behaves when confronted with an emergency situation in which direct intervention to help would appear to entail considerable risk. The behavioral options available to the S in this circumstance include (1) direct high risk intervention (Heroism), (2) providing indirect forms of aid (Helping), or (3) no attempt to help the "victim" (Non-Helping). It should be

noted that the altruistic response, as defined earlier, is not a viable option in this situation. It is hypothesized that individuals who are categorized as high or low risk-takers on an experimental pro-social Risk Taking Scale will exhibit similar behaviors in an actual emergency; that is, high scorers will be likely to engage in direct heroic behavior and, to a lesser extent, indirect helping behavior, whereas low scorers are expected to exhibit minimal aiding responses.

Diffusion of Responsibility

An individual who witnesses an emergency does so either alone or in the presence of one or more others. A series of studies has indicated that the presence of other bystanders has a considerable effect on whether or not an individual will intervene to help (Latané & Darley, 1968; Latané & Rodin, 1969; Latané & Darley, 1970). An inverse relationship was found between the number of bystanders and the likelihood of intervention, suggesting that the presence of others led to a "diffusion of responsibility" thereby reducing for each bystander the compellingness to aid the victim. These initial laboratory studies involved staged non-risk emergencies occurring in an adjoining room or nearby location and measuring the incidence of helping. Other studies entailing staged emergencies on subways (Piliaven 1969; Schwartz & Clausen, 1970) did not confirm this diffusion of responsibility except when the "costs" of intervention were high, as in the case where the victim apparently bled from

the mouth (Piliaven, 1972). It has been suggested that the difference in the findings on this issue may be attributable to the "victim" being in plain sight in the latter studies and also, the Ss were able to exchange non-verbal cues in reaching the determination that they should intervene (Darley, et al, 1973). Being able to observe another bystander's reaction appears to facilitate mutual helping whereas being cut off from the response of others tends to enhance a diffusion of responsibility. It is not clear from these studies, where the victim is present and more bystander's cues are available, whether the higher frequency of intervention noted is mediated by having increased the salience of the "norm of helping" another in distress and the feelings of shame that would accompany inaction.

Although these situational factors (being alone vs presence of others, exchanging looks, non-verbal cues, etc.) appear to be quite significant, they do more to "explain" why most people are not likely to intervene to aid another, rather than why some do. Even in situations which are strongly designed to produce a diffusion of responsibility, there are inevitably a sizable number of bystanders who attempt to intervene. It would appear that some people are more affected by the presence of bystanders than others. Why some individuals should be more reactive to a diffusion of responsibility while others are relatively insensitive to it has not been explored in any depth. Latané and Darley (1970) found that a few demographic variables (i.e.,

occupation of father, size of home town) correlated significantly with helping in emergencies but did not account for very much of the variance in the behavior.

We attempted to replicate the diffusion of responsibility situation by having subjects, who were working either alone or under the impression that another subject was nearby, directly overhear an emergency occurring in the adjoining room. Thus, we were able to examine interaction of a diffusion of responsibility on subjects who had shown different levels of risk-taking tendencies on a risk-taking scale and how they behaved in an actual emergency situation.

In that an S with a higher baseline for risk-taking behavior may be more attuned to cues of potential accidents or emergencies and less deterred by the attendant risks, it was predicted that Ss who scored higher on the RTS would be less influenced by the presence of another S than Ss who scored lower, and would be more likely to actively intervene. However, if "crowd pleasing" is a motivating element in "heroic" intervention, then it might be supposed that the presence of another person would facilitate, rather than diminish, the level of intervention of the high risk taker. The present experimental design is likely to minimize or negate the "crowd pleasing" effect by having the supposed "other" in another room and thus not visible to the subject. Subjects with a lower baseline on the RTS were expected to be more affected by a diffusion of responsibility in that the presence of another S should provide additional justification

for their initial reluctance to avoid risk-taking behavior. In general, the "alone" condition was expected to produce more intervention for both high and low scorers on the risk-taking scale than the "presence of other" condition. Although the presence of only one other bystander was not expected to have as great an impact as two or more might have, the Darley and Latané (1970) studies found that even one other bystander substantially reduced helping behavior.

Sex Variable

It appears to be our cultural expectation that heroic exploits are a function of maleness. This is probably due, in large measure, to our linking of heroic behaviors to wars (fought by men) or jobs that have been almost exclusively available to males (i.e., firemen, policemen, rescue squads). It is of some interest to note that feats of incredible strength, stamina and risk, when attributed to women, are almost inevitably linked to the "maternal instinct", thereby rendering it as behavior less rational and less worthy. Heroic men are acting responsively to the demands of the external situation, whereas heroic women are compelled by eternal and instinctive forces that are somehow beyond their control. Female heroism, on the larger scale (i.e., Joan of Arc), when it cannot be readily linked to maternal instincts, still tends to be viewed as driven (and possibly insane) behavior. The history of nations has not been overly attentive to female heroism, and our culture specifically has tended to direct females into mildly altruistic and quietly self-

sacrificing professions, such as nursing and housewifery (both "natural" extensions of their "maternalism") and away from that which is exciting and dangerous. The effect of all this on a woman's readiness to respond to high risk situations is difficult to assess. Some women, certainly, have learned quite well the role of the "helpless female," whereas the self-concepts of others include a much broader range of expectations.

The question of whether males and females differ in their response to high risk situations has been so dominated by the "common sense" notion that only men slay dragons, that empirical research in the area has been practically nonexistent. Latané & Darley (1970) suggested that women might be more prone to indirect helping, what they call "detour interventions"; that is, reporting an emergency to the relevant authority, rather than attempting to cope with it directly. They examined this reportorial response and found no difference due to sex in the reporting of a "seizure" that the subject overhears. Another interesting finding was that the female subjects' response was not diminished, even when they were led to believe that the other bystander to the seizure was a male pre-med student. Darley & Latané noted in other studies that even when the costs of intervention were higher, no sex differences were manifest. For example, females were no less likely than males to correct a (sometimes vicious) misinformer in a subway experiment (Allen 1968) and no less likely than males to report a beer

robbery in another experiment, (Darley & Latané, 1969).

Most studies on adults have failed to find sex differences in altruism (Berkowitz, Klanderman & Harris, 1964; Blake, Rosenbaum & Duryea, 1955; Bryan & Test, 1967). However, it should be noted that the dependent measures in these studies did not entail any risk to the "altruist". Krebs (1970) notes there are some studies which support the notion of sex differences in pro-social behavior but here, too, the dependent measures entail relatively little cost and no risk (i.e., donating to the March of Dimes, amount of work produced for a dependent other, etc.). One study was found which indicated that more males than females volunteered for an "unpleasant experience" in order to help the experimenter, the experience being volunteering to spend 30 minutes in a chamber at 125 degrees Fahrenheit (Schopler & Bateson, 1965). However, that study's relevance to the present investigation is questionable in that the dependent variable of the former is tolerance for discomfort rather than risk and, in addition, no compelling reason was offered to the subjects to undergo the experience, other than helping the experimenter with his research.

Based on the paucity of prior research and the conclusions drawn from those few that are tangentially relevant, it appeared that the expectation of no sex difference in helping would be reasonable. Although no substantial difference in amount of helping was expected as a function of sex, it seemed likely that female subjects would be more

prone to indirect than direct intervention when more risks were involved. Therefore, it was predicted that females, as a group would exhibit more indirect helping than males, who, as a group were expected to exhibit more direct aiding responses.

Simulated Emergency

A review of the literature indicated that studies involving emergencies were primarily directed to (1) uncovering the situational antecedents of low or no risk pro-social behaviors (see Krebs, 1970; Midlarsky, 1968 for review of research), (2) determining how an individual would react when he found his own life endangered (Berkum, et al 1962; Pepitone, et al, 1955) or (3) determining, through case histories, how individuals react when a disaster strikes (Markowitz, 1973; Withey, 1962). A few studies have examined the behavior of individuals when confronted with an emergency situation in which a stranger's life was in some jeopardy (Bickman, 1971; Ross, 1971; Yakomovitch, 1971; Darley, Teger & Lewis, 1973) but none included the element of risk accruing to direct intervention.

Was it really necessary to simulate an accident emergency? Couldn't the researcher find out how people would respond in an emergency by simply asking them? Unfortunately, prior research had indicated that there was often a low or negative correlation between how people said they would react and how they actually did (La Piere, 1934; Kutner, Wilkins & Yarrow, 1952; Milgram, 1963). In spite of these

discouraging results, this study attempted to devise a predictive instrument and then examined its validity through use of a simulated accident-emergency that was designed to lead the subject to believe that (1) he was witnessing an actual emergency occurring in an adjoining room, and (2) that to aid the "victim" by going into that room, from which sounds of electrical discharges were emanating and marked with a sign warning "Danger - High Voltage," would be very risky. In actuality, the "accident," "victim," and live electrical discharge were tape recorded sounds. Any apparatus that conceivably could have been used by a subject and that could have inadvertently caused injury was removed from the laboratory area. All Ss were debriefed and special attention given to those Ss who exhibited non-helping behavior in order to remove any anxiety or embarrassment regarding their performance by explaining how the study was designed to maximize the danger and to minimize risk-taking behavior. The use of these procedures (noted in detail in the Methods Section) would appear to be consistent with two primary ethical considerations:

- (1) That subjects not be placed in dangerous situations and
- (2) that they leave the experiment feeling better about themselves and psychological research, but certainly no worse, than when they entered.

What was actually measured as the dependent variable was how the subject responded to the emergency situation. Responses were categorized into three possible types:

direct intervention, indirect intervention, and non-helping behavior. Direct intervention referred to instances where the subject opened the door to the room where the emergency was occurring and looked in and/or entered the room. Indirect intervention referred to behaviors that attempted to provide help but were indirect and entailed no risk, such as calling out to the "victim", leaving the room to find the experimenter (E), etc. Non-helping behavior referred to instances where the S made no attempt to intervene, either directly or indirectly, during the trial interval. This was the case if the S sat through the trial without any attempt to communicate with the "victim" or left the room but did not seek to inform the E or find a phone, etc. There being no prior work on situations of this kind, it was not possible to reliably predict how the Ss responses would be distributed over these three types of intervention. Since instances of actual heroism are relatively infrequent, it was perhaps reasonable to expect that the smallest proportion of Ss would choose to intervene directly.

Predictions

The following predictions were suggested:

- (1) High scorers on the RTS would exhibit more direct helping behavior (DH);
- (2) Low scorers on the RTS would exhibit more indirect (IH) or non helping behavior;
- (3) Subjects in the "alone" condition would exhibit more helping responses (DH or IH) than Ss in the "presence of

other" condition when matched on RTS score (i.e., High RTS alone > High RTS other);

- (4) High scorers on the RTS would be less affected by the "presence of other" condition than low scorers on the RTS, that is, the higher the score on the RTS, the less affected the S was expected to be by a diffusion of responsibility;
- (5) No sex difference was expected in total amount of helping (Male DH & IH = Female DH & IH) but males were expected to exhibit more direct helping than females (Male DH > Female DH).

Personality Measures

Can the "right" set of circumstances create a hero out of every individual, regardless of the type of person? Is heroism a function of mood and circumstance or is it a potential quality or trait a person brings to and interacts with his environment? Social psychology has tended to view pro-social behavior as being almost entirely situationally determined. Many different situational variables (i.e., positive and negative states of the benefactor, number of bystanders, appearance, sex and behavior of the victim, etc.) have been examined and appear to account for much of the variance in the dependent measures. However, without minimizing the importance of these situational variables, they have been studied to the relative neglect of personality factors. Research on personality variables in altruism and helping behavior has tended to suffer from superficiality,

for example, equating altruism with cooperation on a task analogous to that of the Prisoners Dilemma Game (Sawyer, 1966), questionable validity (i.e., making altruism almost synonymous with popularity or sociability - see Fredricks, 1960) and behavioral measures that entail little or no risk and/or minimal time commitment (Kogan & Wallach, 1964; Lenrow, 1965; Rim, 1964).

One of the purposes of the present study was to explore whether relationships existed between selected personality variables and the type of help provided in an emergency. The particular areas chosen for inclusion in the study grew out of the author's on-going interviewing of "heroes" (Silverman & Chadsey, in prep.) and were rather intuitive and exploratory.

Impulsivity appeared to be an important variable to examine. Post facto analyses of heroic acts indicate that if an individual reacts, the response tends to be rather immediate and with relatively little forethought. Interviewees noted that they thought about what they were doing after they had begun to act or while they were in the act of helping, rather than prior to intervention. Kogan and Wallach (1964) included a measure of impulsivity in their study of risk-takers (on betting and games of chance) and found that it had an impact on risk-taking only in a context of low motivational disturbance, that is, when their male subjects were low in both test anxiety and defensiveness. The present study examined impulsivity as well as other

traits of interest (i.e., harm avoidance and exhibitionism) that were included in the Personality Research Form. Two additional personality tests, Locus of Control, and Security-Insecurity, were selected for administration in that they appeared related to some of the impressions that emerged from the verbal reports of the heroes who were interviewed. Prior research on the Internal-External Locus of Control scale indicated that internal controllers (those who tend to view themselves as determiners of their own fate) are more likely to become involved in social action movements (Gore & Rotter, 1963; Strickland, 1965) and make constructive reactions to both frustration and anxiety (Butterfield, 1964). These findings suggested that internality was more likely to be associated with behavior previously defined as altruistic rather than heroic. It was suspected that high risk intervention may correlate better with external control. This notion was weakly supported by the Liverant and Scodel (1960) study which found that high and extreme risk taking on a betting game was associated with externality. Considering the paucity of prior work, there was no basis for making a strong predictive commitment on either this factor or on the dimension of Security-Insecurity. The desire to explore the latter in regard to heroism grew out of the question as to whether heroic behavior was facilitated by feelings of security, well-being, and self-acceptance or whether it was more a function of over-compensation for feelings of insecurity, rejection and a need for glory and recognition.

The use of Maslow's Security-Insecurity Inventory to tap motivation based on Adlerian concepts (1927) was suggested by Ansbacher (personal communication). It was cautiously suggested that feelings of insecurity may be associated with both high risk taking and non-helping behavior.

As regards the personality variables under investigation, it was hypothesized that the level of risk-taking behavior would be (1) positively related to impulsivity, exhibitionism, and externality, (2) negatively related to harm avoidance, and (3) curvilinear with security-insecurity.

METHOD

Development of the Risk Taking Scale

Source of Items

Items for the scale were drawn from a number of sources. Approximately 100 undergraduate students, 70 from an Introductory Psychology class and 30 from an upper division zoology class, were asked to provide about 5 risk-taking situations each. They were asked to list different pro-social helping situations, ranging in the degree of risk-sacrifice that helping would entail (see Appendix A for directions).

Another source of risk-taking situations was newspaper accounts of heroic deeds. The Carnegie Hero Fund Commission Annual Report also was a valuable source of risk taking exploits. Lastly a few items were a product of the author's imagination. From the four sources, a scale of 21 items was generated. Each item was a brief situational statement (i.e., "a young child is in the path of an approaching car") followed by 4 or 5 behavioral options, ranging from a low or no risk choice (i.e., "watch helplessly") to a relatively active, high risk choice (i.e., "attempt to push the child out of the way").

