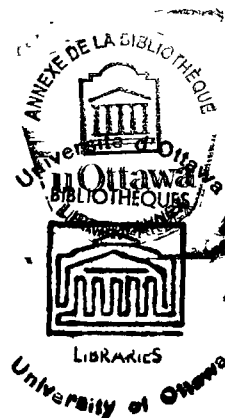


A STUDY OF FACTORS AFFECTING
THE DEFENSIVE ATTRIBUTION
OF RESPONSIBILITY TO OTHERS

by Kenneth R. MacKinnon

Thesis presented to the School of
Graduate Studies of the University
of Ottawa as partial fulfillment of
the requirements for the degree
Master of Arts



Ottawa, Canada, 1976

UMI Number: EC55694

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI[®]

UMI Microform EC55694
Copyright 2011 by ProQuest LLC
All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

ACKNOWLEDGEMENTS

This thesis was prepared under the supervision of Professor Henry Edwards, Ph.D., of the Faculty of Psychology of the University of Ottawa.

The author is also greatly indebted to Dan Lee, Ph.D., for his helpful criticism, and to Henry Coady, Ph.D., Don Henry, Ph.D., Julius Roehl, Ph.D., Norman Daigle, and Charles Murray, whose collaboration helped make this project a reality.

CURRICULUM STUDIORUM

Kenneth Robert MacKinnon was born on September 10, 1952, in Ottawa, Ontario. He received a Bachelor of Science degree from the University of Ottawa in 1973.

TABLE OF CONTENTS

Chapter	page
INTRODUCTION.....	ix
I.- REVIEW OF THE LITERATURE.....	1
1. Severity of Outcome	2
2. Situational Ambiguity	9
3. Situational Forseeability	13
4. Situational Relevance	19
5. Cognitive Set of the Observer	22
6. Sex of the Observer	25
7. Internal-External Locus of Control	28
8. The Dependent Measures	31
9. Summary and Hypotheses	33
II.- METHOD.....	36
1. The Subjects	36
2. Design	37
A) Cognitive Set of the Observer	38
B) Situational Relevance	39
C) Severity of Outcome, Situational Ambiguity, and Situational Forseeability	40
D) Sex of the Observer	43
E) The Dependent Measures	44
F) Built-In Checks	45
G) Personality of the Observer	48
3. Procedure	50
4. Statistical Analyses	53
III.- PRESENTATION AND DISCUSSION OF RESULTS.....	56
1. Presentation of Results	56
A) Independent Variable Manipulation Data	56
B) Sex and Covariate Data	58
C) Attribution of Responsibility Data	62
D) Attribution of Ability Data	68
E) Attribution of Effort Data	76
2. Discussion of Results	91
3. Suggestions for Further Research	98
SUMMARY AND CONCLUSIONS.....	102
BIBLIOGRAPHY.....	104

TABLE OF CONTENTS

v

Appendix	page
A. TWO SEPARATE INTRODUCTION SHEETS, EACH OF WHICH WAS GIVEN TO ONE-HALF OF THE SUBJECTS.....	108
B. EIGHT BASIC STIMULUS DESCRIPTIONS, EACH OF WHICH REPRESENTS ONE COMBINATION OF THE LEVELS OF THE FOLLOWING THREE INDEPENDENT VARIABLES: SITUATIONAL AMBIGUITY, SITUATIONAL FORSEEABILITY, AND SEVERITY OF OUTCOME.....	111
C. RATING SCALES WHICH PROVIDED MEASURES OF THE THREE DEPENDENT VARIABLES, THE FOUR INDEPENDENT VARIABLES, AND ONE OF THE TWO COVARIATES, SITUATIONAL RELEVANCE.....	120
D. NOWICKI-STRICKLAND INTERNAL-EXTERNAL LOCUS OF CONTROL SCALE FOR ADULTS.....	123
E. RAW SCORES FOR THE THREE DEPENDENT MEASURES, THE FOUR INDEPENDENT VARIABLES, AND THE TWO COVARIATES.....	127
F. ABSTRACT OF <u>A Study of Factors Affecting the Attribution of Responsibility to Others</u>	133

LIST OF TABLES

Table	page
I.- t-Ratios Testing the Success of the Manipulation of the Independent Variables.....	57
II.- Correlations Between the Covariates and the Dependent Variables While Including the Sex of the Observer Variable.....	59
III.- Analysis of Covariance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Responsibility Scores of Male Observers.....	63
IV.- Analysis of Covariance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Responsibility Scores of Female Observers.....	64
V.- Simple Main Effects Analysis: Effects of Cognitive Set, and Forseeability on Attribution of Responsibility Scores of Female Observers.....	65
VI.- Analysis of Variance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Ability Scores of Male Observers.	69
VII.- Simple Simple Main Effects Analysis: Effects of Cognitive Set, Forseeability, and Ambiguity on Attribution of Ability Scores of Male Observers.....	71
VIII.- Analysis of Variance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Ability Scores of Female Observers.....	75
IX.- Analysis of Covariance: Effects of Cognitive Set Forseeability, Ambiguity, and Severity on Attribution of Effort Scores of Male Observers.....	77

LIST OF TABLES

vii

Table	page
X.- Simple Simple Main Effects Analysis: Effects of Cognitive Set and Forseability on Attribution of Effort Scores of Male Observers.....	79
XI.- Analysis of Covariance: Effects of Cognitive Set, Forseability, Ambiguity, and Severity on Attribution of Effort Scores of Female Observers.....	81
XII.- Simple Simple Simple Main Effects Analysis: Effects of Cognitive Set, Forseability, Ambiguity, and Severity on Attribution of Effort Scores of Female Observers.....	83
XII.- continued.....	84

LIST OF FIGURES

Figure	page
1.- Diagram of the Interaction Between Cognitive Set and Forseeability on Responsibility Attribution Scores of Female Observers.....	67
2.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, and Situational Ambiguity on Ability Attribution Scores of Male Observers.....	72
3.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, and Situational Ambiguity on Ability Attribution Scores of Male Observers.....	73
4.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, and Situational Ambiguity on Ability Attribution Scores of Male Observers.....	74
5.- Diagram of the Interaction Between Cognitive Set, and Forseeability on Effort Attribution Scores of Male Observers.....	80
6.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Effort Attribution Scores of Female Observers.....	85
7.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Effort Attribution Scores of Female Observers.....	87
8.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Attribution of Effort Scores of Female Observers.....	88
9.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Effort Attribution Scores of Female Observers.....	90

INTRODUCTION

As is clear from the title of this dissertation, its purpose is to help delineate those factors which significantly contribute to the amount of responsibility that is attributed by observers to other people for their behaviour. The study of the responsibility attribution process will focus on the evaluation of the defensive attribution hypothesis postulated by Walster¹. This hypothesis proposes that the degree of responsibility attributed is significantly affected by the severity of the consequences of the behaviour being evaluated. Though this hypothesis has already been the focus of a considerable amount of research attention, the findings have been too inconsistent for any definite conclusions to be drawn as to the validity of the hypothesis. It might be said, however, that in general the results indicate that the responsibility attribution process is more complex than originally thought. It is hoped that the present investigation, a further test of the defensive attribution hypothesis, will shed some light on this complex process.

Chapter I provides the rationale for the specific focus of the present research through a critical review of

¹ E. Walster, "Assignment of Responsibility for an Accident" in Journal of Personality and Social Psychology, Vol. 3, No. 1, 1966, p. 73-79.

the pertinent literature and ends with a statement of the hypotheses to be evaluated. A description of the sample and procedures utilized for testing the hypotheses are presented in Chapter II. Chapter III contains a presentation and discussion of the results of the experiment. The text terminates with a Summary and Conclusions section.

CHAPTER I

REVIEW OF THE LITERATURE

Attribution of responsibility, the study of those factors that influence the degree to which we hold a person responsible for his behaviour, is an area of social psychology that is receiving an increasing amount of research attention. It is one aspect of an increasing research interest in person perception, a trend which has resulted in the study of the attribution process being one of the most dynamic areas of social psychology today. More specifically, the burgeoning interest in responsibility attribution seems at least partially due to an increasing awareness of the strong likelihood that responsibility attribution plays an important role in determining interpersonal behaviour. For example, the degree to which a person is friendly or hostile towards another, accepting or rejecting of the other, and so on, may well be mediated to a significant extent by the degree to which the person attributes responsibility to the other for his behaviour.

Unfortunately, the results of those studies done to date which have tried to discern exactly which factors affect the responsibility attribution process, and how they affect this process, have largely been inconsistent. There is thus need for further research, and hence the present study.

So as to help clarify the contradictions and problem areas in the literature, and facilitate the comprehension of what exactly the present author plans to investigate in the proposed experiment, the review of the literature will be broken down into a number of sections. Each section will review the literature pertinent to one of the variables whose effect on responsibility attribution has previously been investigated.

Severity of Outcome

One factor which has received a considerable amount of research attention is the severity of the outcome of an event. In 1966, Walster¹ predicted that the more severe the negative consequences of an accident, the more responsibility for its occurrence will be assigned, by the observer, to the person potentially at fault. She argued that this occurs because of a human tendency toward "defensive attribution", a self-protective process whereby the observer would rather not assign responsibility for a serious accident to chance because it would imply that such an event is beyond anyone's

¹ E. Walster, "The Assignment of Responsibility for an Accident" in Journal of Personality and Social Psychology, Vol. 3, 1966, p. 73.

power to control. If this were so, the painful event might happen to the observer at some future time. So as to preclude this possibility, the observer assigns greater responsibility to the person involved and less responsibility to chance as the consequences of the accident become more severe.

Walster² found support for her hypothesis in a study where subjects heard about a student's car causing an accident after a disengaged brake allowed the unattended vehicle to roll down a hill. Subjects saw the student-owner as more responsible when the runaway auto caused severe consequences (vehicle destruction or serious injury to innocent bystanders) than when the consequences were mild (a dented fender).

Consistent with the above, Lerner³ and Lerner and Matthews⁴ found that subjects who were randomly assigned to experimental treatments with negative outcomes were judged responsible for their fate by observers. In addition,

2 E. Walster, Op. cit., p. 73-79.

3 M. J. Lerner, "The Effect of Responsibility and Choice on Partner's Attractiveness Following Failure" in Journal of Personality, Vol. 33, 1965, p. 178-187.

4 M. J. Lerner and G. Matthews, "Reactions to Suffering of Others Under Conditions of Indirect Responsibility" in Journal of Personality and Social Psychology, Vol. 5, 1967, p. 319-325.

Lerner and Simmons⁵ found that observers devalued these subjects on interpersonal attractiveness ratings.

Shaw and Skolnick⁶, in an extension of the defensive attribution hypothesis to positive outcomes, predicted that the more severe the positive outcome of a "happy" accident the less responsibility will be attributed by the observer to the person involved. Instead, as severity increases greater responsibility will be attributed to chance, thus increasing the likelihood that such a fortuitous outcome might happen to the observer.

Shaw and Skolnick⁷ found empirical support for their extension of the defensive attribution hypothesis in an experiment where subjects read about a student in a chemistry laboratory who mixed two chemicals. The result was either a pleasant scent (mild positive outcome) or a major scientific discovery (severe positive outcome). As predicted, subjects attributed greater responsibility to the student for the mild positive outcome and greater responsibility to chance for the severe positive outcome.

5 M. J. Lerner and C. H. Simmons, "Observer's Reaction to the 'Innocent Victim': Compassion or Rejection" in Journal of Personality and Social Psychology, Vol. 2, 1966, p. 203-210.

6 J. I. Shaw and P. Skolnick, "Attribution of Responsibility for a Happy Accident" in Journal of Personality and Social Psychology, Vol. 18, No. 3, 1971, p. 381.