Ranking of Options

This original 21 item scale was first examined by 16 male graduate students (10 from psychology, 6 from zoology), each of whom was asked to rank the 4-5 options provided for each situation on the degree of risk-sacrifice that helping would entail (Appendix B for directions). Thus, each rater rank-ordered the options for each item from highest degree of risk-sacrifice to the lowest degree. Following this procedure, the options for each item were examined for degree of concordance by a Kendall W. Eighteen of the 21 items had a concordance level of .80 or better. This meant that the 16 raters were strongly in agreement as to how the options should be ordered on the risk-sacrifice dimension. The three items that did not meet the .80 criterion were later dropped from the final scale.

Each option for each of the 18 items was assigned a weight, depending on how it was ranked. If an item had, say, four options, the option ranked highest on the risk-sacrifice dimension was assigned the weight of 4, the next highest 3, the next highest 2, and the lowest, 1. Some items had 2 options that were almost tied in ranking. In these instances both options were assigned the same weight. This system provided a possible range of scores from 18 (if a subject selected the lowest risk option for each of the 18 items) to 72 (if a subject selected the highest risk option for each item).

Scale Pre-testing

The original scale was given to three small undergraduate classes, which provided usable data from 20 male subjects. Each student filled out the scale twice, once with a cover sheet directing him to answer in terms of how "most people" would respond to those situations and a second time with a cover sheet directing him to indicate how he would respond if faced with the depicted situation (see Appendix C for cover sheets). The order of presentation of these 2 forms was counterbalanced to determine if the elicitation of the normative response first would affect how the subject would rate his own anticipated reactions. An examination of the data indicated that there was no appreciable difference in the self-ratings resulting from first providing the normative response. Rather than the normative rating serving to anchor the self rating as was supposed, the subjects consistently (although not significantly) expected "most people" to exhibit less risk or sacrifice for another than they themselves would. When the Ss were asked to provide the normative response first, their self-ratings which followed tended to be higher, as if they were attempting to compensate personally for the presumed callousness or lack of helpfulness exhibited by "most people". This is supported by other studies which found that Ss tend to rate others as responding more cautiously to risk situations than themselves (Hinds, 1962; Brown, 1965).

The self rating data from these 20 subjects were then

examined for the 18 item scale. Individual scores ranged from 42 to 58 with a mean of 50.75 and a standard deviation (N-1) of 4.48. This mean value appears reasonably close to 45 which is the numeric midpoint of the possible range. An examination of item variability indicated that about three items did not elicit wide usage of options. Dropping these three items from the analysis resulted in a slight decrease in range of scores (31-46) and standard deviation (3.9). It was felt that these items should be retained in that their contribution to score variability, although slight, was helpful. For the 18 item scale, odd-even reliability when corrected for length by the Spearman Brown Prophecy Formula equalled .69.

After the male form of the RTS had been developed, the original 21 item scale (see Appendix D) was examined by 10 female graduate students (6 from psychology, 4 from zoology) and each of the options for each item was ranked on the risk-sacrifice dimension from highest to lowest. An analysis of their rankings using Kendall W's led to the dropping of six items that did not meet the criterion of a .80 concordance level. Three of these six items were the same that had been dropped from the male versions of the scale. Thus, the female form of the RTS was identical to that of the males, except that only 15 of the 18 items were used in scoring the female protocols (see Appendix E). For comparisons in the Results section that involved RTS score, scale size was equalized for males and females by dropping the three items

from the male scoring key that had been dropped for females (those three items, incidently, had the lowest correlation with the total RTS score). When RTS categories were compared (i.e., high vs low scorers), the three items were retained because they did not affect the categorization.

Subjects

Eighty three male and 85 female undergraduate students from the University of Rhode Island were utilized as subjects for the study. All subjects received extra credit for participation. The age group was primarily 18-22 year olds with a mean age of 19.2. Ss were white and predominantly Catholic, of Italian and Irish background. This sample is thought to be of above average intelligence. Although intelligence has not been found to be related to pro-social behavior in prior studies, the age factor is likely to limit generalization of the results in that age can be expected to correlate with impulsivity.

The subjects were drawn from five psychology classes, one fairly large section of Introductory, composed almost entirely of freshmen, three sophomore level classes and one upper division class. The call for volunteers was made prior to their first exams in the hope that involving students very early in the semester might minimize or avoid weighting the study with students who volunteered because they needed extra credit.

Measures

All Ss took the pro-social Risk Taking Scale constructed

specifically for this study. Also devised was a General Background Sheet that provided data on the subject's age, class standing, marital status, community size, birth order, religion, religiosity, height, weight, political orientation, military experience (males only), attitude toward equal rights for women (females only) and occupation of mother and father (see Appendix F for example).

All Ss took, in addition, the three objective personality measures mentioned earlier: Form A of the Personality Research Form (PRF), the Internal-External Locus of Control (I-E), and the Security-Insecurity Inventory (S-I). The PRF is a self report personality inventory yielding 14 trait scores derived from modifications of Murray's conception of personality. The traits examined were: achievement, affiliation, aggression, autonomy, dominance, endurance, exhibition, harmavoidance, impulsivity, nurturance, order, play, social recognition and understanding. A validity scale, infrequency, is also included (see Appendix G for description of each trait). Both convergent and discriminant validity have been carefully established (Buros, 1972) by methods clearly specified in the PRF Manual (Jackson, 1967). A median Kuder-Richardson Formula 20 coefficient of .78 was found for parallel forms A & B. Odd-even median reliability is .81. Care was taken during construction to minimize the effects of response bias (i.e., acquiescence and social desirability). The inventory is self-administered in 30-40 minutes.

The S-I Inventory (Maslow, 1952) was constructed by item selection based on responses of subjects known to be either secure or insecure, according to clinical criteria. It is a self-administering questionnaire with reliabilities (repeat, split-half and correlation of each third with the total) in the .80's. It correlates .68 with the Thurstone Neurotic Inventory and .58 with the Burnreuter. Considerable care was exercised in attempting to insure item validity (Buros, 1959).

The I-E scale developed by Rotter (1966) is concerned with the perception of internal vs external control of reinforcement. It is a forced choice, 29 item scale. Internal consistency analysis (K-R 20) yielded a correlation of .70 for males and a test-retest (after one month) correlation of .60 (Robinson & Shaver, 1970). Factor analyses support the assumption of unidimensionality of the scale and there is supportive evidence for its construct validity (Lefcourt, 1966; Hersch & Scheibe, 1967). The scale is self-administered and takes about 15 minutes to complete.

The dependent measure, type of response to the simulated emergency, has already been described. If a subject exhibited two types of response (i.e., indirect at first and then direct), the subject was scored on the higher category of intervention (in this instance, direct).

Apparatus

A tape recorder was equipped with a pre-recorded tape of approximately 7 minutes of banging and tapping noises,

followed by a man's voice calling out, "Oh, my leg!", and 90 seconds of calls for help, complaints about his leg, muttering and cursing (see Appendix H for transcript of victim's utterances). This recorder was turned on by a 60 second time lag relay which permitted the E to be at some distance from the unit when the tapping noises began.

A 25 pound log, dropped from a height of 2 feet onto some wooden plaques, provided the "crash" and vibrations which immediately preceded the man's voice.

A 110 volt "sparker" produced electrical sounds which were amplified by a radio placed in front of it and tuned to static. The sparker was wired to an alternating relay which, by automatically cutting the power on and off at very brief but variable intervals, produced the sounds of an erratically discharging electrical unit. A commercially available sign measuring 10"x7" and stating, "Danger-High Voltage", was attached to the door.

A set of 40 hand made "ESP" cards were devised. These were 3x5 index cards, each of which had a circle, cross, or star on it. Each card was backed by (and attached to) two blank cards to prevent the figure from showing through. The subjects wrote down their "ESP" responses on a mimeographed sheet.

Setting

Three rooms of the Behavioral Studies Center were used. The door to the center room was set off by the High Voltage sign. The subject was always shown into the room to the

to the left of the "emergency" room. Under the "other" person present condition, the S was informed when she/he entered the suite that the room to the right of the emergency room was occupied by "another guy/gal working on the ESP experiment." The room the subject was shown into had a long table with a number of chairs and was described as a conference room. The S was seated with his/her back to the one-way mirror in order to minimize suspicion.

Procedure

The call for volunteers was a verbal statement presented by the E to each of the five classes. It was brief and indicated that the E was conducting a two-phase study on ESP and that their instructor had agreed to give extra credit for students who participated. They were told that the first phase would be a group testing session lasting approximately two hours which would begin the following week. The second session would come later in the semester and would involve being individually tested in an ESP task for approximately 45 minutes. Sign-up sheets were distributed with a tear-off section indicating the time and location of the first group testing sessions.

Four nights of each of the next two weeks were used for group testing. Each subject was presented with a test kit composed of (in order): (1) general background items, (2) the I-E Scale, (3) the RTS Study, (4) the S-I Inventory and (5) the PRF. Subjects were told that the E was looking for personality correlates of ESP and that these tests were being

utilized for that purpose. They were also informed that the specific testing of their ESP skills would come later in the laboratory portion of the study. Directions for each test in the battery were provided both verbally and on the test itself. There were very few questions asked and no evidence of confusion. Most students finished the battery within 90 minutes.

It was anticipated that giving the RTS early in the study and embedding it in a battery of four other measures would minimize any sensitizing effect it might have on later reactions to the emergency. In any case, all Ss took the same pencil and paper instruments and so any effect the scale was likely to have was shared by all Ss.

The RTS was scored for each S, divided into male and female protocols, and then ranked from lowest to highest. Figures 1 & 2 show the distribution of RTS scores for males and females. The mean for males (based on 18 items) was 50.77 with a SD of 5.77; for females (based on 15 items) the mean was 40.81 with a SD of 5.27.

Approximately one month later, the second phase began. Each week an average of 16 Ss were called (8 males and 8 females), drawn equally from the top and bottom of the RTS distribution. This continued for seven weeks as E worked toward the middle of the RTS distribution. Table 1 indicates how the subject pool was utilized.

N=83
M=50.77
SD=5.465

FIGURE 1. DISTRIBUTION OF MALE RTS SCORES.

N=85
M=40.81
SD=5.270

FIGURE 2. DISTRIBUTION OF FEMALE RTS SCORES

TABLE 1

Utilization of Subject Pool

	<u>Male</u>	<u>Female</u>
Total N in 1st Phase	83	85
Less		
N Used in Pre-test of 2nd phase	5	6
N Who had to be dropped after 2nd phase	13	9
N Middle Range RTS Scorers not used in 2nd phase	26	26
	—	—
Total N of Ss Who Provided Usable Data From Both Phases	39	44

Subjects used in 2nd phase were systematically assigned to the "alone" or "other" condition in order to counterbalance the scores in each group. This assignment into groups based on RTS scores was done by an assistant in order to prevent the E from knowing how any particular S scored. This was an attempt to minimize any biasing effect on behavioral response that prior awareness of score might produce.

The second phase was conducted on weekday evenings between the hours of 7-10. This time was chosen because there was usually no one else present in the halls outside the experimental rooms at those hours.

Subjects met the experimenter and his assistant in an office on the fourth floor of the Social Sciences Building.

The S was seated and while looking over the directions for the ESP task, the E went down the hall and turned on the 60 second timer on the tape recorder. The E then returned to the office and while going over the directions with the S, the tapping and clinking noises commenced. The S was then walked to the suite of rooms at the end of the hall. Upon opening the hallway door to the suite, the S was immediately confronted by a "High Voltage" sign on the door in front of him and construction type noises emanating from within. In the "alone" condition, the S was immediately shown into an adjoining room to the left of the High Voltage room. In the "other" condition, the S was asked to pause in the suite entrance while the E opened the door to the room on the right, looked in, said "Whoops, sorry," immediately closed the door and then told the S, "I forgot. There's another guy (or gal) from the class working on the ESP task in there." The sex of the "other" was always given as the same sex as that of the subject because it was felt that if the S believed that a person of the opposite sex was also a bystander, the different cultural expectations for males and females would introduce an unwanted variable. The S was then shown into and seated in the room on the left. While the directions were being briefly reiterated, the E nodded in the direction of the High Voltage room, and, as if to apologize for the noises coming from that room, stated, "There's some guy working in there." Questions regarding the task were answered and, as the E left the room he

informed the subject, "I will be down the hall in my office." The E then left the room, closing the door behind him, went into the suite hallway, pretended to leave the suite by opening and closing the suite's door to the outside hall, but, in actuality, quietly slipped into the High Voltage room. After approximately four more minutes of tapping noises, the log was dropped, the tape recorded "victim" sounds began and the High Voltage sounds were turned on. Timing of the Subject's response began with the onset of the tape recorded shout of, "Oh, my leg," and continued until 1) the subject opened the door to the "accident" room which involved handling a bright metallic doorknob, or 2) the subject left the suite to inform the E down the hall, or 3) until 90 seconds had elapsed. Debriefing began immediately after this time interval.

Pre-Test Of Experimental Emergency Situation

Eleven subjects (6 females and 5 males) who had scored in the middle range on the RTS were randomly selected to pre-test the second phase procedures. The responses and interviews with the eleven subjects provided some information that led to slight modifications of the experimental procedure. The distribution of their reactions to the emergency were: 5 DH, 4 IH, and 2 NH. Based on post-experimental interviews with these respondents, it was felt that the "presence of other" condition would be enhanced by having a coat lying on the table near the room where the "other" was supposed to be working, to make it seem more likely that

there was another person present. Their comments indicated also that the volume of the electrical sounds should be increased. One additional change that grew out of the pre-test work was a shift in the seating of the S so that the S had his/her back to the 2 way mirror - if the S was facing away from the mirror there was less suspicion regarding it.

Debriefing

The debriefing procedure had three parts and lasted approximately 30 minutes: (1) a written debriefing sheet (see Appendix I) which outlined the actual purpose of the study; (2) a post-experimental interview designed to, a) elicit awareness of deception and/or lack of belief in the actuality of the emergency, c) reiterate the purpose of the study, d) encourage questioning of any and all aspects of the study, e) provide reassurance that a range of responses was possible and that no one of them was the correct reaction, f) discuss in depth the necessity of the S not disclosing critical aspects of the study, g) explore ways of coping with the inevitable inquiries of friends, roommates, fraternity brothers, etc., which would neither compromise the integrity of the respondent nor the intent of the study, h) emphasize the scientific importance of the study, and i) convey appreciation to the S for his participation; and (3) a Post-Experimental Questionnaire (see Appendix J) which was intended to tap further the Ss reactions to the emergency and their attitude toward the experiment as a whole.

RESULTS

Observations of Behavioral Response

Almost all subjects were startled by the loud crash and vibration caused by the log being dropped in the adjoining room. Ss noted, "I hit the ceiling," "scared me to death," "I jumped a mile." Following the uniformity of the initial startle response, there was considerable variability in behavior. Some subjects got up immediately and came to the door of the emergency room and listened to the sounds coming from the room, others continued sitting where they were but appeared to be listening very intently to the emergency sounds. A small number of the 33 subjects attempted to continue working on the ESP task after the emergency had begun. Two of the five non-respondants attempted to continue working throughout the 90 second emergency interval. The other Ss exhibited a variety of other behaviors but what appeared to be common to almost all of them was 1) the startle response, 2) listening - pause (time variable from 3 sec. - 5 sec.), 3) getting up to either (a) take some decisive action such as going into the Emergency Room or going down the hall to find the experimenter, or (b) gain more information about the event by going close to the outside of the Emergency Room and attempting to listen more intently to the sounds. Not infrequently the S would go back and forth between the

ESP room and the corridor outside the Emergency Room, listening carefully, looking in the direction of the room, as if attempting to reach a decision as to what to do. The time required for the decision-making process was, as noted, quite variable but once the decision was made, intervention (either direct or indirect) followed immediately.

Subject's Perception of Emergency Situation

Post-experimental interviews with the 83 Ss whose data could be utilized, indicated that their initial impression had been that something very heavy had fallen over on the leg of a workman in the adjoining room, that he was injured and was calling for help. Almost all of the Ss indicated that they had seen the "Danger-High Voltage" sign when first being led into the ESP room and then again when they went to investigate the accident. Regarding the sounds of electrical discharge, while almost all of the Ss acknowledged hearing other sounds in addition to the man's voice, there was a fair amount of difference in their description and interpretation of the sounds. Some described it as "hissing," "buzzing," "sparking," or "something, but I was not sure what," "static." The sounds were believed to be related to the accident but they were apparently more ambiguous than the E had expected.

There was substantial reason to believe that work of the experiment did not leak out and that the post-experimental interview was successful in convincing the S of the necessity of not discussing the emergency aspects of the

study with other subjects who had not already participated. The startle reaction, the look of anxiety and concern on the faces of the subjects and their bemused remarks during the debriefing (i.e., "that roommate of mine gave me some cock and bull story about ESP cards" or "I asked my sorority sister what it was all about and she told me I was going to have to concentrate on a set of cards.") all strongly indicate that the Ss came into the 2nd phase without prior awareness of the emergency and that the subjects had cooperated fully in not disclosing the critical variables under examination.

Test of Main Variables X Type of Response

There was usable data from 83 subjects who completed both phases of the study. The frequency data are examined in a four-way contingency table design. Table 2 shows the distribution of subjects into response categories.

TABLE 2

The Distribution of Subjects into Response Category
by RTS Score, Sex & Condition

	HI RTS				LO RTS				
	Male		Female		Male		Female		
	Alone	Other	A	O	A	O	A	O	
Direct Helping	9	12	6	9	6	2	2	3	49
Indirect Helping	1	0	5	2	4	4	8	5	29
Non Helping	0	0	1	0	0	0	1	2	5

A multiple L_B was calculated in order to determine if any relationship existed between type of behavioral response and the main variables. A multiple L_B of .2941 was obtained which, the reader should note, is analogous to a multiple R squared. In this instance, it would be analogous to a correlation of .54. When a multiple L_B is calculated with the NH category dropped due to minimal usage, a relationship of .344 is obtained, which is comparable to a R of .58. A partitioned chi-square of Table 2 with the NH category dropped due to its small frequency of 5, yields a significant total of X^2 of 20.26 ($df=7$; $p < .01$). Each X^2 in the table was calculated with Yates Correction for small expected frequencies (Maxwell, 1961).

TABLE 3

Partitioned Chi Square of Table 2

Component of X^2 Due to:	X^2	Degrees of Freedom
Hi RTS Males - A x O	.55	1
Hi RTS Females - A x O	.83	1
Lo RTS Males - A x O	.26	1
Lo RTS Females - A x O	.08	1
Hi RTS - M x F	3.81*	1
Lo RTS - M x F	.95	1
Hi RTS x Lo RTS	13.73**	1
Total X^2	20.26**	7

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

After having established a significant overall relationship among the main variables and the criterion, it was necessary to determine which of the main variables were responsible for this relationship.

RTS Score X Type of Response

The partitioned chi square table indicates that RTS score is the largest contributor to the total χ^2 difference. Table 4 shows the cell distribution of high and low RTS scorers x type of response.

TABLE 4
RTS Score X Type of Response

	DH	IH	NH
Hi RTS	36	8	1
Lo RTS	13	21	4

Leslies Direct Solution χ^2 (Wert, Neidt, & Ahmann, 1954) for Table 4 yields a χ^2 of 17.919. With 2 df, this is significant beyond the .01 level. It is clear that RTS score is most substantially related to type of response as was predicted. Zero-order lambdas of the three main variables (RTS, sex, cond. x type R) also indicates that RTS is the major source of relationship ($L_B = .2058$). It is interesting to note that $L_B .2058$, analogous to a Pearson r of .4536, is strikingly close to the correlation of .4498 which is derived when the 83 RTS scores are correlated against type of response

(by treating type of response as a trichotomization of an underlying continuous variable and using 15 RTS items for both males and females). When high and low RTS scorers are subdivided by sex, and their behavioral responses charted, the following tables are obtained.

TABLE 5

Male

	Hi RTS	Lo RTS
DH	21	8
IH	1	8
NH	0	1

TABLE 6

Female

	Hi RTS	Lo RTS
DH	15	5
IH	7	13
NH	1	3

Leslie Direct Solution X^2 yields a X^2 of 11.826 for Table 5 (significant at the .01 level) and a X^2 of 7.625 for Table 6 (significant at the .05 level) each with 2 df. Inspection of Tables 5 and 6 indicates that although almost all High RTS males will exhibit DH, Low RTS males are split between DH and IH. For females, RTS score appears to be a better predictor: High RTS females tended to DH and Low RTS females tended to IH.

When high and low RTS scorers are subdivided by condition, the frequency of their behavioral responses is shown in tables 7 and 8.

TABLE 7

Alone

	Hi RTS	Lo RTS
DH	15	8
IH	6	12
NH	1	1

TABLE 8

Other

	Hi RTS	Lo RTS
DH	21	5
IH	2	9
NH	0	3

Inspection of Tables 7 and 8 clearly show that High RTS scorers are likely to directly help and Low RTS scorers to indirectly help, regardless of condition.

Sex X Type of Response

Table 9 shows the cell distribution of sex and type of response.

TABLE 9

Sex X Type of Response

	DH	IH	NH
Male	29	9	1
Female	20	20	4

Leslie's Direct Solution χ^2 yields a χ^2 of 7.312. With 2 df, this value exceeds chance expectancy at the .05 level. Thus, it would appear that the sex of the subject plays a part in determining type of response to the emergency, as was predicted. Inspection of the table indicates that males chose

direct intervention over both indirect and non-intervention at a ratio of 3:1. Females, however, were almost evenly split between direct and indirect forms of helping.

Sex X RTS score X type of response was examined in Tables 5 and 6, and indicated that females were better predictors of their behavior than males.

Sex X condition X type of response can be examined in Tables 10 and 11.

TABLE 10

Male

	A	O
DH	15	14
IH	5	4
NH	0	1

TABLE 11

Female

	A	O
DH	8	12
IH	13	7
NH	2	2

Inspection of Table 10 indicates that for males, the presence or absence of bystanders did not appear to influence type of response. Although inspection of Table 11 for females suggests a condition X response interaction, a X^2 of 2.9894 with 2 df is not significant.

Condition X Type of Response

Table 12 illustrates the distribution of Ss in the Alone or Other condition by type of response.

TABLE 12
Condition X Type of Response

	DH	IH	NH
Alone	23	18	2
Other	26	11	3

Inspection of Table 12 indicates that the Alone or Other condition did not appear to influence type of response. Prediction (3) on page which indicated, "subjects in the 'alone' condition will exhibit more helping responses (DH or IH) than Ss in the 'presence of other' condition when matched on RTS score," could not be tested due to the fact that all but 5 of the 83 Ss were either Direct or Indirect helpers.

Prediction (4), however, indicates that high scorers on the RTS should be less affected by the "other" condition than low scorers and, consequently, more likely to intervene. This prediction is examined in Table 13.

TABLE 13
Distribution of Type of Response by High and Low
RTS Score in the "Other" Condition

	Hi RTS	Lo RTS
DH	21	5
IH	2	9

A X^2 of 10.34 was obtained, and with 1 df, is significant at the .01 level.

Personality Correlates of Type of Response

The RTS scale, and each of the 17 personality variables were correlated (Tri-serial r) against type of response. With 81 df, the critical value that was significant for .05 level = .285.

TABLE 14

Correlation of Personality Variables
With Type of Response (N = 83)

Personality Variable	r_{tri}
Internal-External	-.0686
Security-Insecurity	-.0508
Personality Research Form Scales	
Achievement	.1835
Affiliation	-.0172
Aggression	-.0719
Autonomy	.1523
Dominance	.2631*
Endurance	.2309*
Exhibition	.0577
Harmavoidance	-.2627*
Impulsivity	-.0115
Nurturance	-.0541
Order	.1433
Play	.1912
Social Recognition	.0033
Understanding	.1403
Infrequency	.1380
RTS Scale	.4498**

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

Table 14 indicates that when the personality scores of all of the subjects are correlated against type of behavioral response, three variables exhibited a level of correlation that was significant at the .05 level: Dominance, Endurance and inversely Harmavoidance, and one that was significant at the .01 level: the RTS Scale. This indicates that high risk-taking behavior is associated with high Dominance, Endurance, and RTS scores, and with low Harmavoidance scores. These correlations, and a number of other analyses to follow, must be interpreted cautiously in light of Wilkenson's (1951) article which indicates that there is a tendency toward spurious significance when a large number of variables are subjected to statistical analyses, and where a priori logic or the experimental design has not designated which pairs of variables should be significantly similar or different. This point is more relevant to the Dominance and Endurance correlations which, although consistent with what one would expect, were found a posteriori and not specifically predicted, whereas the RTS and Harmavoidance variables are not subject to this criticism in that the relationships were predicted a priori.

Table 15 shows how the DH and IH groups scored on the RTS and each of the personality variables. Scales that were a priori predicted to show differences are marked with an (a) to indicate that they were examined with a one-tailed test, whereas all of the other analyses were two-tailed.

TABLE 15

Table of Mean Scores, Standard Deviations and t-Values
Comparing Direct vs Indirect Intervening Ss
On Each Personality Variable (df = 76)

Personality Variable	T y p e o f R e s p o n s e				t-value
	Direct (N=49)		Indirect (N=29)		
	M	SD	M	SD	
Risk-Taking Scale (a) (15 Items)	46.163	6.70	40.206	6.27	4.770**
Internal-External (a)	12.1837	3.7287	13.2414	4.1028	1.177
Security-Insecurity (a)	24.1837	12.5941	24.4828	11.4256	0.105
PRF Scales					
Achievement	11.4490	4.0623	10.5172	3.6216	1.027
Affiliation	14.959	3.2143	16.4138	2.3531	2.119*
Aggression	6.3061	2.5017	6.4483	2.4869	0.245
Autonomy	8.4286	3.7583	6.8966	3.0746	1.860
Dominance	9.7551	4.8155	7.5862	4.6791	1.944
Endurance	11.0408	3.6570	9.2414	3.7858	2.080*
Exhibition (a)	9.9796	3.8486	9.4828	3.1580	0.593
Harmavoidance (a)	8.2041	4.0995	10.6207	3.9135	2.590*
Impulsivity (a)	10.8367	2.9745	10.3793	3.1891	0.645
Nurturance	14.5918	3.1749	15.3448	3.0270	1.038
Order	9.5918	4.3776	8.8276	4.2516	0.759
Play	12.1020	2.5104	12.8966	2.7301	1.320
Social Recognition	9.9796	3.7052	10.8276	3.1061	1.044
Understanding	12.2449	3.1127	11.7586	3.1471	0.670
Infrequency	0.6735	0.9872	0.3103	0.5414	1.847

(a) one-tailed test

*p<.05 **p<.01

These findings too, indicate that the RTS Scale, Harmavoidance and Endurance are significantly related to type of helping with Dominance showing a substantial, but less reliable, difference. Interestingly, when the NH group was dropped for the comparisons in Table 15, affiliation scores appear to significantly differ for the DH and IH groups. This indicates that higher risk-taking behavior is significantly associated with higher scores on the RTS, Endurance and Affiliative scales (and less reliably with a higher score on Dominance) and with a lower score on the Harmavoidance scale. Figure 3 shows the relatively close similarity of PRF profiles for the DH, IH, and NH groups.

Table 16 shows the correlations of personality variables with type of response when examined separately for males and females. For males, with 37 df, the critical values for r at the .05 and .01 level of significance are .325 and .418, respectively; for females, $df = 42$, critical values for r are .304 and .393 at the .05 and .01 levels, respectively.

Table 16 indicates that for males, two variables, Autonomy and RTS Scale, were significantly and positively associated with a riskier type of response, whereas for females, only the RTS showed a significant positive correlation with higher risk-taking behavior.

FIGURE 3. Mean PRF scales scores for the DH, IH, and NH groups.

TABLE 16

Correlation (r_{tri}) Personality Variables With
Type of Response for Males and Females

Personality Variable	Males (N=39)	Females (N=44)
Internal-External	-.0420	-.0049
Security-Insecurity	.0968	-.2101
Personality Research Form Scale		
Achievement	-.0161	.2757
Affiliation	-.1588	.2239
Aggression	-.1823	-.0614
Autonomy	.3325*	-.0996
Dominance	.1540	.2774
Endurance	.1422	.2124
Exhibition	-.0242	.0613
Harmavoidance	-.2078	-.1610
Impulsivity	.1610	-.1409
Nurturance	-.0208	.1179
Order	.1521	.1971
Play	.2393	-.1507
Social Recognition	-.1046	.0959
Understanding	.1681	.1020
Infrequency	.0582	.1139
RTS Scale	.4550**	.3651*

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

Table 17 shows the correlation of personality variables to type of response for Ss who are categorized as high or low RTS scorers. For high RTS scorers, with 43 df, critical values are .301 and .389 for the .05 and .01 levels of significance. For low scorers, with 36 df, critical values for the .05 and .01 levels are .329 and .424, respectively.

TABLE 17

Correlation of Personality Variables to Type of
Response for High and Low RTS Scorers

Personality Variable	r_{tri}	
	High RTS (N=45)	Low RTS (N=38)
Internal-External	-.0471	.0281
Security-Insecurity	.1810	.0632
Personality Research Form Scale		
Achievement	.0598	.1298
Affiliation	-.3286*	-.0346
Aggression	.1695	-.2768
Autonomy	.2506	-.0296
Dominance	.0356	.2050
Endurance	.0665	.1177
Exhibition	-.0574	.0587
Harmavoidance	.0091	-.2573
Impulsivity	-.1141	-.0293
Nurturance	-.3937**	-.1209
Order	.1065	.2067
Play	-.1689	-.1630
Social Recognition	-.2353	.3778*
Understanding	-.1799	.2262
Infrequency	.0894	.0432

*p<.05 **p<.01

Table 17 indicates that for high RTS scorers, both Nurture and Affiliation are significantly and inversely associated with type of response so that low scores on those scales are correlated with higher risk taking, whereas for low RTS scorers, higher scores on Social Recognition appeared significantly related to a riskier response.