7 J. I. Shaw and P. Skolnick, Op. cit., p. 380-383.

However, not all attempts to demonstrate the effect of the severity of outcome variable on attribution of responsibility have been successful. There are a number of studies which have failed to unveil any such effect. The first such failure was Walster's⁸ 1967 attempts to replicate her earlier findings. In her first experiment, subjects read about a woman who gained or lost money as a consequence of buying a house at the base of some hills. The manipulation of severity for the loss condition was accomplished by describing a mud landslide which either damaged the whole home (severe negative outcome), damaged a good portion of the home (somewhat negative outcome), or damaged the basement (mild negative outcome). The manipulation of severity for the gain condition was accomplished by describing a mud landslide which did not cause damage but which exposed either a very small quantity (mild positive outcome), a somewhat large quantity (somewhat positive outcome), or a large quantity (severe positive outcome) of a valuable mineral. Contrary to expectations, attribution of responsibility to the woman did not increase with increasing severity of negative consequences. Moreover, neither did attribution of responsibility to the woman decrease with increasing severity

⁸ E. Walster, " 'Second Guessing' Important Events" in Human Relations, Vol. 20, 1967, p. 239-250.

of positive consequences. In a second experiment closely resembling the first one, Walster was again unable to discern any relationship between severity of outcome and attribution of responsibility. This time the stimulus information described a man who gained or lost various amounts of money as a consequence of buying a house in a remote area of Nevada. As in the first experiment, attribution of responsibility to the man did not increase with increasing severity of negative consequences and did not decrease with increasing severity of positive consequences.

Shaver, in two separate experiments, also studied the relationship between severity of outcome and attribution of responsibility. In the first experiment⁹, subjects read about a mechanical engineer at an open house who was demonstrating for visitors the operation of an hydraulic machine used for tensile strength tests. While he was called away to answer the phone, the alloy sample being tested shattered, sending splinters everywhere, one of which lodged either in a child's wrist (mild negative consequence) or in the child's eye, causing permanent loss of sight in that eye (severe negative consequence). No relationship was found between the severity of the consequences of the accident and the degree of responsibility attributed to the engineer.

9 K. G. Shaver, "Effects of Severity and Relevance on the Responsibility Assigned for an Accident" in Journal of Personality and Social Psychology, Vol. 14, No. 2, 1970, p. 101-113.

Shaver's second experiment¹⁰ was essentially a replication of Walster's 1966 study. Shaver, however, did not obtain the same positive correlation between responsibility attribution and outcome severity that Walster had obtained. As with her first experiment, Shaver did not discern any consistent relationship between the two variables.

Other studies which have not supported Walster's original hypothesis are those of Crinklaw and Vidmar¹¹ and McKillip and Posavac¹². Crinklaw and Vidmar, in 1971, investigated the relationship between responsibility attribution and a number of other variables, severity of outcome among them. They found no interpretable significant differences in the degree of responsibility attributed to the persons involved. McKillip and Posavac, in 1975, also failed to marshal support for the defensive attribution hypothesis as proposed by Walster. They found no significant differences

10 K. G. Shaver, "Redress and Conscientiousness in the Attribution of Responsibility for Accidents" in Journal of Experimental Social Psychology, Vol. 6, 1970, p. 100-110.

11 L. D. Crinklaw and N. Vidmar, "Attributing Responsibility for an Accident: Two Integrative Attempts" in Research Bulletin No. 186, University of Western Ontario, June 1971.

12 J. McKillip and E. J. Posavac, "Judgments of Responsibility for an Accident" in Journal of Personality, Vol. 43, 1975, p. 248-265.

in attribution of responsibility between mild and severe negative consequences. Neither did they find any differences between mild and severe positive consequences.

It is quite clear from the above that the bulk of the early literature in this area does not support Walster's hypothesis that responsibility attribution is severity dependent. However, this has not led to a lessening of interest in this topic. Rather, it has led researchers to search for other variables which might mediate the relationship between outcome severity and responsibility attribution. Shaver spoke for many when she stated, when referring to the above mentioned failures to demonstrate that responsibility attribution is severity dependent:

These results are surprising because greater attribution of responsibility for severe accidents would seem to be 'overdetermined' - by the self-protective tendency, by the belief in a 'just world', and by a moral necessity to affix blame. Since these considerations suggest that severity-dependent attribution is not to be rejected out of hand, one problem for future research is to specify the conditions under which such attribution occurs.¹³

Shaver's comment was made in 1970. Since this time, the relevance of many other variables to the attribution process have been investigated. Among those considered

13 K. G. Shaver, Op. cit., p. 109.

have been the following variables: situational ambiguity, situational foreseeability, situational relevance, the cognitive set of the observer, the sex of the observer, and the personality of the observer. The literature pertaining to each of these variables will be considered in turn.

Situational Ambiguity

The importance of this variable was first posited in 1972 by Phares and Wilson¹⁴. After reviewing the literature on the relationship between severity of outcome and attribution of responsibility, these authors proposed that perhaps the inconsistencies in the findings were due to the failure to consider the possibility that the relationship between severity and responsibility is mediated by the situational ambiguity-structure dimension. They argued that perhaps the relationship between severity and responsibility exists only when the situation is structured, that is, only when the guilt of the person involved is clear and unambiguous. Otherwise, when the situation is such that there exists significant mitigating circumstances, so that the degree of guilt of the person involved becomes quite ambiguous,

14 E. J. Phares and K. G. Wilson, "Responsibility Attribution: Role of Outcome Severity, Situational Ambiguity, and Internal-External Control" in Journal of Personality, Vol. 40, 1972, p. 392-406.

responsibility attributed to the person will be much less and the dependency of responsibility attribution on outcome severity will disappear. Phares and Wilson¹⁵ proposed that this latter trend occurs because of the broad acceptance throughout Western culture of the legal tradition of judging a person innocent until proven guilty. These authors tested their hypothesis by having subjects rate a number of accident reports which varied both in severity of consequences and in situational ambiguity. In accordance with prediction, more responsibility was attributed in structured cases than in ambiguous cases. Moreover, again as predicted, significantly greater responsibility was attributed for the severe outcome than for the mild outcome only when the situation was structured. In the ambiguous situations, there existed no correlation between severity and responsibility.

Medway and Lowe¹⁶ have also tried to discern the reasons for the inconsistencies in the attribution of responsibility literature. After a brief review of the existing literature, these authors suggested that perhaps

15 E. J. Phares and K. G. Wilson, Op. cit., p. 394.

16 F. J. Medway and C. A. Lowe, "Effects of Outcome Valence and Severity on Attribution of Responsibility" in Psychological Reports, Vol. 36, 1975, p. 239-246.

the main reason Walster's defensive attribution hypothesis has not received much empirical support is that the bulk of the attempts at research validation have not met certain prerequisites theoretically considered necessary for the occurrence of defensive attribution. Based on the theoretical analyses of Heider¹⁷ and Jones and Davis¹⁸, Medway and Lowe¹⁹ proposed the following three prerequisites of defensive attribution: (1) ambiguity of the stimulus situation; (2) high involvement of subjects; and (3) equal likelihood of occurrence of both mild and severe outcomes. The first prerequisite, ambiguity, is suggested because these authors consider defensive attribution an "irrational" response, a perceptual distortion which is facilitated if the situation being evaluated is quite ambiguous. Otherwise, if the situation is too unambiguous, if it is quite clear that the person involved is either innocent or guilty, defensive distortion is far less likely to occur. The evidence is just too strong, for or against, for there to be much room for distortion. It will be noted that this prerequisite of

17 F. Heider, The Psychology of Interpersonal Relations, New York, Wiley, 1958, 322 p.

18 E. E. Jones and K. E. Davis, "From Acts to Dispositions: The Attribution Process in Person Perception" in E. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. II, New York, Academic Press, 1965, p. 219-266.

19 F. J. Medway and C. A. Lowe, Op. cit., p. 240.

Medway and Lowe's is the exact opposite of Phares and Wilson's who, as will be remembered from above, posited that a structured situation facilitates defensive attribution.

The second prerequisite, high involvement of subjects, is proposed because without it there would be little impetus for defensive attribution. If the situation is such that it is highly improbable or if it is irrelevant or uninteresting to the observer, it is highly unlikely that the observer will colour his perception of it. There is simply no need for such self-protective perceiving.

The third prerequisite, equal likelihood of occurrence of both mild and severe outcomes, is suggested so as to preclude the possibility that differences in responsibility attributed for mild and severe outcomes should be due to differences in the likelihood of the outcomes. If, for example, the severe outcome was far less likely to occur than the mild outcome, a greater amount of responsibility might well be attributed for the mild outcome simply because it was far more likely to occur.

Medway and Lowe designed an experiment which attempted to meet the above requirements for the occurrence of defensive attribution. They studied the effects of the severity (mild or severe) and the directionality (positive or negative) of the outcome on responsibility attribution using a paradigm

where subjects read about students who did either very well or very poorly on an exam. Consistent with expectations, they found that observers attributed greater responsibility for severe negative consequences than for mild negative consequences in an ambiguous situation. For the positive outcomes, although the results were in the expected direction, the differences in attribution were not significant.

In summary, the two articles which have considered the situational ambiguity variable make proposals as to how it interacts with the severity of outcome variable which are diametrically opposed to each other. Furthermore, both sides found empirical support for their positions. If one assumes that both studies are valid as far as they go, it becomes likely that the contradictory results are due to the effect of one or more previously non-investigated variables on which the two studies differ. There is some evidence that situational foreseeability is one of those variables.

Situational Foreseeability

Foreseeability as a variable relevant to the attribution process first cropped up in a book by Heider²⁰. In this book, Heider proposed that foreseeability is one of

20 F. Heider, Op. cit., 322 p.

the five levels at which one can attribute responsibility.

The five levels are:

- (1) level of association --- this is the most primitive level. It is where the person involved is held responsible for all effects which are in any way associated with him.
- (2) level of commission --- level at which the person involved is held responsible if he was instrumental in producing the observed effects.
- (3) level of foreseeability --- level at which the person involved is held responsible only if he could have foreseen the effects, even though he might not have intended to produce them.
- (4) level of justification --- level at which the person involved is held responsible only to the extent that his intended behaviour was not justifiable.
- (5) level of intentionality --- level at which the person involved is held responsible only for effects he foresaw and intended.

Shaw and his associates, Sulzer²¹ and Reitan²², adopted Heider's schema. They then postulated that as the behavioural context (situation) fits each successive level of Heider's schema, greater attribution of responsibility is made to the person involved. Thus, for example, there would be greater responsibility attributed by an observer in a situation where the consequences were foreseeable (level 3) rather than in a situation where the consequences were not foreseeable (level 2) to the person involved. The authors performed a number of experiments, with both children and adults, using quite a few different stories to represent each level of Heider's schema. Consistently throughout, their results supported the above hypothesis that the amount of responsibility attributed increases with each successive level of Heider's schema.

At this point in the review, it is important to realize that the great bulk of the attribution of responsibility literature deals only with situations where the behaviour of the person in question was not intended.

21 M. E. Shaw and J. L. Sulzer, "An Empirical Test of Heider's Levels in Attribution of Responsibility" in Journal of Abnormal and Social Psychology, Vol. 69, 1964, p. 39-46.

22 M. E. Shaw and H. T. Reitan, "Attribution of Responsibility as a Basis for Sanctioning Behaviour" in British Journal of Social and Clinical Psychology, Vol. 8, 1969, p. 217-226.

Neither is it proposed to consider intentional behaviour in this study. Thus, it is no longer necessary to consider levels 4 and 5 of Heider's schema. Neither is it necessary to include level 1 because, in large part, only young children attribute responsibility at this level. Therefore, the present study will only consider levels 2 and 3 of Heider's schema, commission and foreseeability. If one then realizes that the only difference between levels 2 and 3 is in degree of foreseeability, it becomes quite feasible to place them along a continuum where level 2 is equivalent to low foreseeability and level 3 is equivalent to high foreseeability.

Other than the work of Shaw and his associates, no research attention has been focused either on the significance of Heider's schema in general, or the foreseeability variable in particular, to the attribution of responsibility process. There have, however, been a couple of theoretical articles which have considered these factors. Fishbein and Ajzen²³, in 1973, suggested that all future research on responsibility attribution should take into account Heider's levels in their design. Vidmar and Crinklaw²⁴, in a 1974 paper discussing

23 M. Fishbein and I Ajzen, "Attribution of Responsibility: A Theoretical Note" in Journal of Experimental Social Psychology, Vol. 9, 1973, p. 148-153.

24 N. Vidmar and L. D. Crinklaw, "Attributing Responsibility for an Accident: A Methodological and Conceptual Critique" in Canadian Journal of Behavioural Science, Vol. 6, No. 2, 1974, p. 112-130.

the limitations of the attribution of responsibility literature, made exactly the same point as did Fishbein and Ajzen. Vidmar and Crinklaw also go on to state that if one only considers non-intentional behaviour in a study, as it is planned to do in the present study, one should include the foreseeability variable in the design.

Are the contradictory results found for the two experiments in the previous section on situational ambiguity partially due, as was suggested at the end of that section, to the authors' not having considered the foreseeability variable in their designs? If one looks closely at the behavioural situations used by Phares and Wilson²⁵, it soon becomes apparent that the foreseeability of the event in the ambiguous situation cited is quite low while the foreseeability in the structured situation cited is quite high. In contrast, Medway and Lowe²⁶ studied an ambiguous situation where the foreseeability was fairly high. Thus, the possibility that the differences in the two studies are due partially to differential situational foreseeability presents itself directly. Accordingly, a tentatively affirmative response to the above question is suggested. The plausibility of this affirmative

25 E. J. Phares and K. G. Wilson, Op. cit., p. 392-406.

26 F. J. Medway and C. A. Lowe, Op. cit., p. 239-246.

response accrues empirical support from the studies of Shaw and Sulzer²⁷, Sulzer and Burglass²⁸, Shaw²⁹, and Shaw and Reitan³⁰. They all found that the effect of outcome intensity (severity) on responsibility attribution is much less at the level of commission than at the level of foreseeability. Therefore, it seems quite possible that people may only assign more responsibility for a serious rather than a mild outcome if they feel a perpetrator really ought to have foreseen the consequences of his behaviour. It is the prime purpose of this study to evaluate this hypothesis while including the situational ambiguity variable. In other words, the prime interest of this author is to study the severity of outcome X situational ambiguity-structure X situational foreseeability interaction.

27 M. E. Shaw and J. L. Sulzer, Op. cit., p. 39-46.

28 J. L. Sulzer and R. K. Burglass, "Responsibility Attribution, Empathy and Punativeness" in Journal of Personality, Vol. 36, 1968, p. 272-282.

29 M. E. Shaw, "Attribution of Responsibility by Adolescence in Two Cultures" in Adolescence, Vol. 3, 1968, p. 23-32.

30 M. E. Shaw and H. T. Reitan, Op. cit., p. 217-226.

Situational Relevance

Situational relevance, or the likelihood that the observer will find himself in a similar situation to that of the stimulus person, is a factor whose relevance to responsibility attribution was first postulated by Shaver³¹ in 1970. At that time, she proposed that defensive attribution will not be aroused in the observers unless the situation being observed is at least somewhat situationally relevant, that is, unless there is a fair possibility that they might find themselves in a similar situation. If the stimulus situation is not relevant, she argued, there would be no cause for any self-protective perceptual distortion on the part of the observers. Shaver goes on to suggest that lack of relevance is perhaps the main reason Walster's 1967 attempts to replicate her 1966 results was unsuccessful. She argues that mud slides, valuable mineral finds, and Nevada land deals are rather foreign events to the world of the typical high school and young university student that comprised Walster's samples.

31 K. G. Shaver, Op. cit., p. 106.

Similarly, Medway and Lowe³² stated, as noted earlier, that for defensive attribution to occur there must be high involvement of subjects and an equal likelihood of occurrence of both mild and severe outcomes. As an example of a study where the effects of defensive attribution might be confounded by differential situational relevance, Medway and Lowe cited Shaw and Skolnick's 1971 study. They pointed to the obvious differential relevance of the mild and severe positive outcomes. It is far more likely for a chemistry student to mix two chemicals and produce a pleasant scent (Shaw and Skolnick's mild positive outcome) than to make a major scientific discovery (Shaw and Skolnick's severe positive outcome). Medway and Lowe then hypothesized that perhaps Shaw and Skolnick's significant results were due largely to the probability that the severe positive outcome was too unlikely. Some support for this hypothesis comes from an experiment done by Feather and Simon³³ in 1971. These authors found that unexpected success was attributed to chance significantly more often than was expected success.

32 F. J. Medway and C. A. Lowe, Op. cit., p. 242.

33 N. T. Feather and J. G. Simon, "Attribution of Responsibility and Valence of Outcome in Relation to Initial Choice Confidence and Success and Failure of Self and Other" in Journal of Personality and Social Psychology, Vol. 16, 1970, p. 311-315.

Perhaps the best example of a study which has successfully manipulated situational relevance is the study done by Chaikin and Darley³⁴ in 1973. Their subject observers witnessed two people performing an experimental task during which one of the two people caused an accident which had negative consequences for the other person. The consequences for the second person were either the loss of a small amount of money (mild negative outcome) or a large amount of money (severe negative outcome). Situational relevance was insured by previously informing the subject-observers that they subsequently would be performing the experimental task they were now observing. Results of the experiment showed that the observers attributed significantly more responsibility to the person causing the accident when the consequences were severe than when the consequences were mild. These findings thus support the defensive attribution hypothesis.

In summary, situational relevance seems an important variable in the attribution process. As a consequence, it is planned to control the effect of this variable in the present investigation.

34 A. L. Chaikin and J. M. Darley, "Victim or Perpetrator?: Defensive Attribution of Responsibility and the Need for Order and Justice" in Journal of Personality and Social Psychology, Vol. 25, No. 2, 1973, p. 268-275.

Cognitive Set of the Observer

Another factor which has been of considerable interest to researchers in the attribution area is the cognitive set of the observer. As is well known, the cognitive set of a perceiver to a large extent determines the cues to which the perceiver is most sensitive. As a consequence, it has been hypothesized, by a number of authors (for example, Vidmar and Crinklaw³⁵), that the cognitive set of an observer significantly affects the extent to which responsibility is attributed by him to the stimulus person for his behaviour. Shaver^{36,37} invoked this hypothesis in an attempt to explicate her failures to replicate Walster's 1966 results. She suggested that perhaps her failures were due to the instigation of a different set in her subjects than that instigated by Walster in hers. Perhaps the cover story she used (testimony evaluation) induced into her subjects a rational, logical, evaluative set not induced by Walster's procedure (opinion research).

35 N. Vidmar and L. D. Crinklaw, Op. cit., p. 115.

36 K. G. Shaver, Op. cit., p. 111.

37 K. G. Shaver, Op. cit., p. 109.

Vidmar and Crinklaw³⁸, in the paper mentioned above, made essentially the same point. They stated that the majority of studies did not instill into their subjects an appropriate cognitive set with which to properly evaluate the defensive attribution hypothesis. So as to elaborate on this point, these authors made reference to the work of Jones and Thibault³⁹ on the analysis of inferential sets in person perception. Jones and Thibault suggest that as one individual begins to interact with another, each defines the goal he is seeking to achieve in the interaction and thereby assumes one of three inferential sets: value-maintenance, causal-genetic, or situation-matching. According to Jones and Thibault, the basic concern of a person in a value-maintenance set can best be summarized by the question: "What is the person being perceived doing to me or for me that makes me want to approach or avoid him?"⁴⁰. People in a causal-genetic set, on the other hand, are concerned with uncovering the underlying social, physical, psychological, and/or biological conditions which give rise to behaviour. Finally, people

38 N. Vidmar and L. D. Crinklaw, Op. cit., p. 116.

39 E. E. Jones and J. W. Thibault, "Interaction Goals as Bases of Inference in Interpersonal Perception" in R. Tagiuri and L. Petrullo (Eds.), Person Perception and Interpersonal Behaviour, Stanford, Stanford University Press, 1958.

40 E. E. Jones and J. W. Thibault, Op. cit., p. 86.

adapting the situation-matching set have as their main concern the evaluation of the behaviour of the stimulus person as it relates to the norms appropriate to the situation.

Making reference to this schema, Vidmar and Crinklaw stated the following:

Clearly, all versions of the defensive attribution hypothesis assume that the perceiver has a value-maintenance set concerned with securing motivational and value support for the manner in which he prefers to view the world and himself. However, many of the experiments on attribution of responsibility for an accident operationally created causal-genetic or situation-matching settings.⁴¹

Essentially, the point being made is that too many authors, by their experimental instructions, are instigating logical, rational and evaluative sets in their subjects while in the process of trying to evaluate what is largely an irrational response (defensive attribution).

Some empirical support for the above argument can be gleaned from an experiment done by the same authors in 1971⁴². Therein, Crinklaw and Vidmar instructed their subjects to take one of five roles covering the three inferential sets of Jones

41 N. Vidmar and L. D. Crinklaw, Op. cit., p. 116.

42 L. D. Crinklaw and N. Vidmar, "Inferential Sets, Locus of Control and Attribution of Responsibility for an Accident" in Research Bulletin No. 203, University of Western Ontario, September 1971.

and Thibault. Their results showed that subjects in the causal-genetic or situation-matching sets attributed more responsibility to environmental factors and less responsibility to the stimulus person than did subjects in the value-maintenance set.

As a consequence of the above, it is planned to include this variable, the cognitive set of the observer, as one of the independent variables in the present investigation.

Sex of the Observer

The research interest in this variable, sex of the observer, has fluctuated considerably through the years. There are a number of studies (for example, Phares and Lamiell⁴³) which have not at all considered the effect of this variable even though their samples have consisted of both males and females. There are also studies which have dealt with this variable by only using subjects of one sex (for example, McKillip and Posavac⁴⁴). Finally, there are those studies that have considered the effect of the sex variable.

43 E. J. Phares and J. T. Lamiell, "Internal-External Control, Interpersonal Judgements of Others in Need, and Attribution of Responsibility" in Journal of Personality, Vol. 43, 1975, p. 23-38.

44 J. McKillip and E. J. Posavac, Op. cit., p. 250.

Of these, about half seem to have uncovered sex differences while the other half have not. Among those which have not unearthed any sex differences are such studies as Medway and Lowe's⁴⁵ and Shaw and Sulzer's⁴⁶. Among those studies which have found sex differences are the experiments of Walster⁴⁷, Shaver⁴⁸, and Shaw and Skolnick⁴⁹.

Walster found an interaction between the sex of the observer variable and the severity of outcome variable. There were no differences in the amount of responsibility attributed by the women to the stimulus person between the mild and severe outcomes. There were significant differences for the men.

Shaver, in a study of the mitigating value of the knowledge that the stimulus person carried insurance, discovered that the mitigating effect of this knowledge was far greater for men than for women.

Shaw and Skolnick found that males identified more with the stimulus person and also considered him to be more trustworthy than did the females.

45 F. J. Medway and C. A. Lowe, Op. cit., p.242.

46 M. E. Shaw and J. L. Sulzer, Op. cit., p. 43.

47 E. Walster, Op. cit., p. 77.

48 K. G. Shaver, Op. cit., p. 107.

49 J. I. Shaw and P. Skolnick, Op. cit., p. 382.

In an effort to explain why they obtained sex differences and why some others have not, both Shaver and Shaw and Skolnick referred to the concept of situational relevance. They hypothesized that sex differences occur whenever the stimulus situation is such that it is differentially relevant for the two sexes. Shaw and Skolnick gave as an example their own study. Their stimulus situation was a male college student mixing two chemicals in a chemistry laboratory. They reasoned that male observers are far more likely to consider such a stimulus event as relevant for them. This hypothesis receives some support from the above mentioned finding that the males in the study did identify more and did consider the stimulus person as more trustworthy than did the females.

Vidmar and Crinklaw⁵⁰, in their review of the literature, agreed that the above interpretation is plausible. However, they also emphasized that equally plausible alternative explanations do exist. For one, it is quite possible that males and females weigh differently factors like severity of outcome, situational foreseeability, and the contribution of external variables to the attribution process. For another, males and females may select different cues, draw different

50 N. Vidmar and L. C. Crinklaw, Op. cit., p. 124.

inferences from these cues, or generalize to a different degree on the basis of limited information about a stimulus person.