Other Correlates of Type of Response

The demographic variables, too, were correlated against type of response (Table 18). With 81 df, the critical values for the .05 and .01 levels are .219 and .285, respectively.

TABLE 18

Correlation of Demographic Variables with Type of Response

Variable	Correlation
Sex	.2909**
Age	.1548
Class Standing	.2073
Community Size	-.2275*
Birth Order	-.0539
Religiosity	.1069
Height	-.0650
Weight	.1685
Political Orientation	-.0282
Mother's Education	-.0690
Father's Education	-.2652*
Mother's Occupation	.2056
Father's Occupation	.0821

*p<.05

**p<.01

Of the demographic variables examined, Sex, Community Size and Father's Education correlated significantly with type of response, so that high risk behavior is associated with males from smaller size communities whose fathers have received lesser amounts of education.

TABLE 19

Correlation of RTS Items with Type of Response

RTS' Scale Item	Correlation
1	.2940**
2	.3224**
3	.2752*
4 (Dropped)	
5	.1774
6	.2883**
7	.2626*
8	.2381*
9	.2388*
10 (Dropped)	
11	-.0750
12	.2508*
13	.3805**
14	.1079
15	.1870
16	.3197**
17 (Dropped)	
18	.3049**
Total	.4498

*p<.05 **p<.01

The Correlation between RTS score (total) and type of response has been noted earlier, but Table 19 shows the correlations between each of the 15 RTS scale items and type of response. Degrees of freedom equals 81 and critical values are .219 and .285 for the .05 and .01 levels, respectively. Hence, it would appear from Table 19 that 11 of the 15 RTS items correlate significantly with type of response.

Latency of response would appear to be another important correlate of type of response. The speed with which the S responded to the emergency was correlated against type of response and found to equal $-.4531$, which was highly significant and suggested that high risk taking was related to faster reaction time. However, the NH group, it should be remembered, was defined as composed of Ss who do not react helpfully within 90 seconds and the inclusion of this group could tend to bias the correlation. When the NH group was dropped, the mean latency and standard deviation for the DH group equalled 22.76 seconds, 15.93 respectively and for the IH group, 23.83 seconds and 20.31 respectively. This suggested that the latency data were rather skewed and so a Mann-Whitney U was calculated. The U-Test yielded a z of .62 which required acceptance of the null hypothesis.

Correlates of the Risk-Taking Situations Scale

Score on the 15 item RTS scale was correlated against each of the other variables (Demographic, Personality and Latency). For 81 df, critical values for the .05 and .01 level are .219 and .285 respectively. Table 20 indicates

which variables were found to be significantly related to scores on the RTS.

TABLE 20
Significant Correlates of RTS Score (N=83)

Variable	Correlation
Sex	.3618**
Community Size	-.2707*
Weight	.2610*
Mother's Occupation	.2289*
Internal-External	-.2781*
Security-Insecurity	-.3233**
Achievement	.3173**
Dominance	.4040**
Endurance	.4094**
Harmavoidance	-.4377**
Nurturance	.2315*
Understanding	.2605*
Infrequency	.2861**
Latency	-.2611*

*p<.05 **p<.01

Table 21 shows the correlation of each of the 15 items on the RTS scale against the total RTS score. Degrees of freedom = 81 and the .05 and .01 level of significance equals .219 and .285 respectively.

TABLE 21

Correlation of RTS Items with RTS Total Score

RTS Item	Quadriserial or Quintiserial r	Level of Significance
1	.5394	
2	.5178	
3	.5856	
5	.5693	
6	.7426	
7	.4547	All Correlations are significant at $p < .01$
8	.6694	
9	.6087	
11	.3020	
12	.3884	
13	.5161	
14	.4638	
15	.6998	
16	.4052	
18	.6245	

It would appear that the RTS has good internal consistency in that each item correlates well with the test as a whole, which itself shows satisfactory correlation with the criterion. Appendix K shows the interitem correlation matrix.

Correlates of Latency

When latency is examined by sex, the mean and standard deviation for males equal 25.15 and 22.36 respectively and for females, the M and SD equal 28.98 and 24.33 respectively. The size of the standard deviations would seem to indicate highly skewed data and so a Mann-Whitney U was used to analyze the difference in latency between males and females. This test yielded a z of .35, which requires acceptance of the null hypothesis.

DISCUSSION

This section is designed to initially provide some general theoretical and empirical considerations that pertain to behavioral responsiveness and then a discussion of those considerations that pertain more specifically to each of the different types of behavioral response found: Indirect helping, Non-Help and Direct Helping. This will lead to a discussion of the relationships found among each of the main variables (RTS Scale, Sex, and Condition) and behavioral response. Personality, Demographic and other correlates of behavioral response will then be examined, followed by an evaluation of the RTS Scale, its implications for further research, and a concluding statement.

General Theoretical and Empirical Considerations of the Behavioral Response

The manner in which the subjects responded to the emergency can be examined through the perspectives provided by a number of different theoretical positions. The decision to assay the findings by this multiple theory approach was dictated by the paucity of prior theoretical and empirical work in the area of high-risk intervention. There is simply not enough known about the phenomenon to permit or even encourage the interpretation of the data through a single theoretical perspective.

The door with the "High Voltage" sign on it and from behind which a victim's voice and electrical sounds were emanating, would be a conditioned stimulus which people have tended to associate with dangerous, unconditioned stimuli and which usually lead to a conditioned response of fear. Fear is generally acknowledged to be a complex stimulus which is, at one and the same time, arousing (Morgan & Stellar, 1950), aversive (Piliavin, et al, 1969), and motivating (Withey, 1962). The tension-reduction model postulates that the organism will seek to rid itself of tension in order to return to a quiescent condition but it does not indicate why organisms will choose different behavioral options in order to achieve homeostasis.

Schacter's (1964) cognitive-physiological theory of emotion, indicates that when a person is presented with emotionally arousing cues, he will, in an attempt to understand and label his bodily responses, seek information about what is happening to him. This information seeking process did appear to be confirmed by the post-emergency exploratory behavior of most of the Ss. They evidenced intense concentration in the auditory and visual modalities. Schacter goes on to postulate a steering function to the labeling of emotion so that the labels that one attaches to his state of arousal will determine how he will emotionally respond. However, in order to account for the variation in types of response in uniformly stressful or emergency situations (i.e., when almost every S would tend to use the same label to

describe his/her internal state), Schacter's theory would suggest a person's actions will depend upon whether he anticipates mild or severe pain which is based on the cognitions he has acquired from prior experience about the danger situation. This is an important qualification in that simply knowing how a person "feels" does not tell us how he will respond. Two individuals could label their internal arousal as "fear," yet one could run to seek reassurance and another rush closer to the source of the danger, depending on their cognitive expectation of consequences.

The emergency and its attendant sounds and noises would tend to create an approach-avoidance conflict for most subjects. The socially desirable response would be to respond directly to the victim's appeals for help, but to do so would appear to entail disruption of the ESP experiment, might prove embarrassing if help is not really needed, and/or could be dangerous. Dollard and Miller (1950) note in their discussion of the approach-avoidance conflict, that

the tendency to approach is the stronger of the two near to the goal. Therefore, when far from the goal, the subject should tend to approach part way and then stop. In short, he should tend to remain in the region where the two gradients intersect. (p.356)

Most subjects evidenced just this type of indecisive behavior by going back and forth between the ESP room and the corridor outside the emergency room, looking at the ESP cards, and engaging in a variety of other behaviors before deciding on a course of action. For most subjects (N=49), the conflict was

resolved by approach behavior (direct helping), but thirty-four others chose an avoidant response (indirect or non-helping). Appendix L shows a diagram of the setting and location of subject and emergency room.

Theoretical Consideration of Indirect Helping Behavior

Of the 34 who chose the avoidant response, 71% were female. In that females in our culture are found to score higher on affiliation motivation (Gordon, 1965), see themselves as less daring, dominant, and adventurous than males (McKee & Sherriffs, 1959), shy away from competitive situations (Brown, 1965), rate leadership significantly as less important than males (Wilson & Benner, 1971), and agree (with men) that males are "more courageous in the face of physical danger" and show "greatest emotional balance in crises" (Sherriffs & Jarrett, 1953), the manner in which they responded is not surprising. This is not to say they did not help; the overwhelming majority did, but in a manner that avoided a direct confrontation with dangerous stimuli. Schacter (1959) has indicated that, under threat of external danger, people will exhibit a heightened need for social reassurance. His study of female college students found that, under threat of painful electric shocks (high threat), 65% of the Ss chose to wait together. When the impending shock was described as mild and painless, (low threat), 33 1/3% chose affiliative behavior. This suggests that the preference to seek out others increases with level of threat. Descriptions of men at war (Gray, 1959) and under conditions

of natural disaster (Marshall, 1951), suggest that affiliation serves to reduce fear levels in men as well. However, people who are frightened prefer to seek out companions who would provide fear-reduction over companions who were themselves, in a highly frightened state (Rabbie, 1963). These studies provide information consistent with what was found in the indirect helping group. The PRF Affiliative scores of the Indirect Helping group were significantly higher than the Direct Helping group and the Ss who rapidly sought the E down the hall (and found his assistant instead) all made statements or asked questions that reflected the need for reassurance and support.

Theoretical Consideration of Non-Helping Behavior

Learning theory can be helpful in attempting to understand the behavior of those relatively few subjects (5) who did not overtly respond in a helpful manner to the emergency. The emergency situation, with the crash, cries for help, electrical sounds, etc., constituted highly aversive stimuli which induce strong arousal and stress in the bystander, which leads to a behavioral response directed toward reduction or removal of the aversive stimuli by either avoidance or escape, the choice of which would theoretically be a function of the individual's reinforcement history of anxiety reduction.

Psychoanalytic theory, too, offers concepts that could pertain to the behavior of the non-respondant. Denial is a nonverbal reaction that prevents the realistic perception

of unpleasant external stimuli by blotting out or distorting the perception (Freud, 1894). These subjects, on the post-experimental questionnaire, tended to minimize the danger involved and during questioning, indicated that "after listening to it for about a minute, I thought that it wasn't for real," "when I heard the voice say 'Oh shit,' I knew it was probably you" (that phrase comes close to the end of the tape). Lazarus (1966) notes that threatening cues lead to apprehension which causes the person to think about resources available to cope with the threat. If the person is unable to gain emotional relief by developing a cognitive plan or strategy for dealing with the problem, then he is likely to resort to defensive avoidances that ward off full awareness of the threat.

Some work in Social Psychology has indicated that there is diminished acceptance of fear-arousing communications (Janis & Feshbach, 1953; Janis & Terwilliger, 1962), particularly among persons with chronically high anxiety levels (Janis & Feshbach, 1954).

Although no objective measures of anxiety were taken, it was apparent during the post-experimental interviews that the simulated emergency had affected the subjects differently, depending on how the subject reacted. Clearly, the group of Ss showing the most residual anxiety (manifested by tremor, hypertalkativeness, smoking, restlessness), were those who sat through the emergency. Janis (1969) cites research studies of combat units in which symptoms of fear occur most

frequently among those who must sit passively and await the enemy's actions. He also notes lab studies which indicate the importance of an active role in dealing with danger stimuli. Faced with the threat of painful electric shocks, emotional disturbance will most likely occur if the subject has no control over its onset or termination. Janis et al conclude that "those experimental findings, together with field studies of combat and disaster, support the psychoanalytic hypothesis concerning the fear-intensifying effects of helplessness in a threatening environment" (p.67). It seems very likely that some action, either direct or indirect, is necessary as a response to anxiety-arousing stimuli in order to more rapidly reduce the anxiety. If the person is not physically reactive, then he is required to make more internal cognitive changes in order to re-establish his equilibrium. This seems to entail distorting the experience so that it appears that no action was required (i.e., "it wasn't real," "I thought there was another workman there who would help."). Latané and Darley (1970) note that those who do not intervene to help in emergencies are more prone to verbalize suspiciousness about the experimental procedure and the possibility that the "accident" was a fake.

Theoretical Considerations of Direct Helping Behavior

Fifty-nine percent of the sample exhibited direct helping behavior. Why did so many Ss chose the high risk intervention? Did the Ss have greater approach tendencies toward those in need or did they have less avoidant tendencies

toward danger than those subjects who sought to help indirectly? The answer can be found, in part, by examining the replies each subject gave on the post-experimental questionnaire. To the question, "How dangerous did you believe it would be to go into the room where the 'accident' occurred?", the choices provided were, 1 - not at all dangerous; 2 - somewhat dangerous; 3 - quite dangerous; 4 - very dangerous. A t-test between the responses of the Direct Helping group and the Indirect Helping group confirms that, although both groups felt it would be dangerous, the IH group felt that it was more dangerous than the DH group ($t=3.620$, $df=76$, $p<.01$) to enter the emergency room. Appendix J gives frequency counts of how the Ss responded to this question and a number of other items on the Post-Experimental Questionnaire. Although most subjects (75%) indicated that some degree of danger was probably involved in entering the "accident" room, a number of subjects indicated that they did not perceive the situation as dangerous. The phenomenological experience of risk is clearly a factor in determining the course of action a subject will choose.