In short, even though it is planned, in the present investigation, to try and have the stimulus situations equally relevant for both sexes, it will be necessary, when analyzing the results, to check for sex differences. We, as yet, simply do not know enough about how the sex of the observer variable affects attribution of responsibility.

Internal-External Locus of Control

There seems little doubt that an observer's personality and the degree of responsibility he attributes for events are inextricably related. However, there has not as yet been a great deal of research which has attempted to clarify this relationship. What research there has been has focused largely on Rotter's⁵¹ internal-external locus of control dimension.

Internal-external locus of control deals with the extent to which individuals attribute the responsibility for the occurrence of reinforcement to themselves (internals) or

⁵¹ J. B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement" in Psychological Monographs, Vol. 80 (1, Whole No. 609), 1966.

to forces outside themselves, such as luck, fate, chance, or powerful others (externals). Those authors which have tried to forge a link between internal-external locus of control and attribution of responsibility (for example, Sosis⁵²) have invoked Heider's⁵³ concept of assimilative projection as a theoretical backdrop for such a link. This concept refers to the tendency for people to egocentrically assume that whatever applies to themselves also applies to others. Extending the applicability of this concept to the internal-external dimension, these authors postulated that internals, as observers, would tend to consider the stimulus person as far more responsible for the consequences of his behaviour than would externals, who would have a greater tendency to point the accusing finger at extenuating external circumstances. Some support for such an hypothesis can be found in the work of DeCharms, Carpenter, and Kuperman⁵⁴. These authors, using the terms origin and pawn rather than internal and external, respectively, showed that people who perceived themselves as

52 R. H. Sosis, "Internal-External Control and the Perception of Responsibility of Another for an Accident" in Journal of Personality and Social Psychology, Vol. 30, No. 3, 1974, p. 393.

53 F. Heider, Op. cit., p. 32.

54 R. DeCharms, V. Carpenter, and A. Kuperman, "The 'Origin-Pawn' Variable in Person Perception" in Sociometry, Vol. 28, 1965, p. 241-258.

origins saw others as being primarily origins. Equivalently, they showed that people who saw themselves as pawns saw others as being more pawn than origin.

Four separate studies have actually studied the relationship between the internal-external control dimension and attribution of responsibility. All showed unequivocal support for the above hypothesis. The first, a previously mentioned investigation by Crinklaw and Vidmar⁵⁵, found an interaction between cognitive set, severity of outcome, and internal-external control. Internals, in a value-maintenance set, attributed more responsibility than did externals to the stimulus person when the outcome was severe. The second, an experiment by Phares and Wilson⁵⁶, obtained results that indicated that internals, in general, attribute significantly more responsibility to the stimulus person than do externals. Sosis⁵⁷, in 1974, also found a significant main effect for internal-external locus of control. Finally, a 1975 experiment by Phares and Lamiell⁵⁸ demonstrated that internals authorize less help and respond less sympathetically to others requesting help than do externals.

55 L. D. Crinklaw and N. Vidmar, Op. cit., p. 8.

56 E. J. Phares and K. G. Wilson, Op. cit., p. 402.

57 R. H. Sosis, Op. cit., p. 393-399.

58 E. J. Phares and J. T. Lamiell, Op. cit., p. 23-38.

There is thus consistent evidence that the personality variable, degree of internality, has a significant effect on the extent of responsibility attribution by observers to others. Consequently, it is planned to control the effects of this variable in the present experiment, so as to preclude the possibility that these effects would confound the interpretation of the effects of those independent variables that are of prime interest.

The Dependent Measures

The prime dependent variable in well nigh all the articles referred to in this review has been a rating scale measure of responsibility attribution. The present investigation will certainly adhere to this tradition. However, attribution theory, as espoused by Heider⁵⁹ and Jones and Davis⁶⁰, has further specified two subcomponents of responsibility - effort and ability. These writers argued that attribution of effort and attribution of ability should covary with attribution of responsibility. They hypothesized that changes in responsibility attribution due to variability in

59 F. Heider, Op. cit., p. 48.

60 E. E. Jones and K. E. Davis, Op. cit., p. 242.

the independent measures should be accompanied by analogous changes in effort attribution and ability attribution. It is important to note, however, that the fluctuations in ability attribution were predicted to be much smaller than those for either responsibility attribution or effort attribution. This is because ability is a far more stable disposition than effort and because ability is less central to personal causation.

Medway and Lowe's⁶¹ study is the only experiment to have utilized all three of the above measures of attribution at the same time. They found similar significant results for attribution of responsibility and attribution of effort. However, the differences were not significant when the dependent measure was attribution of ability. After discussing this finding, Medway and Lowe go on to conclude: "The present results suggest that inferences about 'effort' may be the most direct, sensitive, and measurable antecedent of moral attribution."⁶²

The present experiment is also organized so as to utilize all three of the above measures of attribution. This is done in the hope that it will further help clarify the

61 F. J. Medway and C. A. Lowe, Op. cit., p. 239-246.

62 F. J. Medway and C. A. Lowe, Op. cit., p. 245.

attribution process. More specifically, the plan is to see whether any support can be mustered for the above mentioned concluding comment of Medway and Lowe.

Summary and Hypotheses

In summary, the proposal is to investigate some of the factors involved in the complex process that is the attribution of responsibility, ability, and effort by an observer to others. More specifically, it is proposed to study the attribution of responsibility, the attribution of ability, and the attribution of effort for behaviour that has unintentional negative consequences while independently varying outcome severity (mild and severe), situational ambiguity (ambiguous and structured), situational foreseeability (low and high), and cognitive set of the observer (instigation of logical set and no instigation of logical set). It is also proposed to control any effect that situational relevance or internal-external locus of control might have on the attribution of responsibility, ability, or effort.

It is predicted that all four of the above independent variables will have a significant effect on responsibility attribution, ability attribution, and effort attribution. It is also predicted that a four way interaction will result. The review of the literature leads us to expect that the

differential effect of outcome severity on responsibility attribution, ability attribution, and effort attribution will be accentuated when the situation is structured, the foreseeability is high, and there is no instigation of a logical set. It is also predicted that situational relevance and internal-external locus of control will have a significant effect on the degree of responsibility, ability, and effort attributed to the stimulus person. Finally, no sex differences are anticipated if the manipulation of situational relevance is successful. This final prediction is very tentative because, as noted earlier, we as yet know very little about how the sex of the observer variable is related to the attribution of responsibility, ability, and effort.

The following are the hypotheses of the present study, presented in the null form.

Hypothesis 1 --- No significant differences in responsibility attribution, ability attribution, or effort attribution exist between the mild and severe outcome conditions.

Hypothesis 2 --- No significant differences in responsibility attribution, ability attribution, or effort attribution exist between the ambiguous situation and structured situation conditions.

Hypothesis 3 --- No significant differences in responsibility attribution, ability attribution, or effort attribution exist between the low foreseeability and high foreseeability conditions.

- Hypothesis 4 --- No significant differences in responsibility attribution, ability attribution, or effort attribution exist between the instigation of logical set and no instigation of logical set conditions.
- Hypothesis 5 --- No significant interactions exist between severity of outcome, situational ambiguity, situational foreseeability, and cognitive set of the observer in terms of their effect on responsibility attribution, ability attribution, or effort attribution.
- Hypothesis 6 --- No significant differences in responsibility attribution, ability attribution, or effort attribution exist between male observers and female observers.
- Hypothesis 7 --- No significant effect on responsibility attribution, ability attribution, or effort attribution will be produced by differences in situational relevance.
- Hypothesis 8 --- No significant effect on responsibility attribution, ability attribution, or effort attribution will be produced by differences in internal-external locus of control.

CHAPTER II

METHOD

The purpose of this chapter is to present a detailed exposition of the experimental methods utilized to test the hypotheses proposed earlier. The chapter is split into four separate sections. Section one presents the details of subject selection. The second section deals with that portion of the design which encompasses the manipulation of the independent variables and the measurement of the dependent variables. The details of the actual in-classroom procedure are presented in the third section. Finally, section four describes the statistical analyses appropriate to the testing of the given hypotheses.

1. The Subjects

The subjects for this experiment were 176 students enrolled in summer courses at the University of Ottawa. Of this total, 68 were male and 108 were female. It was required to utilize five separate classes to obtain the above-noted number of students. Permission to use two classes on the main campus in Ottawa was obtained. To get the other three classes, it was necessary to go off the main campus.

Two of these classes were obtained on the Cornwall extension of the University of Ottawa campus. The other class was obtained on the Pembroke extension of the university campus.

Since the questionnaires in this study are only in English, all participating students were required to have a working knowledge of the English language. So as to insure this, only students in classes that were being taught in English were considered for inclusion in the study.

All subjects who participated were volunteers. Moreover, none of them received any financial remuneration whatever for their cooperation.

2. Design

The experiment consisted of two parts. First, all subjects received an experimental booklet containing, in order: one sheet of instructions, one sheet upon which was typed a description of some academic difficulties a university student found himself in, and two sheets of rating scales. All subjects were requested to read the instructions first, then the description, and then make the ratings. Once they had finished this, they were asked to do the second part of the experiment. This consisted of answering a forty item questionnaire.

How, within the context of the above paradigm, were the variables of importance to the attribution process (as delineated in the previous chapter) manipulated and/or measured? This question can best be answered by considering each of the variables in turn.

A) Cognitive Set of the Observer - The interest was in studying two distinct conditions: (1) where there was the instigation of a logical, rational, evaluative set in the observers; and (2) where there was no such instigation. This manipulation was accomplished by having two different instruction sheets, each to be given to one half of the subjects. The first, the logical set, was instigated by utilizing the following instruction sheet:

Our interest is in studying the feasibility of having students on promotion committees. As you might well imagine, this would only be feasible to the extent that the students involved can be impartial in their evaluations of students being considered for promotion. The nature of the job also demands that the person involved be as logical and rational as possible. We would like you to assume that you are a student applying for a position on this committee. Then, we would like you to read the following description and answer the associated questions. Remember, it is important to be as logical and impartial as possible.

Similarly, the second condition was instigated as follows:

Our interest is in the variability of people's opinion of others. Consequently, it would greatly be appreciated if you would read the following description and then give us your opinion by answering the questions which are found after the description. Remember, there are no right or wrong answers. Also keep in mind that we are interested in your opinion and not in how you think others might react or in how you feel you should react to the given description.

It is to be noted that the essential difference between the above two instruction sheets is that the first one makes repeated requests to the subject to be logical and impartial while the second sheet makes no such requests, asking only for the subject's opinion.

B) Situational Relevance - As noted earlier, it is considered quite important that the situational relevance of the stimulus situation be quite high for the observers. In other words, it is important that the observers consider that there exists a strong likelihood that they will find themselves in a similar situation to that of the stimulus person. So as to insure that the stimulus situation in the present experiment was situationally relevant for the subject-observers, only university students were accepted as subjects in the study. It will be recalled that the story being evaluated described the academic difficulties of a university student. The

rationale for using only university students as subjects thus becomes clear. It was done because it guarantees that the subjects are in direct contact with at least a somewhat similar environment to that of the stimulus person.

C) Severity of Outcome, Situational Ambiguity, and Situational Forseeability - These three independent variables, severity of outcome, situational ambiguity, and situational forseeability, will all be considered together because all three were manipulated simultaneously within the description of the student with academic difficulties. The research interest was in studying the effects on attribution of two levels of severity of outcome (mild and severe), two levels of situational ambiguity (ambiguous and structured), and two levels of situational forseeability (low and high). Consequently, eight (2 X 2 X 2) different descriptions of a student with academic difficulties were needed so as to encompass all the varying combinations of the three independent variables.

For illustrative purposes, there follows two of the eight basic descriptions of the stimulus student, along with notations indicating which levels of the three independent variables these sample descriptions are illustrating.