Also to be taken into account is the role of stress in determining the individual response. The post-experimental questionnaire also asked, "How much stress and anxiety did you experience when you heard the 'emergency' occurring in the next room?", and the S was provided with the following choices: 1 - none; 2 - little; 3 - some; 4 - moderate amount; 5 - a great deal. Both the DH and IH Ss indicated

a rather high amount of stress (4.22 and 4.48 respectively) which serves to validate the perceived reality of the "accident" procedures. One application of learning theory suggests that the victim's cries for help constitute strong and highly aversive stimuli, the reduction or avoidance of which would be very reinforcing. That distress calls act as aversive stimuli that can initiate seemingly altruistic acts has received support from animal studies that found that rats would exhibit operant behaviors in response to the noxious squealing of a companion rat (Rice & Gainer, 1962; Lavey & Foley, 1963). Janis (1954) notes that certain behavior theory postulates can be useful in helping to explain behavior under stress conditions. In that it is hypothesized that fear and anxiety operate as learned drives, it is further assumed that

a) the intense emotional state aroused by danger cues will motivate varied escape behavior - including thinking, planning, fantasy, and other symbolic reactions, as well as overt activity, and b) whatever response terminates or greatly reduces the intensity of the emotional state will be reinforced and hence will tend to become the dominant reaction. (p.22)

Although these assumptions seem to offer an explanation for certain kinds of adaptive and maladaptive behavior in response to fear stimuli, they tend to emphasize an avoidant or escape response to fear-inducing stimuli and make no substantial provision for the fact that when a building is on fire, some people rush in to help, rather than just simply escaping. To rely on the notion that pro-social behavior in the past had probably met with reinforcement and consequently

becomes a dominating response in an emergency, seems rather weak when one considers that it is unlikely that many people have ever been much reinforced for high risk behavior in their past. The emergency clearly presents a situation in which loss, pain, or fright is more likely to result from direct intervention than the possibility of praise or reward. If one were to empathetically consider the situation: you hear an accident in the next room, you hear a stranger calling for help, you go to explore and realize that the sounds are coming from behind a door marked "High Voltage," you can hear electrical discharge or some electrical type noise and also realize that you appear to be the only bystander, you can leave the suite or go down the hall - considering these factors, what would impell you to open that door? Avoidance of pain? Expectation of reinforcement? Simple curiosity? If one were to see the look of expectant fear and concern on the faces of those who directly intervened, the above choices would hardly seem appropriate. As helpful as learning theory might be in attempting to explain the behavior of the indirect helper and non-respondant, it loses momentum when it comes to the high-risk, pro-social responses. The difficulty arises because of learning theory's focus on external events and how they serve to control behavior. It is here maintained that high risk, pro-social behavior cannot be understood without a fuller consideration of internal, organismic factors. As Withey (1962) points out, the research on diasters

contradicts the popular belief that human beings under threat of disaster are motivated sheerly by a simple drive for physical safety. The imminence of danger, it is evident, produces a complicated social situation capable of engaging a wide variety of motivations and attitudes. (p. 13)

Risk Taking Situations Scale and Type of Response

By numeric standards, a correlation of .45 between RTS score and behavioral response hardly seems impressive. After all, it accounts for only about 20% of the dependent measure's variance. However, when one considers the complexity of personality variables, the multiplicity of situational variables and then the subtle interaction of both, any paper and pencil measure that can account for 20% of a person's behavior in a situation which typically is considered unpredictable ("you never know how a person will respond"), takes on a different aspect. The scale correctly predicted the response of both high and low scorers in the emergency situation, 73% of the time. Other studies that have attempted to discover attitudinal, personality and demographic correlates of pro-social behavior, have generally met with minimal or very modest success in predicting behavior (Deutsch, 1960; Sawyer, 1966; Darley & Latané, 1968; Yakimovitch & Saltz, 1971). The question to be answered then is not why didn't the scale work better, but rather, why did this relatively simple instrument work as well as it did? Subjects are presented with a series of brief situational statements that describe the plight of some individual in distress and the subject is asked to select how

he/she would respond from a list of alternatives that range from little or no risk to very high risk. The S is being asked to make a cognitive decision as "objectively" as he/she can, to situations that are clearly laden with danger.

The RTS scale then, is subject to the same problems that affect any self report measure. As Cook and Selltiz (1964) note: 1) the purpose of the instrument may be obvious to the S, 2) the implications of his responses are probably apparent to him, and 3) he can consciously control his responses. The sources of distortion can be subsumed under the term "social desirability." In the administration of the RTS, an attempt was made to avoid obvious distortion of response by cautioning the subject against "unrealistic expectations," stressing the necessity of honesty in replying if the study is to be of "scientific value," and encouraging objectivity of response. However, it is suggested that removal of all aspects of social desirability would be not only impossible, but also undesirable because the scale is composed of items which contain a set of socially desirable behavioral options. The S is generally being asked to decide, not whether to make a socially desirable response or not, but rather, what level of socially desirable response. In the range of behavioral options associated with each item, there was usually only one that represented a socially undesirable response (i.e., "watch helplessly," "do nothing," "prefer not to get involved," etc.) and it was not expected to be chosen very often. Thus, in a very real sense, the RTS is an instrument

that measures socially desirable responses.

Is it possible that the RTS scale itself had a sensitizing and facilitating effect on later high risk, pro-social behavior? This is unlikely in that the test is rather brief (only about 10 minutes to take) and was embedded in a battery of longer tests, all of which were taken 4-9 weeks earlier. During the debriefing session, when the experiment was being explained, some subjects remembered the RTS and then realized its connection to the second phase. When questioned, however, none of these subjects indicated that they had remembered the RTS scale prior to debriefing.

In that a correlation of .361 was found between RTS score and Sex, it was considered necessary to determine if the correlation of .4498 that existed between RTS and type of response was primarily attributable to RTS or to Sex. When Sex was partialled out, a correlation of .362 between RTS and Response was maintained, which indicated that the relationship between RTS and Response was not substantially influenced by the sex of the respondent.

It would seem reasonable to consider that perhaps people are more cognitively aware of their behavior potential than had been recognized by earlier studies. A recent article (Kelman, 1974) cites a number of studies which support the thesis that there can be a close correspondence between attitudes and behavior. It could be, of course, that the university sample used in the current investigation was particularly candid and "in touch." The scale will have

to be tried with other samples in order to determine if its predictive validity in this study is the result of an unusually self-aware and insightful group of respondents. If its ability to predict emergency behavior is demonstrated with other groups, this would suggest the fascinating possibility that if you want to know how a person will respond in an emergency, you need only ask! After all, scrutinization of the test makes obvious its intent; there is nothing subtle or projective about it. Its predictive abilities may rest with its attempt to sample the domain of risk-emergencies so that the subject is being asked not just once, but with 15 somewhat different situations, what he/she would do if confronted with people in distress. It is not really clear whether the RTS scale is a personality or attitude measure, or some combination of both. Neither Scott nor McGuire, in their major discussion of attitudes in the Handbook of Social Psychology (1969), distinguish traits from attitudes. Though convention would suggest that traits are what a person is and attitudes are what he believes, the two seem rather intertwined. Whatever attitudinal or personality elements the RTS is tapping, the scale does show promise as a predictor of high risk intervention.

Sex and Type of Response

As we predicted, the results indicated that the sex of the bystander is significantly associated with different types of response to the emergency situation. Men were three times as likely to directly intervene than to indirectly

help, whereas the women's responses were about equally divided between direct and indirect intervention. What factors are likely to have contributed to this difference? It is quite probable that the sex of the victim (male), the type of emergency (industrial type accident) and the relative availability of an older, male authority figure were all influential in determining the type of response. Considering that these were youthful females, suddenly confronted with an accident in an unfamiliar setting, with elements of risk and danger present, it is not surprising that half of them chose a "detour intervention" by going to inform the experimenter of the accident. What was surprising was that half of the female Ss chose direct intervention and opened the door to the emergency room. What the statistics indicated was not that males were more helpful than women, but simply that they were more likely to help directly than indirectly. This difference in type of helping is attributable, in part, to fears regarding bodily injury. Scores on the Harmavoidance scale indicated that females were significantly less adventurous and risk-seeking than males (means=10.55 and 7.59 respectively, $t=3.43$, $df=81$, $p<.01$).

As Tables 5 and 6 indicated, when Sex was examined by RTS score, women were more reliable predictors of their behavioral responses in an emergency than men. Sixty-five percent of high scoring females later exhibited direct intervention and 75% low scoring females later showed indirect or non-helping responses. For men, 95% of high RTS scorers

later helped directly but only 53% of the low scorers exhibited avoidant behavior during the emergency. In that almost half of the male low RTS scores exhibited direct high risk intervention in the emergency, why did they so significantly underestimate their behavioral responsiveness to risk on the RTS? This tendency to underestimate can be better understood when their scores on the S-I Inventory are examined. Males who scored high on the RTS scored significantly lower on the Security-Insecurity Inventory than low RTS scorers (19.86 and 31.06 respectively, $t=2.68$, $df=37$, $p<.02$). The manual reports a mean of 19.5 from its standardization sample with an $N=2020$. High scores on the S-I Inventory are associated with Insecurity and, as Maslow (1952) notes, the subsyndromes of insecurity include uncertainty, inconsistency, discouragement, inferiority feelings and feelings of weakness and helplessness. These elements would be entirely consistent with their underestimates on a scale of risk-taking tendencies. Females seemed to share this association between RTS score and S-I score but their scores on the S-I (26.91 and 21.87) did not differ at a statistically significant level.

Condition and Type of Response

It is interesting that, of the three main variables studied, the one that did not appear to have any effect on emergency performance was the situational variable (alone vs other). The post-experimental interview and questionnaire indicated that very few subjects in the "other" condition

remembered that there was another bystander (supposedly) present in an adjoining room who also would have heard the accident. Most subjects indicated that they didn't think about or recall another person being in the immediate vicinity. It seems that under the stress of an emergency, the need for action is so imperative that only the most salient cues and immediate information are utilized by the witness. Many situational variables that might significantly influence responsiveness under normal conditions were seemingly negated by the compelling circumstances of the emergency. This is not to minimize the importance of situational variables but rather to suggest that as the tension and anxiety levels go higher as a response to threat, there is a commensurate focusing and narrowing of attention which is disruptive to mental efficiency (Janis, 1969). In order for the "other" condition to have been at all influential, the other bystander would have to have been physically present and able to help (Bickman, 1971), and his/her response (facial, verbal, etc.) observed (Piliavin, et al 1969; Rose, 1971). The very brief portrayal in the current study, enacted when the S was being led through unfamiliar surroundings, of another person working on an ESP task in one of the adjoining rooms, had insufficient impact and was not readily accessible to memory when the "accident" occurred. This casts serious doubt on the validity of the significant χ^2 of Table 13, where it was suggested that high RTS scorers were less affected by the presence of "others" than low

scorers and, consequently, more likely to directly intervene. A more conservative interpretation would suggest it is the RTS score (high vs low) alone, and not the Condition variable, which is contributing to the association with type of response.

Personality Variables and Type of Response

This study had predicted that personality variables could be useful in determining reactions to a high-risk emergency. The findings appear to provide some modest support for this prediction. There were statistically significant, although not very substantial relationships found between some personality variables (as measured by the Personality Research form) and type of response. Three of the PRF scales initially found to be significantly associated with type of response were: Dominance, Endurance, and inversely, Harmavoidance. Some of the adjectives the manual uses to describe the traits are: for Dominance, "attempts to control his environment," "enjoys the role of the leader and may assume it spontaneously," "commanding," "forceful," "directing," "assertive," "powerful": for Endurance, "persevering, even in the face of great difficulty," "determined," "steadfast," "unfaltering," "relentless," "energetic," "has stamina," "sturdy," "durable." High scorers on the Harmavoidance scale are described as "does not enjoy exciting activities, especially if danger is involved," "avoids risk of bodily harm," "seeks to maximize personal safety," "withdraws from danger," "self protecting," "pain avoidant,"

"careful,," "cautious," "seeks safety," "unadventurous," "avoids risk," "attentive to danger," "stays out of harm's way." Thus, it would appear that this study provides additional validation for these scale traits in that each is entirely consistent with the behavioral response, particularly the significant negative correlation between Harm-avoidance scale and level of risk-taking response. When the Non-Helping group was dropped from the analysis, and the Direct Helping and Indirect Helping groups compared on the PRF scales, Affiliation emerged as significantly higher for the Indirect Helping group. High scorers are described as "enjoys being with people in general," "friendly," "cooperative," "gregarious," and "affiliative."

The personality profile of the Direct Helper that emerges from these scales is an individual who tends to be forceful, assertive and who can assume a leadership role, who shows determination and stamina in the face of difficulty, and who appears adventurous and not overly concerned about personal safety or avoiding risk and who is not particularly distinguished by gregarious or affiliative qualities. This portrait is very consistent with the behavioral definition of the "hero," provided at the introduction to the study; namely an individual who spontaneously aids another in a brief, high risk situation. Parenthetically, the relationship of low Harmavoidance to feelings of invulnerability (being investigated by the E in another study) is probably quite close. Janis (1969) cites studies of Army

and Air Force vets who broke down during or after combat, which found that it was the loss of a sense of personal invulnerability that caused the debilitating anxiety. This would suggest that the belief in one's invulnerability is not only common, but perhaps necessary for effective functioning in the face of danger.

Other PRF scales that were a priori presumed to correlate with response, such as Impulsivity and Exhibitionism; did not receive support. Although it is relatively easy to dismiss the failure of the Exhibitionism variable due to the fact that there was no audience for the S to play to or seek notice from, the failure of the Impulsivity Scale is rather surprising (tri-serial $r = -.0115$). Even when correlated against response latency, no signs of a relationship appear (tri-serial $r = -.0175$).

Neither the Internal-External Scale nor the Security-Insecurity Inventory gave evidence of being associated with type of response. Maslow (1952) specifically noted that the S-I Inventory was not a behavior measure but, rather a test designed to reveal inner conscious feeling. It is of some comfort to discover that heroic intervention is not associated with neuroticism, which would have been implied by a strong positive correlation between S-I and risk taking behavior. The I-E and S-I scales significantly correlate with each other, however, ($r = .388$, $df = 81$, $p < .01$), and both showed significantly inverse correlations with the RTS scale, so that high RTS score is associated with Internality ($r = -.278$)

and with Security ($-.323$). This would suggest that subjects who subscribe to higher risk-taking tendencies are more likely to be secure individuals who see themselves in control of their own lives. The failure of these scales to correlate with behavior implies that traits of security or insecurity, internality or externality, can generate a range of behavioral reactions, varying from avoidant non-responding to high risk, direct intervention.

Demographic Correlates of Type of Response

Type of response was found to be significantly and inversely correlated with Father's Education ($r = -.265$) and Community Size ($-.2275$). This means that high risk intervention is more likely to be found in a subject who comes from a smaller community and whose father had not attended college. The Community Size variable is essentially a confirmation of Latané and Darley's (1970) study, wherein they reported a correlation of $-.26$ between size of community and speed of reporting a seizure. Father's education, in their study, correlated $-.12$ with helping. Darley and Latané do not appear to take these demographic correlations very seriously due to their only being able to account for such a small percentage of the dependent measure. However, it is the position of this thesis that reliable prediction of high risk intervention will depend on the interaction of a multiplicity of factors and that it is premature to discard predictive contributors, no matter how small. The Community Size finding is consistent with other studies which have

indicated that people from small communities are generally more likely to be helpful (Milgram, 1970).

The relationship of Father's Education to type of helping is likely to be mediated by a social class factor. It is possible that subjects who come from homes where their father has not had a surfeit of education are likely to be more low middle class and perhaps have a greater acquaintance with risk-taking situations than children from more insulated and protected environments.

Latency and Other Correlates of Type of Response

Response latency was found to significantly correlate with type of response; that is, the faster the response, the more likely the response to be of a higher risk type (r tri-serial = $-.453$, $df=81$, $p<.01$). This was not unexpected in that studies previously noted had shown that if a person is going to help, he/she usually does so very soon after the onset of an accident or emergency. Given the sizable correlation, it is unfortunate that response latency comes so close temporally to type of response and consequently cannot be used as a predictor variable in a discriminant function. A significant but not as substantial a relationship was found between latency and RTS score ($r = -.261$, $df=81$, $p<.01$), indicating that high RTS scorers are likely to react to an emergency more quickly than low RTS scorers.

The restricted age range of the sample was unfortunate in that there are obviously very relevant traits that correlate with age in our culture. As Roger Brown (1965) noted,

it is usually the younger driver who passes the older. Riskiness is associated with youthfulness and the young are more imbued with a sense of invulnerability. It is the older individual who has a greater sense of risk, more awareness of consequence, keener awareness of his own mortality. A life insurance salesman would probably concur that it is a safer bet that a 40 year old will see the age of 60, than that a 17 year old will reach 25 years of age. Obviously, not all young people are risk takers or adventurous as we evidenced by the distribution of types of response. Yet it is fully recognized that youthfulness (and its correlates) was probably a substantial determinant of a direct intervention rate of 59%. It is very likely that if a wider age range of subjects were employed, the distribution of responses would almost certainly be altered.

Evaluation of the RTS Scale

It was a surprise, although admittedly a pleasant one, to discover that the RTS scale was more substantially related to type of high-risk pro-social response than any of the other scales employed in this study. In fact, when the RTS is placed in a discriminant function with other predictors (i.e., Sex, Father's Education, Harmavoidance), the function generated does not classify the Ss into DH or IH groups as well as when the RTS is used by itself. Its predictive validity appears quite adequate for a maiden voyage but, considering that it was developed and validated by a college sample, it will have to be used with a more heterogenous

sample in order to determine its ability to predict behavior.

Care was taken during the construction of the scale to establish content validity by sampling the domain of risk related, pre-social situations. This process was described in an earlier section and appears to have met with satisfactory results.

The construct validity of the RTS scale can be examined by consideration of the psychological construct the scale is purported to measure: risk-taking tendencies. It is suggested that its correlation with the criterion variable (a situation designed to parallel that which the test measures) serves to establish its construct validity (Bohrnstedt, 1970). Another way to approach this subtle problem is by considering with what other measures does the RTS correlate. High RTS scores (higher risk) significantly correlate with sex (males score higher), show positive significant correlations to the PRF scales Achievement, Dominance, Endurance, Nurture and Understanding, and negative significant correlations with Community Size, Internal-External, Security-Insecurity, Harmavoidance and Latency. All of these correlations make psychological sense and are consistent with what one would expect from the scale's underlying construct.

The reliability of the RTS scale was discussed, in part, in the section on test construction. The inter-correlation matrix of RTS items is shown in Appendix K. Table 21, Correlation of RTS Items with RTS Total Score, indicates good internal consistency for the scale in that every item

correlated significantly with the total score (correlations ranged from .30 to .74, with an average correlation of .54). The scale is going to be factor analyzed in the immediate future to determine its component factors. Adding length to the RTS in order to increase reliability could prove to be of mixed value. As Rosenblatt and Miller (1972) point out, it could lead to the unwanted intrusion of other variables (i.e., suspiciousness, perseverance, etc.). More preferable would be to replace poor items with those that have more discriminatory power.

Further Research Considerations

The RTS was designed to explore a range of behavioral options in the face of an emergency or need and consequently is expected to have utility only in those situations where the bystander has a choice between or among different types of response. Some subjects who exhibited indirect helping mentioned that they did not know what they would have done if the E or his assistant had not been down the hall. Some indicated that they then would have had to come back to the "emergency" room and gone in; others noted that they would have gone to another floor in the building in order to find someone. Consequently, the expected utility of the scale seems to require that the subject have a choice of behavioral options.

Although every attempt was made to standardize the experimental setting and to control potentially influential ex-factors, the rather modest success of the personality measures

suggests that the major determinants of behavior (either internal and/or external) have yet to be uncovered. The effect of situational factors is not disputed here. Certainly, if the victim in the present study were female, for instance, or the level of intervention risk dramatically increased, it is expected that the amount and degree of intervention would be affected. A follow-up study would want to insure that all Ss perceived the situation as dangerous, for example. These are interesting situational factors that deserve further attention experimentally. So do additional personality traits; for example, an individual who is riskier (more willing to take risks) might be incurring less cost in helping than a less risky person. Should subjects be matched on risk-taking prior to emergency? While the high-risker might respond more readily, he might derive less satisfaction (or enhancement of self-esteem) than his more conservative counterpart, whose self-esteem might have been raised considerably by performing an unlikely (i.e., heroic) act. This relationship of self-esteem to pro-social behavior can be examined experimentally, utilizing the RTS scale to match subjects on risk taking tendencies.

CONCLUSION

The thrust of this investigation was to explore the feasibility of predicting pro-social behavior from a pro-social scale and to examine the role that personality variables might play in determining high risk, pro-social behavior. The Risk-Taking Situations scale, although not a conventional measure of personality, does appear to tap some organismic element that relates importantly to high risk intervention. Further study should help clarify what the RTS scale is actually eliciting and whether or not it has applicability in less controlled environments. It seems reasonable to conclude, therefore, that this study has been helpful in establishing, not the dominance of internal over external variables, but rather the importance of considering both intrinsic and situational factors as acting in concert to determine high risk, pro-social behavior.

REFERENCES

- Adler, A. The practice and theory of individual psychology. New York: Harcourt, Brace & World, 1927.
- Baldwin, H. W. Admiral death: twelve adventures of men against the sea. New York: Simon & Schuster, 1939.
- Berkum, M.M., Bialek, H.M., Kern, R.P., & Yogi, K. Experimental studies of psychological stress in man. Psychological Monographs, 1962, 76 (Whole No. 534).
- Bickman, L. The effect of another bystander's ability to help in bystander intervention in an emergency. J. of Experimental Social Psychology, 1971, 7, 367-79.
- Bohrnstedt, G. W. Reliability and validity assessment in attitude measurement. In G. Summers (Ed.), Attitude Measurement. Chicago: Rand, McNally, 1970.
- Brown, R. Social psychology. New York: Free Press of Glencoe, 1965.
- Buros, O. F. (Ed.) Fifth mental measurements yearbook. Highlands Park, N.J.: Gryphon Press, 1959.
- Buros, O. F. (Ed.) Seventh mental measurements yearbook. Highlands Park, N.J.: Gryphon Press, 1959.
- Butterfield, E. C. Locus of control, test anxiety, reactions to anxiety and achievement attitudes. Journal of Personality, 1964, 32, 325-370.
- Carnegie Hero Fund Commission Annual Report, 1970; 1971; 1972.
- Cook, S. W. & Selltitz, C. A multiple indicator approach to attitude measurement. Psychological Bulletin, 1964, 62, 36-55.
- Darley, J., Teger, A., & Lewis, L. Do groups always inhibit individuals' responses to potential emergencies? Journal of Personality and Social Psychology, 1973, 26, 395-399.
- Dollard J., & Miller, N.E. Personality and psychotherapy. New York: McGraw Hill, 1950.
- Edwards, A.L. The measurement of personality traits. New York: Holt Rinehart & Winston, 1970.

- Feshwick, M. W. American heroes, myth and reality. Washington: Public Affairs Press, 1954.
- Form, W. H., & Nosow, S. Community in disaster. New York: Harper & Bros., 1958.
- Freud, S. (1894) The neuropsychoses of defense. (Stan. ed.) Vol. 3, London: Hogarth Press, 1962.
- Friedricks, R. W. Alter versus ego: an exploratory assessment of altruism. American Sociological Review, 1960, 25, 496-508.
- Gordon, B. Influence, social comparison and affiliation. Dissertation abstracts, 1965, 26 (4), 2366.
- Gore, P. M. & Rotter, J. B. A personality correlate of social action. Journal of Personality, 1963, 31, 58-64.
- Gurin, P., Gurin, G., Lao, R., & Beattie, M. Internal-external control in the motivational dynamics of Negro youth. Journal of Social Issues, 1969, 25, (No. 3), 29-54.
- Gray, G. The warriors: reflections on men in battle. New York: Harper & Row, 1959.
- Grusec, J., & Skubiski, A. Model nurturance, demand characteristics of the modeling experiment, and altruism. Journal of Personality and Social Psychology, 1970, 14, 352-359.
- Hartshorne, H., & May, M. Studies in the nature of character. New York: MacMillan, 1929.
- Hartshorne, H., & May, M. A summary of the work of the character education inquiry. Religious Education, 1930, 25, 754-762.
- Hersch, P. D., & Scheibe, K. E. Reliability and validity of internal-external control as a personality dimension. Journal of Consulting Psychology, 1967, 31, 609-613.
- Hinds, W. C. Individual and group decisions in gambling situations. Unpublished masters thesis: Massachusetts Institute of Technology, School of Industrial Management, 1962. Cited by R. Baron & R. Liebert, Human Social Behavior. Illinois: Dorsey Press, 1971.
- Hook, S. The hero in history; a study of limitation and possibility. Boston: Beacon Press, 1955.

- Kelman, H. Attitudes are alive and well and gainfully employed in the sphere of action. American Psychologist, 1974, 29, 310-324.
- Jackson, D. Personality research form manual. Goshen, New York: Research Psychologists Press, 1967.
- Janis, I. L., & Feshbach, S. Effects of fear-arousing communications. Journal of Abnormal & Social Psychology, 1953, 48, 78-92.
- Janis, I. L., & Feshbach, S. Personality differences associated with responsiveness to fear-arousing communications. Journal of Personality, 1954, 23, 154-66.
- Janis, I. L. Problems of theory in the analysis of stress behavior. Journal of Social Issues, 1954, 10, 12-25.
- Janis, I. L., & Terwilliger, R. An experimental study of psychological resistances to fear-arousing communications. Journal of Abnormal & Social Psychology, 1962, 65, 403-10.
- Kogan, N., & Wallach, M. Risk-taking: a study in cognition and personality. New York: Holt, Rinehart & Winston, 1964.
- Krebs, D. Altruism an examination of the concept and a review of the literature. Psychological Bulletin, 1970, 73, 258-302.
- Kutner, B., Wilkins, C., & Yarrow, P.R. Verbal attitudes and overt behavior involving racial prejudice. Journal of Abnormal and Social Psychology, 1952, 47, 649-652.
- LaPiere, R. T. Attitudes vs actions. Social Forces, 1934, 14, 230-237.
- Latané, B., & Darley, J. Group inhibition of bystander intervention. Journal of Personality and Social Psychology, 1968, 10, 215-221.
- Latané, 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.
- Latané, B., & Darley, J. The unresponsive bystander: why doesn't he help? New York: Appleton-Century-Crofts, 1970.
- Lavery, J. J., & Foley, P. J. Altruism or arousal in the rat? Science, 1963, 140, 172-173.

- Lazarus, R. S. Psychological stress and the coping process. New York: McGraw-Hill, 1966.
- Lefcourt, H. M. Internal versus external control of reinforcement: a review. Psychological Bulletin, 1966, 65, 206-220.
- Lenrow, P. B. Studies of sympathy. In S. S. Tomkins & C. E. Izard (Eds.). Affect, cognition, and personality. New York: Springer Publishing Co., 1965.
- Liverant, S., & Scodel, A. Internal and external control as determinants of decision making under conditions of risk. Psychological Reports, 1960, 7, 59-67.
- London, P. The rescuers: motivational hypotheses about Christians who saved Jews from the Nazis. In J. Macaulay & L. Berkowitz (Eds.). Altruism and helping behavior. New York: Academic Press, 1970.
- Markowitz, J. A walk on the crust of hell. Brattleboro, Vt.: Stephen Greene Press, 1973.
- Marshall, S. Men against fire. Washington, D.C.: Combat Forces Press, 1951.
- Maslow, A. H. Manual for the Security-Insecurity Inventory. Palo Alto, California: Consulting Psychologists Press, 1952.
- Maxwell, A. E. Analysing qualitative data. London: Methuen & Co., 1961.
- McKee, J. P., & Sherriffs, A. C. Men's and women's beliefs, ideals, and self concepts. American Journal of Sociology, 1959, 64, 356-363.
- Medal of Honor, 1863-1968. Government publication Y4.L 11/2: M 46/10/863-968. U. S. Government Printing Office: 1968.
- Midlarsky, F. Aiding responses: an analysis and review. Merrill-Palmer Quarterly, 1963, 14, 229-260.
- Milgram, S. Behavioral study of obedience. Journal of Abnormal and Social Psychology, 1963, 67, 371-378.
- Milgram, S. The experience of living in cities. Science, 1970, 167, 1461-1468.
- Peatman, J. G. Descriptive and sampling statistics. New York: Harper & Bros., 1947.

- Pepitone, A., Diggory, J., & Wallace, W. H. Some reactions to a hypothetical disaster. Journal of abnormal and Social Psychology, 1958, 51, 706-708.
- Piliavin, I., Rodin, J., & Piliavin, J. A. Good samaritanism: an underground phenomenon? Journal of Personality and Social Psychology, 1969, 15, 289-299.
- Piliavin, J. A., & Piliavin, I. Effect of blood on reactions to a victim. Journal of Personality and Social Psychology, 1972, 23, 353-361.
- Rabbie, J. M. Differential preference for companionship under threat. Journal of Abnormal & Social Psychology, 1963, 67, 143-48.
- Rice, G. E., & Gainer, P. "Altruism" in the albino rat. Journal of Comparative & Physiological Psychology, 1962, 55, 123-25.
- Rim, Y. Personality and group decisions involving risk. Psychological Record, 1964, 14, 37-45.
- Robinson, J. & Shaver, P. Measures of social psychological attitudes. Ann Arbor: Institute for Social Research, 1970.
- Rosenblatt, P. C. & Miller, N. Problems and anxieties in research design and analysis. In Chas. McClintock Experimental Social Psychology. New York: Holt, Rinehart, & Winston, 1972.
- Ross, A. S. Effect of increased responsibility on bystander intervention: the presence of children. Journal of Personality and Social Psychology, 1971, 19, 306-10.
- Rotter, J. B. Generalized expectancies for internal vs external control of reinforcement. Psychological Monographs, 1966, 80 (Whole No. 609).
- Sawyer, J. The altruism scale: a measure of co-operative, individualistic and competitive interpersonal orientation. American Journal of Sociology, 1966, 71, 407-416.
- Schacter, S. S. The psychology of affiliation. Stanford, California: Stanford U. Press, 1959.
- Schacter, S. S. The interaction of cognitive and physiological determinants of emotional state. In L. Berkowitz (Ed.), Advances in experimental social psychology, Vol. 1, New York: Academic Press, 1964.