(1) The following description illustrates the severe outcome, ambiguous situation, and high foreseeability condition:

Tom is a 20 year old student at a large Canadian university. A few weeks back, he wrote an important exam in one of his courses. The exam had consisted of 3 questions, chosen by the professor, out of the 8 on the list the professor had given the class a month or so before the exam. Around the same time he had given out the list of questions, the professor had suggested to Tom that he work harder since he was not doing all that well. However, Tom still did not get around to studying for the exam until 2 nights beforehand. This was much too late to properly prepare all 8 questions on the list. Tom realized this and thus decided to prepare only 4 questions thoroughly. This he did. The other 4 questions he hardly prepared at all. When asked by a friend, on the day of the exam, why he had waited so long before starting to study, Tom replied that it was because he had so much other work to do this year, particularly lately. He went on to say that the exam schedule had also worked against him. He was stuck writing four exams the same week and as a result did not really have the time to properly prepare for all his exams. To top it all off, he had been quite sick for three weeks the previous month. Consequently, he had fallen behind in his work and since had not quite been able to completely catch up. Unfortunately for Tom, the professor asked 3 questions on the exam that Tom had not prepared. Consequently, Tom failed his important exam quite miserably. To make matters even worse, Tom's failure means that he will have to put in an extra six hours of lab time during the next semester.

(2) The following description illustrates the mild outcome, structured situation, and low foreseeability condition:

Joan is a 19 year old student attending a large Canadian university. Just last week, she had been forced to write an important but surprise exam in one of her courses. Before the exam, Joan had not had any suspicion whatever that an exam was forthcoming. In fact, the professor in question had never been known to give surprise exams before. However, the professor involved had been giving regular reading assignments and at one point became angry with the class because it was obvious the majority of the students were not doing the assigned reading regularly. Furthermore, Joan was one of those students who was guilty of not having done most of her reading assignments. This was not because she had too much other work to do. In fact, this year was a rather easy one for Joan. She just never got around to it. There always seemed something better to do than to spend time doing her reading assignments. Joan did, however, listen in class. As a consequence, even though she did not do her reading assignments, she managed to almost pass her surprise exam. Joan failed this important exam by only a couple of marks.

Within the above descriptions, situational foreseeability was manipulated by either having the questions from which the exam was chosen given to the class one month beforehand (high foreseeability condition) or by having the exam being a total surprise to the students (low foreseeability condition). Similarly, situational ambiguity was manipulated by either having quite a few mitigating circumstances (for example, sickness the previous month) for the stimulus student (ambiguous situation) or by having no mitigating circumstances (structured situation).

Finally, severity of outcome was manipulated by either having the stimulus student fail the exam miserably (severe outcome condition) or by having the student fail by only a couple of marks (mild outcome condition).

The other descriptions of the stimulus student are listed in Appendix B.

D) Sex of the Observer - An effort was made to control the potential influence on attribution of responsibility of the sex of the observer variable by giving to female subjects descriptions of female stimulus students and by giving to male subjects descriptions of male stimulus students. The reader may have noticed that the first sample description above relates the predicament of a male student while the second sample description refers to a female student. The first sample description was given to a male subject and the second to a female subject. The rationale for this procedure was that it was likely to reduce the chances that the stimulus events would be differentially relevant for subjects of different sexes, thereby reducing the chances of obtaining sex-related differences in attribution of responsibility.

Incidentally, the decision to utilize the above procedure resulted in an increase in the number of stimulus situations, from eight to sixteen. There was now a need for eight stimulus situations involving males and eight stimulus

situations involving females, with no differences between the two groups of stimulus situations other than the sex of the person described.

E) The Dependent Measures - The three dependent variables in this study, attribution of responsibility, attribution of ability, and attribution of effort, were all measured using simple rating scales. After reading the instructions and the description of the stimulus student, each subject was asked to rate first how much he/she felt that the student was personally responsible for having failed the exam. Then, each subject was asked to rate how much they felt the failure on the exam was due to lack of ability and, finally, how much they felt that the failure was due to lack of effort on the part of the stimulus student.

An example of the sequence of questions that was asked follows:

(1) How responsible do you think Tom is for having miserably failed his scheduled exam?

	1	2	3	4	5	6	7	8	9
not at all responsible									completely responsible

(2) How much is Tom's failure in his scheduled exam due to lack of ability?

	1	2	3	4	5	6	7	8	9
not at all due to lack of ability									completely due to lack of ability

(3) How much is Tom's failure in his scheduled exam due to lack of effort?

	1	2	3	4	5	6	7	8	9
not at all due to lack of effort									completely due to lack of effort

The above ratings were made on a 9 point scale. This size of scale was employed because there is some evidence, provided by Warr and Knapper¹, that this is the most discriminating size of scale when the subject population is university students, as it is in this study.

F) Built-In Checks - Up to now, we have described how the independent variables were manipulated. As of yet, however, no methods have been delineated as to how the success of these manipulations might be verified. This section presents two such methods.

First of all, this writer brought together four people to act as raters. After a brief introduction, in which they were told only that the writer wished to carry out a study and that he wished them to be of help by rating some characteristics of some descriptions he would present to them, each person was independently asked to read the two sheets of instructions and the eight basic stimulus situations. Which

¹ P. B. Warr and C. Knapper, The Perception of People and Events, New York, Wiley, 1968, p. 76.

group of eight stimulus situations they received depended on the sex of the rater. As well, the raters did not receive all ten sheets at once but only one at a time. First, they received one of the instruction sheets. After reading it, they were asked to rate the degree to which they felt the instructions would instill into the subjects a logical, rational set. They were given only two choices: (1) the instructions would do so to a significant extent; or (2) the instructions would not do so to a significant extent. They were then given the second instruction sheet and requested to go through the same procedure. In this way, it became possible to get an indication as to whether the manipulation of cognitive set was successful or not.

Equivalently, the four raters were then asked to separately read the eight stimulus situations and answer questions which tapped the extent to which the raters felt the manipulations of severity of outcome, situational foreseeability, and situational ambiguity were successful. As above, the responses had to be one of two alternatives.

The results of this procedure was an unanimous agreement that the manipulation of the four independent variables had been successfully arranged. All four raters rated the descriptions in the expected fashion. However, there were

some suggestions made as to how the descriptions might be improved. These suggestions were thoroughly discussed by all present and some alterations to the stimulus descriptions did ensue.

Essentially, then, this utilization of raters allowed the author to obtain some consensual validation that his manipulation of the independent variables was successful.

The second method employed so as to amass empirical support for the manipulation of the independent variables was to include four more questions for the experimental subjects to respond to. These were in addition to, and subsequent to, the three questions relating to the dependent variables. These four questions asked the subjects themselves to rate, in turn: (1) how severe they considered the negative consequences for the stimulus person? ; (2) how foreseeable should failing the exam have been for the stimulus person? ; (3) how sure were they that the stimulus person was at fault for failing the exam? (this question taps the situational ambiguity dimension); and (4) to what extent did they, the subjects, feel that they looked at the stimulus person's situation in a logical and impartial fashion? . As above, all ratings were made on a 9 point scale. For the exact wording of these questions, see Appendix C.

The subjects were also asked to answer a fifth question. It dealt with situational relevance. It went essentially as follows: how likely were they to find themselves in the same or a similar position to the one the stimulus person was in? . It was mentioned earlier that an attempt was made to maintain at a high level the situational relevance of the descriptions for the subjects. Despite this attempt, there would undoubtedly still be individual differences among the subjects in felt relevance. It was the purpose of the above question to provide data through which these differences might be ascertained and then controlled for in terms of their effect on attribution of responsibility, effort, and ability.

G) Personality of the Observer - As explained in Chapter I, the vast majority of research investigation into the relevance of the personality of the observer variable has focused on the internal-external locus of control dimension. Again in this study, this is the aspect of personality that was investigated.

Internal-external locus of control was measured in this study via a 40-item questionnaire, the Nowicki-Strickland

Internal-External Locus of Control Scale for Adults^{2,3}. This scale was administered only after the first experimental booklet containing the instructions, stimulus description, and ratings was completed.

The Nowicki-Strickland Locus of Control Scale is comprised of 40 questions which are answered simply YES or NO. A sample item is: "Do you believe it is better to be smart than lucky?". See Appendix D for the complete scale. Also of note is that the scale is keyed in such a fashion that the higher the score, the more external the locus of control orientation.

As for reliability, the data collected to date (N=766) by Nowicki and his co-workers⁴ strongly suggests that the instrument is psychometrically sound (split-half reliability ranging from 0.74 to 0.86; test-retest reliability ranging from 0.71 to 0.83). The construct validity findings are also encouraging. For one, there is a significant positive:

2 M. P. Duke and S. Nowicki, "Personality Correlates of the Nowicki-Strickland Locus of Control Scale for Adults" in Psychological Reports, Vol. 33, 1973, p. 267-270.

3 S. Nowicki and B. R. Strickland, "A Locus of Control Scale for Children" in Journal of Counselling and Clinical Psychology, Vol. 40, No. 1, 1973, p. 148-154.

4 S. Nowicki and M. P. Duke, "A Locus of Control Scale for Noncollege as Well as College Adults" in Journal of Personality Assessment, Vol. 38, No. 2, 1974, p. 136-137.

correlation between the Nowicki scale and Rotter's⁵ scale ($r=0.68$), another well-known measure of internal-external locus of control. For another, the Nowicki scale⁶ has been found to be significantly correlated with a number of personality concepts theoretically considered to be linked to the internal-external locus of control dimension. Among these personality concepts are need for achievement ($r=-0.46$), need for dominance ($r=-0.30$), and need for abasement ($r=0.30$).

3. Procedure

The experiment was conducted in the classrooms themselves. In each of the five classrooms, it took only approximately 15 minutes to go through the whole procedure and accumulate all the necessary data. There follows a description of the exact procedure that was faithfully followed in each of the classrooms.

After the professor had relinquished the class to the writer, the first thing done was the introduction of the

5 J. B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement" in Psychological Monographs, Vol. 80 (1, Whole No. 609), 1966.

6 M. P. Duke and S. Nowicki, Op. cit., p. 269.

writer and his assistant, whose help, incidentally, greatly facilitated the whole process. In the introduction, the author introduced himself as a graduate student in psychology at the University of Ottawa who had come to ask them to be subjects for his thesis. He went on to explain that participation was of course voluntary but that their cooperation would be greatly appreciated. After a short pause to allow for reaction to this request, the experimenter then delved directly into an explanation of the stimulus materials. It was explained that there were two parts to the study, that is, two separate questionnaires to fill out. They were then told that the details of the study and what was requested of them was on the first sheet of the first experimental booklet. Next, they were entreated to please answer all questions, as it was important that there be no missing data. Following this, it was explained to them that since there were two separate parts to the study, it was necessary that some matching identifying mark should be put on both parts, so that they could be identified as belonging together. So as to guarantee confidentiality, it was suggested that they not put their names on both sections but some other identifying mark, such as their student numbers. Most took this suggestion. The preamble ended by asking if there were any questions. The few that arose were promptly answered.

At this juncture, the experimenter and his assistant handed out the first experimental booklet to all subjects. For reasons explained earlier, special care was taken to give only questionnaires concerning male students to male subjects and only questionnaires concerning female students to female subjects. This was done unobtrusively so as not to engender too much curiosity in the subjects as to differences between the booklet they received and the ones others received. In accordance with this desire, subjects were not told that their booklets differed from others.

As the subjects finished the first experimental booklet, the experimenter or his assistant handed them the second part, while at the same time collecting the first part. As the first booklet was picked up, it was checked to ensure that there was an identifying mark on it and checked to ensure that all eight questions were answered. If either of these conditions were unfulfilled, the subject in question was asked to rectify the omission before proceeding with the second questionnaire. This same procedure of checking for the identifying mark and checking that all questions were answered was carried out when the second questionnaire was returned.

After all the questionnaires were collected, both the subjects and the professor were thanked for their cooperation.

4. Statistical Analyses

The first analysis done was of the ratings made by the subjects of the four primary independent variables - severity of outcome, situational ambiguity, situational foreseeability, and cognitive set of the observer. Four separate t-tests of the significance of the difference between means were done to ascertain whether the stimulus descriptions and instructions which were created to differentiate between the two levels of each of the four independent variables actually did so in the eyes of the subjects. For example, one of the t-tests tested whether the high foreseeability stimulus situation was actually rated as more foreseeable by the subjects than the low foreseeability stimulus situation.

Of importance to note is that all the t-tests were one-tail tests using a 0.05 significance level. They were one-tailed because, for example, we were only interested in knowing whether the high foreseeability stimulus situation was rated as more foreseeable than the low foreseeability stimulus situation. Furthermore, a pooled estimate of the common population error variance was utilized in all cases.

The correlations between the two covariates, internal-external control and situational relevance, and the

three dependent measures were calculated next. For this purpose, the sample was split into two groups according to the sex of the observer variable. This was done so as to be able to check that the relationship between the covariates and the dependent measures was the same for both sexes. In all cases where there was not a substantial correlation between a covariate and a dependent measure, that covariate was not utilized in further analyses.

The main analyses ensued. These consisted of three separate ANCOVAs, each with four independent variables and up to two covariates, the number depending on whether any had been previously eliminated from further analyses. In each case, the four independent variables were as follows: severity of outcome (mild and severe), situational ambiguity (structured and ambiguous), situational foreseeability (low and high), and cognitive set of the observer (instigation of logical set and no such instigation).

Situational relevance was measured by question number 7 in the first experimental booklet while internal-external locus of control was measured by the Nowicki-Strickland scale for adults.

The dependent measure in the first ANCOVA was attribution of responsibility, as measured by question number 1 in the first experimental booklet. Questions 2 and 3

in this same booklet provided the dependent measures for the second and third ANCOVAs. These questions dealt with, respectively, attribution of ability and attribution of effort.

Here also, all tests of significance used the 0.05 significance level. However, these were two-tailed tests of significance.

The computations involved in the above analyses were largely carried out on an IBM 360 computer at the University of Ottawa Computing Centre, through the medium of the Statistical Package for the Social Sciences (SPSS)⁷.

The next chapter contains both the presentation and discussion of the results of this experiment.

⁷ N. H. Nie et. al., SPSS (Second Edition), New York, McGraw-Hill, 1975, 675 p.

CHAPTER III

PRESENTATION AND DISCUSSION OF RESULTS

In this chapter, the experimental results are presented and discussed. The chapter consists of three sections. Section one is concerned with reporting the results of the statistical operations performed on the data and is divided into a number of subsections: independent variable manipulation data, sex and covariate data, attribution of responsibility data, attribution of ability data, and attribution of effort data. Section two interprets and discusses the results in terms of theoretical and practical considerations. Finally, in section three, some suggestions for further research are offered.

1. Presentation of Results

A) Independent Variable Manipulation Data - Table I presents four t-ratios which serve as further evidence that the manipulation of the independent variables was successful. This table shows that those subjects who received experimental booklets which described one of the levels of an independent variable rated significantly differently the degree of presence of that independent variable from those subjects who

Table I.- t-Ratios Testing the Success of the Manipulation of the Independent Variables.

Independent Variables	Level 1		Level 2		N	t-Ratio
	Mean	S.D.	Mean	S.D.		
Cognitive Set of the Observer	7.58 (Instigation)	1.35	6.50 (No Instigation)	1.87	88	4.39*
Severity of Outcome	5.14 (Low)	1.90	6.53 (High)	1.74	88	5.03*
Situational Ambiguity	7.20 (Ambiguous)	1.66	5.31 (Structured)	1.90	88	6.98*
Situational Forseeability	5.55 (Low)	1.80	7.32 (High)	1.19	88	7.64*

$$t_{.05}(df=174)=1.65$$

* $p < .05$

Note: The raw scores from which the above means are derived appear in Appendix E.

received booklets describing the other level of that independent variable. In other words, subjects who received instruction sheets requesting them to approach the task in a logical, evaluative fashion rated themselves to have approached the task in a more logical manner than did those subjects for whom no such initial request was made. Similarly, stimulus descriptions where the stimulus person suffered severe consequences for his behaviour resulted in ratings of severity which were significantly higher than severity ratings of descriptions where the consequences were comparatively mild. Equivalently, those situations where there were some mitigating circumstances were rated as being significantly more ambiguous than those situations where there were no mitigating circumstances. Finally, the high foreseeability stimulus situations were rated as significantly more foreseeable than the low foreseeability stimulus situations.

These results, along with the consensual validation provided by the raters, provided substantial evidence that the manipulation of the independent variables was successful.

B) Sex and Covariate Data - Table II presents the correlations between the two covariates and the three dependent measures while including the sex of the observer variable. There are a number of findings of note to be gleaned from this table. First of all, it is apparent from the table that no

Table II.- Correlations Between the Covariates and the Dependent Variables While Including the Sex of the Observer Variable.

Dependent Variables	<u>Covariates</u>			
	<u>Internal-External Locus of Control</u>		<u>Situational Relevance</u>	
	<u>Males (N=68)</u>	<u>Females (N=108)</u>	<u>Males (N=68)</u>	<u>Females (N=108)</u>
Attribution of Responsibility	-0.266 (p=.014)*	-0.111 (p=.126)	0.151 (p=.110)	-0.157 (p=.048)*
Attribution of Ability	-0.008 (p=.475)	0.013 (p=.447)	-0.007 (p=.479)	0.015 (p=.441)
Attribution of Effort	-0.273 (p=.012)*	-0.073 (p=.226)	0.086 (p=.242)	-0.204 (p=.017)*

* $p < .05$

relationship at all existed between either covariate and the attribution of ability. This is so for both males and females. Second of all, sex related differences in the relationships of both covariates to the attribution of responsibility and the attribution of effort clearly existed. The relationship between the internal-external locus of control variable and both the responsibility and effort attribution variables was stronger for males than for females. As well, the relationship between the situational relevance variable and both the responsibility and effort attribution variables was in opposing directions for the two sexes. The correlations were positive for males and negative for females. Thirdly, there are four correlations in Table II which are significantly different from a correlation of zero. These are the correlations between internal-external locus of control and responsibility and effort attribution for males and the correlations between situational relevance and responsibility and effort attribution for females.

The implications of the above findings for further analyses were as follows. First of all, the lack of correlation between the covariates and the attribution of ability meant that the attribution of ability data was analyzed using an ANOVA model rather than an ANCOVA model. There was no longer any appropriate rationale for including

the two covariates in that analysis. Secondly, the sex differences found for the relationship between the covariates and the attribution of responsibility and effort necessitated that the analyses of the data for these two dependent variables be done separately for the two sexes. Thirdly, the elevation of the correlations between the covariates and responsibility and effort attribution indicated that the analyses of the data for these two dependent variables would be done using both covariates. It might be argued that for the four of the eight relevant correlation coefficients which are not significantly different from a correlation of zero, the associated covariates should not be included in the appropriate analyses. This course of action was not followed because the utilization of the covariates in these four cases still reduced the Mean Square Error term, thus increasing the likelihood of obtaining significant results.

Finally, the above results mean that the null hypotheses 7 and 8 postulated earlier were rejected with regards to the attribution of responsibility and the attribution of effort but not rejected with regards to the attribution of ability. These hypotheses stated, respectively:

Hypothesis 7 --- No significant effect on responsibility attribution, ability attribution, or effort attribution will be produced by differences in situational relevance.

Hypothesis 8 --- No significant effect on responsibility attribution, ability attribution, or effort attribution will be produced by differences in internal-external locus of control.

C) Attribution of Responsibility Data - As explained above, the attribution of responsibility data was analyzed separately for the two sexes. The results for male observers will be considered first. As shown in Table III, the only significant result for the male sample was a main effect for situational foreseeability ($F = 5.02$; $p < .05$). There was greater attribution of responsibility when the foreseeability was high (Mean = 6.91) than when the foreseeability was low (Mean = 5.55).

Table IV gives the results of the ANCOVA on the female sample. As is shown, there was both a significant main effect for situational ambiguity ($F = 8.56$; $p < .05$) and a significant 2-way interaction between cognitive set and situational foreseeability ($F = 4.43$; $p < .05$). The significant main effect for ambiguity means that there was greater attribution of responsibility when the ambiguity was low (Mean = 7.46) than when the ambiguity was high (Mean = 6.43).

So as to clarify the above interaction, tests of simple main effects were carried out (see Table V). These tests showed that the situational foreseeability variable had an effect on responsibility attribution only under the second

Table III.- Analysis of Covariance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Responsibility Scores of Male Observers.

Source of Variation	SS	df	MS	F
A (Cognitive Set)	3.94	1	3.94	0.87
B (Forseeability)	22.89	1	22.89	5.02*
C (Ambiguity)	11.84	1	11.84	2.60
D (Severity)	3.39	1	3.39	0.74
A X B	1.37	1	1.37	0.30
A X C	0.12	1	0.12	0.03
A X D	9.81	1	9.81	2.15
B X C	5.61	1	5.61	1.23
B X D	1.34	1	1.34	0.29
C X D	0.01	1	0.01	0.00
A X B X C	0.61	1	0.61	0.13
A X B X D	0.15	1	0.15	0.03
A X C X D	0.16	1	0.16	0.03
B X C X D	0.11	1	0.11	0.02
A X B X C X D	2.11	1	2.11	0.46
Residual	227.92	50	4.56	----

$$F_{.05(1,50)}=4.04$$

* $p < .05$

Table IV.- Analysis of Covariance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Responsibility Scores of Female Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	9.57	1	9.57	3.50
B(Forseeability)	3.30	1	3.30	1.21
C(Ambiguity)	23.43	1	23.43	8.56*
D(Severity)	0.01	1	0.01	0.00
A X B	12.11	1	12.11	4.43*
A X C	4.65	1	4.65	1.70
A X D	2.52	1	2.52	0.92
B X C	3.91	1	3.91	1.43
B X D	3.33	1	3.33	1.22
C X D	0.59	1	0.59	0.21
A X B X C	0.14	1	0.14	0.05
A X B X D	2.63	1	2.63	0.96
A X C X D	5.92	1	5.92	2.16
B X C X D	5.25	1	5.25	1.92
A X B X C X D	1.05	1	1.05	0.38
Residual	246.32	90	2.74	----

$$F_{.05(1,90)}=3.96$$

* $p < .05$

Table V.- Simple Main Effects Analysis: Effects of Cognitive Set, and Forseeability on Attribution of Responsibility Scores of Female Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	9.57	1	9.57	3.50
A at b ₁	4.18	1	4.18	1.53
A at b ₂	25.91	1	25.91	9.46*
B(Forseeability)	3.30	1	3.30	1.21
B at a ₁	1.20	1	1.20	0.44
B at a ₂	34.17	1	34.17	12.47*
Residual	246.32	90	2.74	-----

$$F_{.05(1,90)}=3.96$$

* $p < .05$

cognitive set condition, that is, only when there had been the instigation of a logical set ($F = 12.47$; $p < .05$). There was greater attribution of responsibility when the situational foreseeability was high (Mean = 7.93) than when the foreseeability was low (Mean = 6.32), but again, only when there had been the instigation of a logical set. The simple main effects tests also showed that the cognitive set of the observer variable had a significant influence on responsibility attribution only when the situational foreseeability was high ($F = 9.46$; $p < .05$). Within this constraint, there was greater responsibility attribution when there had been the instigation of a logical set (Mean = 7.93) than when there had been no such instigation (Mean = 6.55). The above interaction is illustrated in Figure 1.