- Schwartz, S. H., & Clausen, G. T. Responsibility, norms and helping in an emergency. Journal of Personality and Social Psychology, 1970, 16, 300-310.
- Sherriffs, A. C., & Jarrett, R. F. Sex differences in attitudes about sex differences. Journal of Psychology, 1953, 35, 161-168.
- Staub, E. & Feagans, L. Effects of age and number of witnesses in children's attempts to help another child in distress. Cited by Krebs, D. Altruism - an examination of the concept and a review of the literature. Psychological Bulletin, 1970, 73, 258-302.
- Streit, P. New York Times Magazine Section, Nov. 24, 1963, 30-31, 125-128.
- Strickland, B. The prediction of social action from a dimension of internal-external control. Journal of Social Psychology, 1965, 66, 353-358.
- Tolman, E. C. Behavior and psychological man. Berkeley: U. of California Press, 1961.
- Torrance, E. P. & Ziller, R. C. Risk and life experience: development of a scale for measuring risk-taking tendencies. (Rep. No. 57-23V) United States Air Force Personnel Training Research Report. Washington, D. C.: United States Government Printing Office, 1957.
- Ugurel-Semin, R. Moral behavior and moral judgement of children. Journal of Abnormal and Social Psychology, 1952, 47, 463-474.
- Velicer, W. F. Prediction and association for N-way classification tables. (In prep).
- Wilkinson, B. A statistical consideration in psychological research. Psychological Bulletin, 1951, 48, 156-158.
- Wilson, S. R. & Benner, L. A. The effects of self-esteem and situations upon comparison choices during ability evaluation. Sociometry, 1971, 34, 381-387.
- Withey, S. B. Reaction to uncertain threats. In G. W. Baker & D. W. Chapman (Eds.), Man and society in disaster. New York: Basic Books, 1962.
- Wrightsmann, L. Measurement of philosophies of human nature. Psychological Reports, 1964, 14, 743-751.
- Yakimovich, D. & Saltz, E. Helping behavior: the cry for help. Psychonomic Science, 1971, 23, 427-428.

APPENDIX A

Development of the RTS Scale: Step 1

Risk Taking Scale: Phase One

Sex: Age:

We are attempting to construct a list of items that sample a variety of situations involving risk or sacrifice. Your thinking can be very helpful to us at this stage of our work. We would appreciate your taking a few minutes to think about 5 situations of various levels of risk or sacrifice to the person who attempts to help. Please jot them down on the lower portion of this sheet. Feel free to consider unusual as well as typical kinds of risk-sacrifice situations. For example, donating an hour of time to collect for the United Fund represents a different level of risk or sacrifice than jumping into an icy lake in mid-winter to save a drowning person. After you have listed the situations, number them from 1 to 5 (or however many you have noted), with (1) indicating the situation entailing the highest degree of risk-sacrifice, and (2) the next highest, etc.

APPENDIX B

Development of the RTS Scale: Step 2

Dear:

Attached is a scale I am working on that will hopefully, at some later date, be useful in predicting high risk pro-social behavior. I need your help at this point - about 10-15 minutes worth. Glancing at the attached sheets, you will see that there are 21 very brief situational statements followed by 3-5 behavioral options for each item. I would like you to carefully consider the options provided for each situation and, using the scale indicated below, attempt to rank order the options according to the degree of risk and/or sacrifice associated with each.

- 1 - This option entails the highest degree of risk and/or sacrifice
- 2 - This option entails the next highest degree of risk and/or sacrifice
- 3 - This option entails somewhat less degree of risk and/or sacrifice than #2
- 4 - This option entails somewhat less degree of risk and/or sacrifice than #3
- 5 - This option entails somewhat less degree of risk and/or sacrifice than #4

Therefore, for an item with 4 options, you would place the number 1 (one) next to the option you consider to involve the highest degree of risk, #2 to the next highest, #3 to the next, and 4 to the least risky option.

Appendix B (continued)

OK?

If the directions seem unclear, please contact me.

APPENDIX C

Development of the RPS Scale: Step 3

The RTS Situation Study - Form A

Sex: Age: Mother's Maiden Name:

Directions:

On the following pages are 21 very brief statements describing an incident. Following each statement are a number of different options. Consider the situation and then each of the options carefully. Using the scale below, place the number in the blank space to the left of each option that best corresponds to how likely you would be to respond in that particular way:

- 1 - This is what I would most likely do in this situation
- 2 - This is what I would probably do if I didn't do number 1
- 3 - This is what I would probably do if I didn't do number 2
- 4 - This is what I would probably do if I didn't do number 3
- 5 - This is what I would probably do if I didn't do number 4

Therefore, if a particular situation had four options, you will assign the number 1 to your most likely response, number 2 to the next most likely, then number 3 to the next most, then number four to the least likely. It is understood that it is quite difficult to predict how you would respond to many of the situations, particularly where there are so few details given. However, make the best determination you can in each case.

Please be sure to answer on the basis of how you think

Appendix C (continued)

you probably would act, rather than how you think you should react. It is very important that you attempt to answer as honestly as you can. Avoid both undue modesty as well as unrealistic expectations of yourself. This study will be of no scientific value unless you respond to it as fairly and objectively as you possibly can. Your replies will be strictly confidential.

If you have any questions or need clarification of the directions, please ask. If not, please go right on and begin.

APPENDIX C (Continued)

Development of the RTS Scale: Step 3

The RTS Situation Study - Form B

Sex: Age: Mother's Maiden Name:

Directions:

On the following pages are 21 very brief statements describing an incident. Following each statement are a number of different options. Consider the situation and then each of the options carefully. Using the scale below, place the number in the blank space to the left of each option that best corresponds to how likely you think most people would respond in that particular situation.

1-This is what most people would be likely to do in this situation

2-This is what most people would do if they didn't do #1

3-This is what most people would do if they didn't do #2

4-This is what most people would do if they didn't do #3

5-This is what most people would do if they didn't do #4

Therefore, if a particular situation had 4 options, you will assign number 1 to the option that you feel reflects how most people would react to that situation, number 2 to the next most likely option, number 3 to the next most and number 4 to the least likely.

It is understood that it is quite difficult to predict how most people would respond to many of the situations, particularly where there are so few details given. However, make the best determination you can in each case.

Appendix C (Continued)

Please be sure to answer on the basis of how you think most people would act, rather than how they should react. It is very important that you attempt to answer as honestly as you can. This study will be of no scientific value unless your responses are as fair and objective as possible. Your responses will be strictly confidential.

If you have any questions or need clarification of the directions, please ask. If not please go on and begin.

APPENDIX D

Development of the RTS Scale: Step 4 (First Scale)

Situations

1. A vicious German Shepard is attacking an older woman

- _____ a) attempt to pull the dog away from the woman
- _____ b) call for help
- _____ c) throw a rock or heavy stick at the dog
- _____ d) watch helplessly
- _____ e) attempt to attract the dog's attention away from the woman

2. An older man is being mugged by a teenager

- _____ a) walk by quickly
- _____ b) call the police
- _____ c) attempt to stop the attacker
- _____ d) attempt to aid the victim after the attack

3. A young child is in the path of an onrushing car

- _____ a) attempt to push the child out of the way
- _____ b) yell to the child to move
- _____ c) watch helplessly
- _____ d) attempt to wave the car aside

4. A friend in your class is doing very poorly. It is a large class and he is in danger of flunking the final exam

- _____ a) let him handle the situation on his own
- _____ b) let him glance at a few of your answers on the exam
- _____ c) spend time that you could use for your other courses helping him prepare for the exam
- _____ d) take the final exam for him

Appendix D (continued)

5. A woman appears trapped by the 2nd floor window of a burning building

- ☐ a) watch helplessly
- ☐ b) encourage her to jump and try to catch her
- ☐ c) try to find a ladder to put up to the window
- ☐ d) rush into the building and attempt to rescue the victim
- ☐ e) call the Fire Department

6. The country is at war. There is a choice of

- ☐ a) serving 2 years as a paratrooper
- ☐ b) serving 4 years in the Navy
- ☐ c) serving 6 years in the Pentagon
- ☐ d) serving 3 years in the Marines

7. Man threatening to jump from the ledge of a large window outside your office

- ☐ a) wait until something happens
- ☐ b) attempt to talk him out of jumping
- ☐ c) attempt to grab him when he turns to look down
- ☐ d) run to call the police

8. Driving by a bad car accident

- ☐ a) continue on without stopping
- ☐ b) try to get word to the police or rescue squad
- ☐ c) attempt to administer First Aid to the injured
- ☐ d) attempt to wave down another car or truck to help

Appendix D (Continued)

9. A young relative is seriously ill due to a severe kidney disorder
- _____ a) prefer not to get involved
 - _____ b) make a small cash contribution to his parents in order to defray some of the medical costs
 - _____ c) volunteer to donate a kidney for transplant
 - _____ d) donate a pint of blood in case he is operated on
10. There is a purse snatching by a young thief
- _____ a) call the police
 - _____ b) attempt to catch the thief
 - _____ c) stop to aid the victim
 - _____ d) attempt to pursue the thief calling out for someone to stop him
 - _____ e) do nothing
11. A young man is drowning in a lake not too close to the shore
- _____ a) run to notify the lifeguard who is 200 yards up the shore
 - _____ b) watch helplessly
 - _____ c) dive in and attempt to rescue him
 - _____ d) try to row a boat out to the victim
12. Boy is stuck out on the limb of a fairly tall tree
- _____ a) attempt to talk the boy down
 - _____ b) call the Fire Dept. of Rescue Squad
 - _____ c) tell the boy to stay there until someone comes
 - _____ d) attempt to bring the boy down with a ladder

Appendix D (Continued)

13. Red Cross blood drive due to a serious shortage of blood

- ☐ a) donate a pint of blood
- ☐ b) serve on a committee to advertise the blood drive
- ☐ c) volunteer to donate blood every 3 months for a year
- ☐ d) don't get involved

14. Sole witness to a hit and run murder of a child. The driver looked like a very rough character

- ☐ a) notify the police and testify against the man in court
- ☐ b) notify the police but refuse to testify in court
- ☐ c) notify the police anonymously
- ☐ d) act like it never happened - do nothing

15. A man has fallen through the ice not too far from shore

- ☐ a) run for help
- ☐ b) try to find a large stick or branch to throw out to the person
- ☐ c) attempt to crawl out on the ice with a stick to reach out to the victim
- ☐ d) yell to the person to try to climb onto the ice slowly
- ☐ e) watch helplessly

16. A car is stopped by the side of the road with it's rear wheels stuck in the mud and two men in work clothes are standing there

- ☐ a) go by and notify next gas station or toll booth
- ☐ b) stop and offer to help
- ☐ c) stop and offer to send help
- ☐ d) go by and not do anything

Appendix D (Continued)

17. A group of three noisy, drunk college boys surround a young woman and harass her with lewd remarks and block her attempts to run away

- _____ a) call out to the boys to leave the woman alone
- _____ b) attempt to physically separate the boys and allow the woman's passage
- _____ c) call the police
- _____ d) assume it's just a joke and continue walking by

18. A granade lands in your foxhold. There are three others in the hole.

- _____ a) cover the granade with your body
- _____ b) try to cover another's body with your own
- _____ c) attempt to pick the granade up and throw it out
- _____ d) try to scramble out of the hole as fast as you can
- _____ e) "freeze" and not move

19. The apartment house catches on fire in the middle of the night

- _____ a) attempt to fight the fire
- _____ b) leave the apartment house immediately
- _____ c) try to help a family with children or an older tenant to get out
- _____ d) call the Fire Dept. and then leave the apartment house
- _____ e) go from door to door to notify as many tenants as possible

Appendix D (Continued)

20. As a VISTA volunteer, there are a choice of assignments

- ☐ a) a forestry project in northern Maine
- ☐ b) teaching mountain children in West Virginia
- ☐ c) insect control study in rural Mississippi
- ☐ d) welfare center in Harlem

21. Neighboring man is selling heroin to young kids

- ☐ a) don't get involved
- ☐ b) call police and testify at the hearing
- ☐ c) try to get a photograph of him dealing to send to the police
- ☐ d) call police anonymously
- ☐ e) tell him to stop or you'll notify the police

APPENDIX E

Development of the RTS Scale: Step 5 (Final Step)

The RTS Situation Study

Sex:

Age:

Directions:

On the following pages are 18 very brief statements describing an incident. Following each statement are a number of different options. Consider the situation and then each of the options carefully. Using the scale below, place the number in the blank space to the left of each option that best corresponds to how likely you would be to respond in that particular way:

- 1 - This is what I would most likely do in this situation
- 2 - This is what I would probably do if I didn't do number 1
- 3 - This is what I would probably do if I didn't do number 2
- 4 - This is what I would probably do if I didn't do number 3
- 5 - This is what I would probably do if I didn't do number 4

Therefore, if a particular situation had four options, you will assign the number 1 to your most likely response, number 2 to the next most likely, then number 3 to the next most, then number 4 to the least likely. It is understood that it is quite difficult to predict how you would respond to many of the situations, particularly where there are so few details given. However, make the best determination you can in each case.

Please be sure to answer on the basis of how you think you probably would act, rather than how you think you should

Appendix E (Continued)

react. It is very important that you attempt to answer as honestly as you can. Avoid both undue modesty as well as unrealistic expectations of yourself. This study will be of no scientific value unless you respond to it as fairly and objectively as you possibly can. Your replies will be strictly confidential.

If you have any questions or need clarification of the directions, please ask. If not, please go right on and begin.

APPENDIX E (Continued)

Situations

1. A vicious German Shepard is attacking an older woman

- _____ a) attempt to pull the dog away from the woman
- _____ b) call for help
- _____ c) throw a rock or heavy stick at the dog
- _____ d) watch helplessly
- _____ e) attempt to attract the dog's attention away from the woman

2. A young child is in the path of an onrushing car

- _____ a) attempt to push the child out of the way
- _____ b) yell to the child to move
- _____ c) watch helplessly
- _____ d) attempt to wave the car aside

3. A woman appears trapped by the 2nd floor window of a burning building

- _____ a) watch helplessly
- _____ b) encourage her to jump and try to catch her
- _____ c) try to find a ladder to put up to the window
- _____ d) rush into the building and attempt to rescue the victim
- _____ e) call the Fire Department

4. The country is at war. There is a choice of

- _____ a) serving 2 years as a paratrooper
- _____ b) serving 4 years in the Navy
- _____ c) serving 6 years in the Pentagon
- _____ d) serving 3 years in the Marines

Appendix E (Continued)

5. Man threatening to jump from the ledge of a large window outside your office

- _____ a) wait until something happens
- _____ b) attempt to talk him out of jumping
- _____ c) attempt to grab him when he turns to look down
- _____ d) run to call the police

6. Driving by a bad car accident

- _____ a) continue on without stopping
- _____ b) try to get word to the police or rescue squad
- _____ c) attempt to administer First Aid to the injured
- _____ d) attempt to wave down another car or truck to help

7. A young relative is seriously ill due to a severe kidney disorder

- _____ a) prefer not to get involved
- _____ b) make a small cash contribution to his parents in order to defray some of the medical costs
- _____ c) volunteer to donate a kidney for transplant
- _____ d) donate a pint of blood in case he is operated on

8. There is a purse snatching by a young thief

- _____ a) call the police
- _____ b) attempt to catch the thief
- _____ c) stop to aid the victim
- _____ d) attempt to pursue the thief calling out for someone to stop him
- _____ e) do nothing

Appendix E (Continued)

9. A young man is drowning in a lake not too close to the shore

- _____ a) run to notify the lifeguard who is 200 yards up the shore
- _____ b) watch helplessly
- _____ c) dive in and attempt to rescue him
- _____ d) try to row a boat out to the victim

10. Boy is stuck out on the limb of a fairly tall tree

- _____ a) attempt to talk the boy down
- _____ b) call the Fire Dept. or Rescue Squad
- _____ c) tell the boy to stay there until someone comes
- _____ d) attempt to bring the boy down with a ladder