The above findings led to the following conclusions regarding the first five null hypotheses posited earlier concerning responsibility attribution. Hypothesis 1, which states that differences in severity of outcome will not have a significant effect on responsibility attribution, was not rejected for either males or females. Hypothesis 2, that differences in situational ambiguity will not have a significant effect on responsibility attribution, was rejected for females but not for males. In contrast, hypothesis 3, that differences in situational foreseeability will not have a

Legend

- B₁ - Forseeability Low
B₂ - Forseeability High
A₁ - No Instigation of Logical Set
A₂ - Instigation of Logical Set

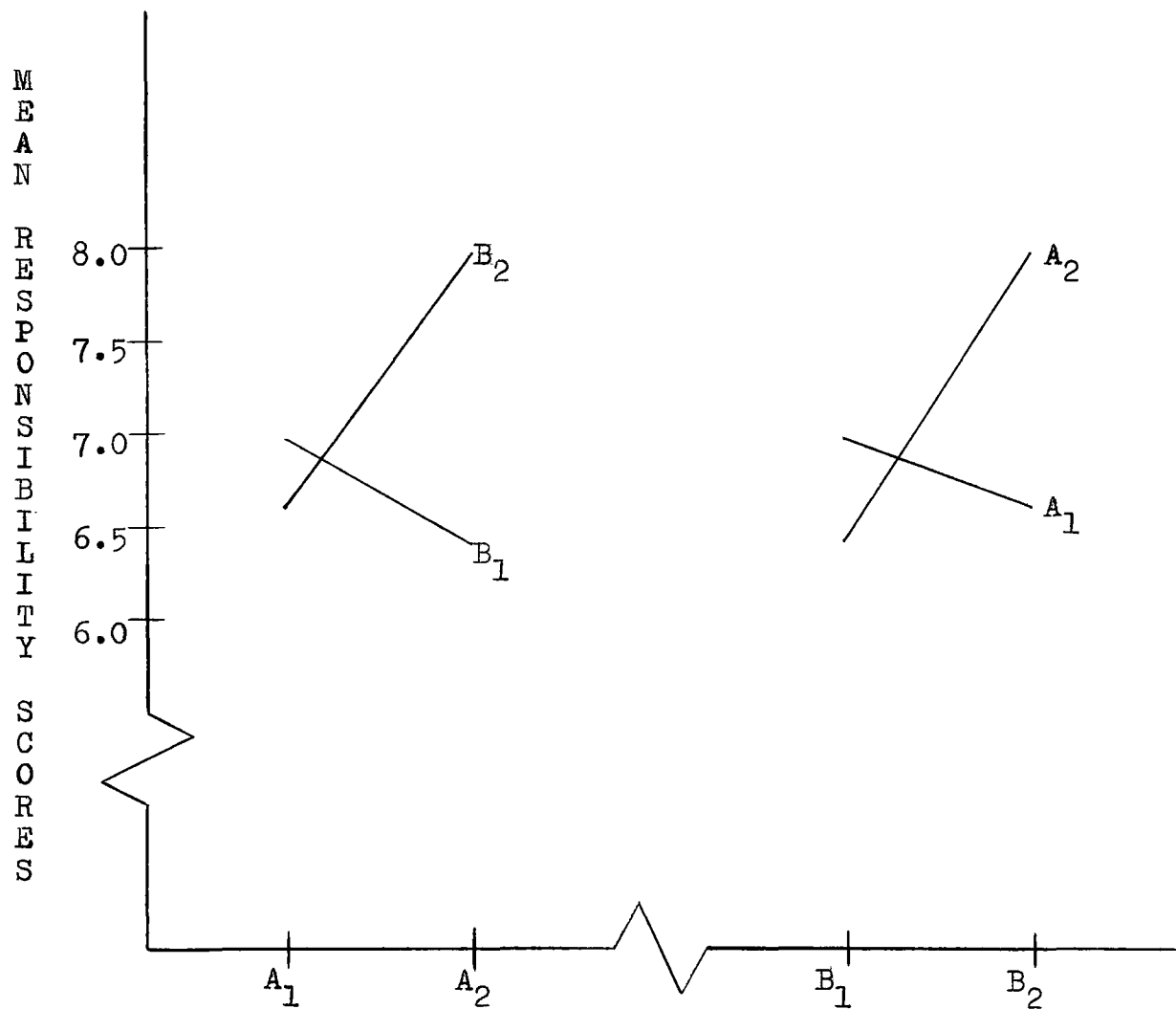


Figure 1.- Diagram of the Interaction Between Cognitive Set and Forseeability on Responsibility Attribution Scores of Female Observers.

significant effect on responsibility attribution, was rejected for males but not for females. Hypothesis 4, that differences in cognitive set will not have a significant effect on responsibility attribution, like hypothesis 1, was not rejected for either males or females. Finally, hypothesis 5, that no significant interactions exist between the four independent variables in terms of their effect on the attribution of responsibility, was rejected for females but not for males.

D) Attribution of Ability Data - The attribution of ability data was also analyzed separately for males and females. However, this was not done, as it was for both the attribution of responsibility and the attribution of effort, because of the differential influence of the two covariates for the two sexes. Rather, it was done because a preliminary analysis of the attribution of ability data including the sex of the observer variable uncovered strong sex related differences.

The data from the male observers was analyzed first. The results of this ANOVA are presented in Table VI. This table shows that there were no significant main effects, that is, that none of the four independent variables had an overall significant effect on ability attribution. However, this table does show a significant 3-way interaction between cognitive set, situational foreseeability, and situational ambiguity ($F = 4.36; p < .05$).

Table VI.- Analysis of Variance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Ability Scores of Male Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	3.35	1	3.35	1.54
B(Forseeability)	2.48	1	2.48	1.15
C(Ambiguity)	0.69	1	0.69	0.35
D(Severity)	1.68	1	1.68	0.79
A X B	3.17	1	3.17	1.48
A X C	0.26	1	0.26	0.16
A X D	0.18	1	0.18	0.09
B X C	0.03	1	0.03	0.01
B X D	3.24	1	3.24	1.49
C X D	0.01	1	0.01	0.00
A X B X C	9.47	1	9.47	4.36*
A X B X D	2.34	1	2.34	1.10
A X C X D	5.20	1	5.20	2.41
B X C X D	1.10	1	1.10	0.52
A X B X C X D	0.14	1	0.14	0.06
Residual	112.93	52	2.17	----

$$F_{.05(1,52)}=4.03$$

* $p < .05$

This interaction was further explored through tests of simple simple main effects, the results of which are presented in Table VII. As is shown, under no conditions were there any effects on ability attribution produced by differences in situational ambiguity (see Figure 2). There were, however, effects on ability attribution produced by differences in situational foreseeability and differences in cognitive set. There was greater attribution of ability when the foreseeability was high (Mean = 3.25) than when the foreseeability was low (Mean = 1.78) but only when the situational ambiguity was high and there was the instigation of a logical set ($F = 4.23$; $p < .05$). Figure 3 illustrates this interaction. As well, there was significantly less attribution of ability when there was the instigation of a logical set (Mean = 1.78) than when there was no such instigation (Mean = 3.25) but only when the situational ambiguity was high and the situational foreseeability was low ($F = 4.23$; $p < .05$). See Figure 4.

The results from the ANOVA on the data from the female observers are presented in Table VIII. There was only one significant main effect ($F = 6.58$; $p < .05$) and no significant interactions. The significant main effect was for severity of outcome and may be interpreted as follows - there was greater attribution of ability when the severity of outcome was high (Mean = 3.07) than when the severity of outcome was low (Mean = 2.24).

Table VII.- Simple Simple Main Effects Analysis: Effects of Cognitive Set, Forseeability, and Ambiguity on Attribution of Ability Scores of Male Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	3.35	1	3.35	1.54
A at bc ₁₁	0.27	1	0.27	0.12
A at bc ₁₂	9.18	1	9.18	4.23*
A at bc ₂₁	2.85	1	2.85	1.31
A at bc ₂₂	3.07	1	3.07	1.42
B(Forseeability)	2.48	1	2.48	1.15
B at ac ₁₁	2.05	1	2.05	0.94
B at ac ₁₂	3.07	1	3.07	1.42
B at ac ₂₁	0.07	1	0.07	0.03
B at ac ₂₂	9.18	1	9.18	4.23*
C(Ambiguity)	0.69	1	0.69	0.35
C at ab ₁₁	1.00	1	1.00	0.46
C at ab ₁₂	2.52	1	2.52	1.16
C at ab ₂₁	4.85	1	4.85	2.23
C at ab ₂₂	1.57	1	1.57	0.72
Residual	112.93	52	2.17	----

$$F_{.05(1,52)}=4.03$$

* $p < .05$

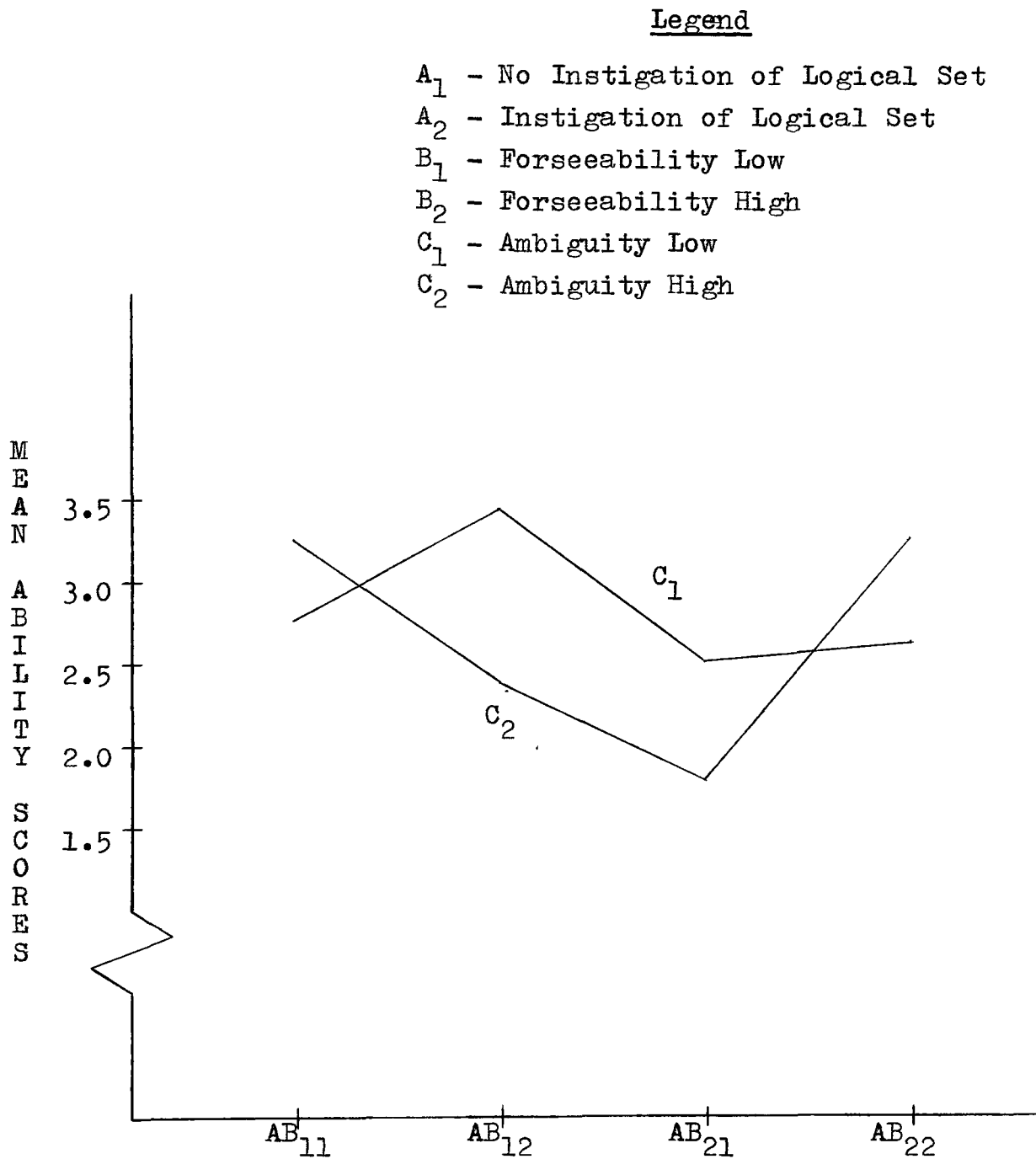


Figure 2.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, and Situational Ambiguity on Ability Attribution Scores of Male Observers.