11. Red Cross blood drive due to a serious shortage of blood

- _____ a) donate a pint of blood
- _____ b) serve on a committee to advertise the blood drive
- _____ c) volunteer to donate blood every 3 months for a year
- _____ d) don't get involved

12. Sole witness to a hit and run murder of a child. The driver looked like a very rough character

- _____ a) notify the police and testify against the man in court
- _____ b) notify the police but refuse to testify against the man in court
- _____ c) notify the police anonymously
- _____ d) act like it never happened - do nothing

Appendix E (Continued)

13. A man has fallen through the ice not too far from shore

- _____ a) run for help
- _____ b) try to find a large stick or branch to throw out to the person
- _____ c) attempt to crawl out on the ice with a stick to reach out to the victim
- _____ d) yell to the person to try to climb onto the ice slowly
- _____ e) watch helplessly

14. A car is stopped by the side of the road with it's rear wheels stuck in the mud and two men in work clothes are standing there

- _____ a) go by and notify next gas station or toll booth
- _____ b) stop and offer to help
- _____ c) stop and offer to send help
- _____ d) go by and not do anything

15. A group of three noisy, drunk college boys surround a young woman and harass her with lewd remarks and block her attempts to run away

- _____ a) call out to the boys to leave the woman alone
- _____ b) attempt to physically separate the boys and allow the woman's passage
- _____ c) call the police
- _____ d) assume it's just a joke and continue walking by

Appendix E (Continued)

16. The apartment house catches on fire in the middle of the night

- _____ a) attempt to fight the fire
- _____ b) leave the apartment house immediately
- _____ c) try to help a family with children or an older tenant to get out
- _____ d) call the Fire Dept. and then leave the apartment house
- _____ e) go from door to door to notify as many tenants as possible

17. As a VISTA volunteer, there are a choice of assignments:

- _____ a) a forestry project in northern Maine
- _____ b) teaching mountain children in West Virginia
- _____ c) insect control study in rural Mississippi
- _____ d) welfare center in Harlem

18. Neighboring man is selling heroin to young kids

- _____ a) don't get involved
- _____ b) call police and testify at the hearing
- _____ c) try to get a photograph of him dealing to send to the police
- _____ d) call police anonymously
- _____ e) tell him to stop or you'll notify the police

APPENDIX F

General Background Items

Name _____

1. Age at last birthday

A. 17 & Under _____

B. 18-19 _____

C. 20-25 _____

D. 26-30 _____

E. 31 and over _____

2. Class Standing

A. Freshman _____

B. Sophomore _____

C. Junior _____

D. Senior _____

E. Other _____

3. Marital Status

A. Single _____

B. Married _____

C. Divorced _____

D. Other _____

4. Before coming to college, in what kind of community did you live most of your life?

A. Farm _____

B. Village 250-2,500 _____

C. Town 2,500-25,000 _____

D. City 25,000-100,000 _____

E. City over 100,000 _____

Appendix F (Continued)

5. Were you _____
- A. First born _____
- B. Second born _____
- C. Third born _____
- D. Fourth born _____
- E. Fifth or later _____
6. Religion _____
- A. Catholic _____
- B. Protestant _____
- C. Jewish _____
- D. Other _____
7. Attendance at Religious Services _____
- A. More than once a month _____
- B. Less than once a month _____
- C. Never _____
8. Height _____
- A. Under 5'5" _____
- B. 5'5"-5'7" _____
- C. 5'8"-5'10" _____
- D. 5'11"-6'1" _____
- E. 6'1"-6'3" _____
- F. Over 6'3" _____

Appendix F (Continued)

9. Weight

- A. Under 130 _____
- B. 130-145 _____
- C. 146-160 _____
- D. 161-175 _____
- E. 176-190 _____
- F. 191-210 _____
- G. Over 210 _____

10. Which of the following best describes
your political orientation?

- A. Extremely left _____
- B. Liberal _____
- C. Moderate _____
- D. Conservative _____
- E. Extremely right _____

11. Military Service

- A. Never drafted _____
- B. Drafted _____
- C. Enlisted reserve _____
- D. Enlisted active _____
- E. Other _____

Appendix F (Continued)

12. Mother's education

- A. Did not complete high school _____
- B. High school graduate _____
- C. Some college _____
- D. College graduate _____
- E. Advanced degree (M.S.,
Ph.D., M.D., etc.) _____

13. Father's education

- A. Did not complete high school _____
- B. High school graduate _____
- C. Some college _____
- D. College graduate _____
- E. Advanced degree (M.S., Ph.D.,
M.D., etc.) _____

14. Mother's occupation

(specify)

15. Father's occupation

(specify)

APPENDIX G

PERSONALITY RESEARCH FORM SCALES

<u>Scale</u>	<u>Description of High Scorer</u>	<u>Defining Trait Adjectives</u>
Achievement	Aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence.	Striving, accomplish, capable, purposeful, attaining, industrious, achieving, aspiring, enterprising, self-improving, productive, driving, ambitious, resourceful, competitive.
Affiliation	Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people.	neighborly, loyal, warm, amicable, good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable, sociable, affiliative, good-willed,
Aggression	Enjoys combat and argument; easily annoyed; sometimes willing to hurt people to get his way; may seek to "get even" with people whom he	aggressive, quarrelsome, irritable, argumentative, threatening attacking, antagonistic, push, hot-tempered, easily-angered,

Appendix G (continued)

perceives as having harmed him.

hostile, revengeful, belligerent,
blunt, retaliative.

Autonomy

Tries to break away from re-
straints, confinement, or re-
strictions of any kind; enjoys
being unattached, free, not tied
to people, places or obligations;
may be rebellious when faced
with restraints.

unmanageable, free, self-reliant;
independent, autonomous, rebell-
ious, unconstrained, individual-
istic, ungovernable, self-deter-
mined, non-conforming, uncon-
pliant, undominated, resistant,
lone-wolf.

Dominance

Attempts to control his environ-
ment, and to influence or direct
other people; expresses opinions
forcefully; enjoys the role of
leader and may assume it spon-
taneously.

governing, controlling, comman-
ding, domineering, influential,
persuasive, forceful, ascendant,
leading, directing, dominant,
assertative, authoritative, pow-
erful, supervising.

Endurance

Willing to work long hours;
doesn't give up quickly on a

persistent, determined, steadfast,
enduring, unfaltering, persever-

Appendix G (continued)

	problem; persevering, even in the face of great difficulty; patient and unrelenting in his work habits.	ing, unremitting, relentless, tireless, dogged, energetic, has stamina, sturdy, zealous, durable.
Exhibition	Wants to be the center of attention; enjoys having an audience; engages in behavior which wins the notice of others; may enjoy being dramatic or witty.	colorful, entertaining, unusual, spellbinding, exhibitionistic, conspicuous, noticeable, expressive, ostentatious, immodest, demonstrative, flashy, dramatic, pretentious, showy.
Harmavoidance	Does not enjoy exciting activities, especially if danger is involved; avoids risk of bodily harm; seeks to maximize personal safety.	fearful, withdraws from danger, self-protecting, pain-avoidant, careful, cautious, seeks safety, timorous, apprehensive, precautionary, unadventurous, avoids risks, attentive to danger, stays out of harm's way, vigilant.
Impulsivity	Tends to act on the "spur of the	hasty, rash, uninhibited, spontaneous.

Appendix G (continued)

	moment" and without deliberation, gives vent readily to feelings and wishes; speaks freely; may be volatile in emotional expression.	taneous, reckless, irrepressible, quick-thinking, mercurial, impatient, incautious, hurried, impulsive, foolhardy, excitable, impetuous.
Nurturance	Gives sympathy and comfort; assists others whenever possible, interested in caring for children, the disabled, or the infirm; offers a "helping hand" to those in need; readily performs favors for others.	sympathetic, paternal, helpful, benevolent, encouraging, caring, protective, comforting, maternal, supporting, aiding, ministering, consoling, charitable, assisting.
Order	Concerned with keeping personal effects and surroundings neat and organized; dislikes clutter, confusion, lack of organization; interested in developing methods for keeping materials methodically organized.	neat, organized, tidy, systematic, well-ordered, disciplined, prompt, consistent, orderly, clean, methodical, scheduled, planful, unvarying, deliberate.

Appendix G (continued)

Play

Does many things "just for fun"
spends a good deal of time participating in games, sports, social activities and other amusements;
enjoys jokes and funny stories;
maintains a light-hearted, easy going attitude toward life.

Social Recognition

Desires to be held in high esteem by acquaintances; concerned about reputation and what other people think of him; works for the approval and recognition of others.

playful, jovial, jolly, pleasure-seeking, merry, laughter-loving, joking, frivolous, prankish, sportive, mirthful, fun-loving, gleeful, carefree, blithe.

approval seeking, proper, well-behaved, seeks recognition, courteous, makes good impression, seeks respectability, accommodating, socially proper, seeks admiration, obliging, agreeable, socially sensitive, desirous of credit, behaves appropriately.

Understanding

Wants to understand many areas of knowledge; values synthesis of ideas, exploring, intellectual, reflective,

inquiring, curious, analytical,

Appendix G (continued)

	verifiable generalization, logical thought, particularly when directed at satisfying intellectual curiosity.	incisive, investigative, probing, logical, scrutinizing, theoretical, astute, rational inquisitive.
Infrequency	Responds in implausible or pseudo- random manner, possible due to carelessness, poor comprehension, passive non-compliance, confusion, or gross deviation.	

APPENDIX H

Transcript of "Victim's" Utterances (90 seconds)

Oh my leg...Oh help...Oh..What happened to me...Oh..Oh.....
my leg..Oh..Ah..Ah...Oh, it hurts...Oh..Oh Help...Oh Help...
Oh my leg...Oh my leg...What happened...Oh...Oh...Oh...Oh...
Ah...My leg...it hurts...Oh my leg... Christ am I....Oh.....
Oh...Ohhhh...My leg....Ehhh...Ohhhh...Ohhhh...it happened...
Oh my leg...Oh God...Ehhh...it hurts....Help me...Oh shit..
Help....Ohh...Ohhh....Ohhhh...Ohhhh...Ohhh...Help me.....
My leg....Ohhhh.....

APPENDIX I

Debriefing Sheet

The purpose of this study was to explore the many factors that go into how a person reacts to the sounds of an accident occurring near them. Very little research has been done on this subject and so much of what we are trying is entirely new. We could not really predict how people would respond. Prior research has indicated that there is often a big difference between what people say they would do in a certain situation and what they actually do. For that reason, we felt that if we wanted to find out how people would react, we would have to devise a situation and then observe them. We were concerned that if we told people ahead of time that they were going to be exposed to a simulated emergency, that their awareness might affect the spontaneity of their behavior. Therefore, we had to suggest to our subjects that we were studying ESP when, in fact, we were studying something else. Please be assured that we would not have used this deception if we did not feel that it was necessary. We hope that you understand the reason for this. If you feel that we could have accomplished our research objectives in some other way, without having to hide our real purpose, please let us know. It makes us uncomfortable to have to use this method, yet we know of no other way, at the present time, to accurately predict how people will respond.

The study was designed to create an emergency but to intervene to help would appear to entail considerable risk.

Appendix I (Continued)

That is why we used tape recorded electrical sounds and the "High Voltage" sign on the door. We were aware that everyone is naturally fearful of getting shocked or being close to live electricity. In addition, half of the subjects were led to believe that there was another bystander on the other side of the curtain - this too, serves to discourage active intervention. Please be assured that your reaction to this particular situation was expected and is in no way unusual.

Your participation in this study makes a very positive contribution toward our understanding of behavior in high risk situations. Both the tests you took and your response to the simulated emergency, provide important data for our analysis. The time and effort you have expended will, hopefully, aid us to better understand this vital subject.

One final, but extremely important point. Your friends, classmates, or fraternity brothers are likely to ask you about the experiment. Please DO NOT, under ANY circumstances, TELL THEM ANYTHING about the study except that it involved extra sensory perception. If pressed, you can tell them about the cards, but please say nothing about the simulated emergency. I'm sure you realize that if they came into the situation knowing beforehand what you know now, that this would seriously flaw the study and negate any possible benefit this study may have. Your own particular contribution to the scientific value of this study will be wiped out if

Appendix I (Continued)

potential subjects know what to expect.

My sincerest thanks for your help - seriously - I really appreciate your giving me a hand.

If you have any questions or comments, let's discuss them now, while this experience is fresh in your mind.

APPENDIX J

Post Experimental Questionnaire

1. When you heard that loud noise in the next room what was the very first thing that went through your mind?

2. Then what did you think had happened?

3. How much stress and anxiety did you experience when you heard the "emergency" occurring in the next room?

none	little	some	moderate amount	a great deal
0	6(7%)	13(16%)	18(22%)	46(55%)*

4. How dangerous did you believe it would be to go into the room where the "accident" had occurred?

not at all	somewhat	quite	very
dangerous	dangerous	dangerous	dangerous
19(24%)	30(38%)	14(18%)	15(19%)**

5. Did you believe that anyone else could hear the emergency occurring? No Yes (If Yes, who _____)

6. How suspicious were you of the "emergency"?

not at all	somewhat	quite	very
suspicious	suspicious	suspicious	suspicious
53(68%)	17(22%)	5(6%)	3(4%)**

7. How do you feel about the experiment as a whole?

very dull	dull	so-so	interesting	very interesting
0	0	0	9(11%)	72(89%***

8. How would you feel about participating in a similar study in the future?

very unwilling	unwilling	not sure	willing	very willing
0	0	1(1%)	17(21%)	64(78%****

9. Do you feel that deception was necessary and justified in this experiment?

No	Yes	Not sure
0	81(99%)	1(1%****

Appendix J (Continued)

10. If you were to submit a bill requesting payment for participating in this experiment, what amount from \$1.00 to \$20.00 would you charge? _____

Why?

11. Please be completely frank in answering this question.
Did you know before this evening that you would be exposed to a simulated emergency?

Yes	No
0	83(100%)*

* N=83

** N=78

*** N=81

**** N=82

APPENDIX K

RTS Item: Intercorrelation Matrix

	1	2	3	5	6	7	8	9	11	12	13	14	15	16	18
1															
2	.209														
3	.331	.319													
5	.250	.235	.341												
6	.277	.596	.348	.407											
7	.225	.145	.142	.287	.319										
8	.406	.207	.324	.328	.410	.271									
9	.137	.279	.344	.351	.368	.226	.343								
11	.016	.057	.058	.159	.264	.380	.122	.197							
12	-.036	.256	.234	.178	.396	.210	.204	.179	.118						
13	.323	.141	.298	.330	.314	.043	.320	.330	-.134	.075					
14	.151	.144	.061	.265	.278	.278	.173	.310	.324	.023	.197				
15	.378	.280	.384	.470	.430	.169	.517	.338	.209	.268	.321	.398			
16	.184	.237	.277	.021	.242	.107	.251	.353	.012	-.011	.253	-.076	.051		
18	.336	.201	.223	.345	.506	.227	.424	.270	.062	.259	.258	.167	.443	.237	

APPENDIX L

Physical Layout Of Experimental Setting