Legend

- A₁ - No Instigation of Logical Set
- A₂ - Instigation of Logical Set
- B₁ - Forseeability Low
- B₂ - Forseeability High
- C₁ - Ambiguity Low
- C₂ - Ambiguity High

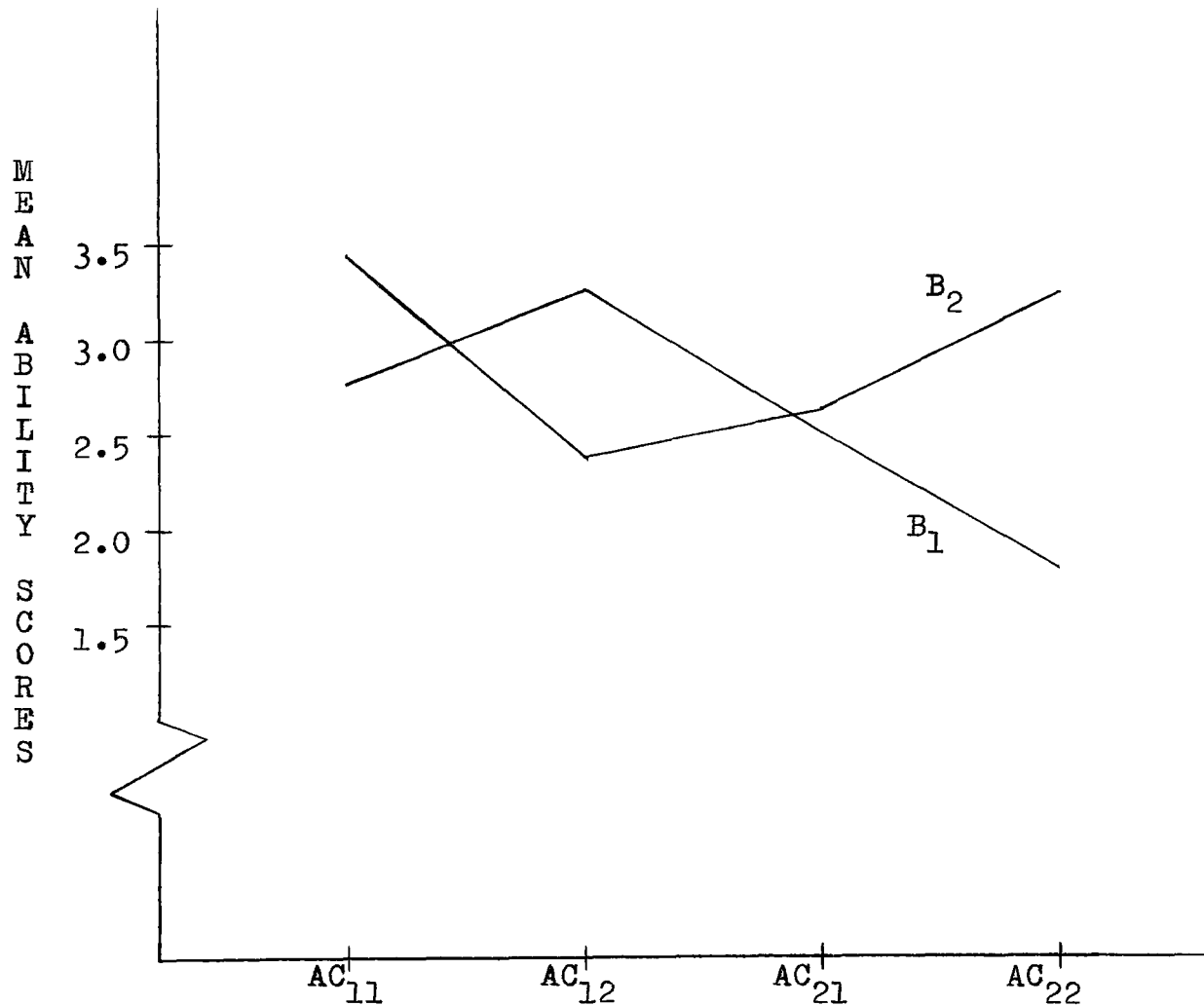


Figure 3.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, and Situational Ambiguity on Ability Attribution Scores of Male Observers.

Legend

- A_1 - No Instigation of Logical Set
 A_2 - Instigation of Logical Set
 B_1 - Forseeability Low
 B_2 - Forseeability High
 C_1 - Ambiguity Low
 C_2 - Ambiguity High

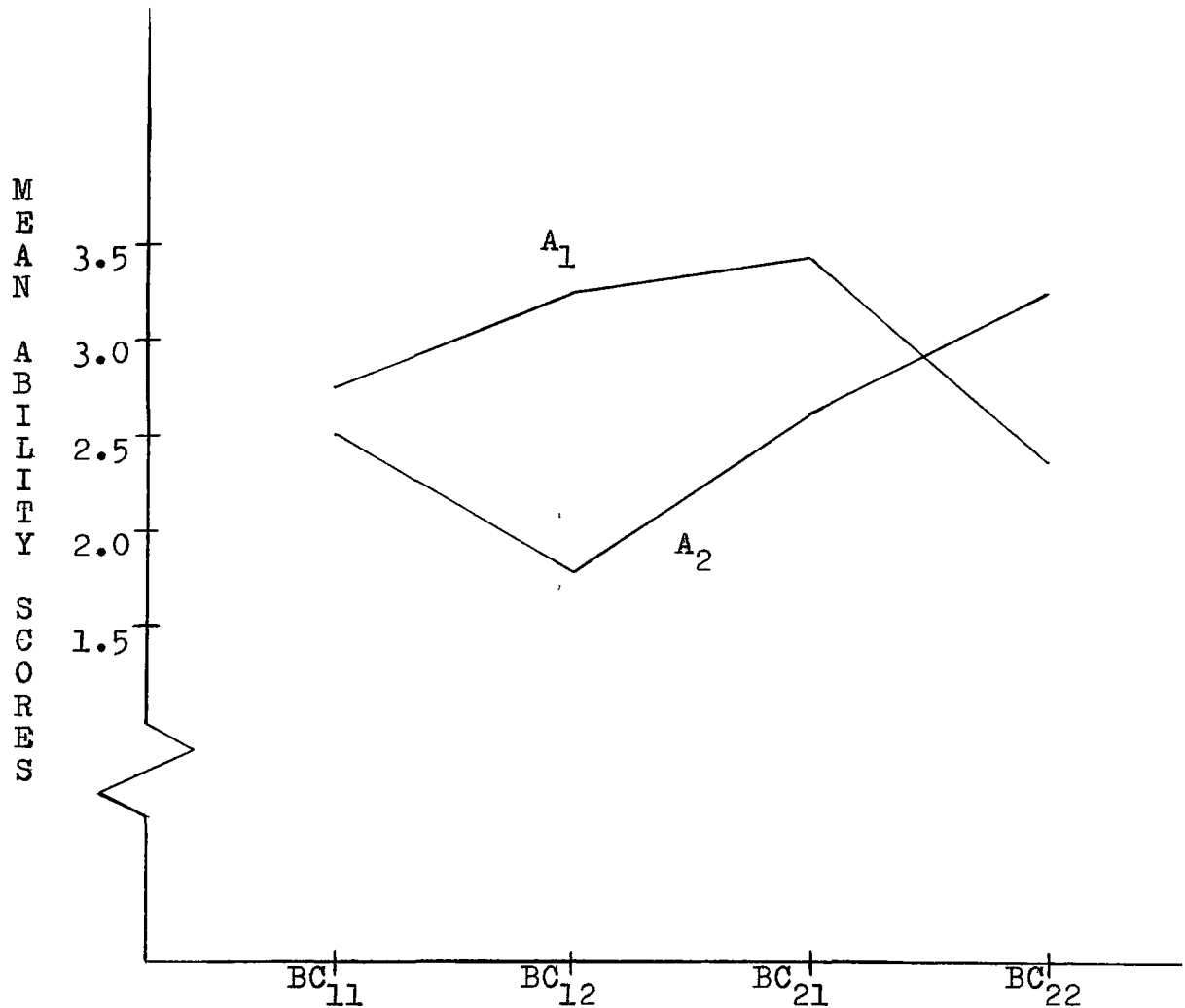


Figure 4.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, and Situational Ambiguity on Ability Attribution Scores of Male Observers.

Table VIII.- Analysis of Variance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Ability Scores of Female Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	0.01	1	0.01	0.00
B(Forseeability)	2.22	1	2.22	0.82
C(Ambiguity)	2.67	1	2.67	0.99
D(Severity)	17.93	1	17.93	6.58*
A X B	6.51	1	6.51	2.39
A X C	0.91	1	0.91	0.34
A X D	1.33	1	1.33	0.49
B X C	0.02	1	0.02	0.01
B X D	3.86	1	3.86	1.42
C X D	0.54	1	0.54	0.20
A X B X C	1.73	1	1.73	0.64
A X B X D	4.59	1	4.59	1.69
A X C X D	0.11	1	0.11	0.04
B X C X D	1.05	1	1.05	0.39
A X B X C X D	1.50	1	1.50	0.56
Residual	248.65	92	2.70	----

$$F_{.05(1,92)}=3.96$$

* $p < .05$

In terms of the null hypotheses concerning ability attribution presented at the end of Chapter I, the above results led to the following conclusions. Hypothesis 1, regarding the relationship between severity of outcome and attribution of ability, was rejected for females but not for males. Hypotheses 2, 3, and 4, regarding, respectively, the relationships between situational ambiguity and ability attribution, situational foreseeability and ability attribution, cognitive set of the observer and ability attribution, were not rejected for either sex. Finally, hypothesis 5, that no significant interactions exist between the four independent variables in terms of their effect on ability attribution, was rejected for males but not for females.

E) Attribution of Effort Data - As noted previously, the attribution of effort data was analyzed separately for males and females. Table IX presents the ANCOVA on the attribution of effort data from male observers. As this table shows, only the situational foreseeability and situational ambiguity independent variables had an overall significant influence on effort attribution. The interpretation of the significant finding regarding situational ambiguity ($F = 16.70$; $p < .05$) is quite straightforward. This result means that there was greater attribution of effort when the situational ambiguity was low (Mean = 7.51) than when the

Table IX.- Analysis of Covariance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Effort Scores of Male Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	0.30	1	0.30	0.10
B(Forseeability)	20.69	1	20.69	6.54*
C(Ambiguity)	52.80	1	52.80	16.69*
D(Severity)	5.69	1	5.69	1.80
A X B	21.29	1	21.29	6.73*
A X C	0.11	1	0.11	0.03
A X D	2.23	1	2.23	0.70
B X C	9.10	1	9.10	2.88
B X D	9.67	1	9.67	3.06
C X D	3.50	1	3.50	1.11
A X B X C	10.66	1	10.66	3.37
A X B X D	0.06	1	0.06	0.02
A X C X D	0.82	1	0.82	0.26
B X C X D	10.57	1	10.57	3.34
A X B X C X D	0.83	1	0.83	0.26
Residual	158.14	50	3.16	----

$$F_{.05(1,50)}=4.04$$

* $p < .05$

situational ambiguity was high (Mean = 5.72). However, the interpretation of the significant main effect for situational foreseeability ($F = 6.54$; $p < .05$) is not as straightforward because there is also a significant 2-way interaction involving situational foreseeability and cognitive set ($F = 6.73$; $p < .05$). Such being the case, an analysis of simple main effects was carried out (see Table X). As a consequence of this analysis, it was discovered that differences in foreseeability had a significant effect ($F = 14.13$; $p < .05$) on effort attribution only under the first cognitive set condition, that is, only when there was no instigation of a logical set. Within this constraint, there was greater attribution of effort when the foreseeability was high (Mean = 7.76) than when the foreseeability was low (Mean = 5.44). Figure 5 illustrates the above interaction.

Table XI presents the ANCOVA on the attribution of effort data from female observers. This table shows that there are three significant main effects, one 2-way interaction and a 4-way interaction. The main effects are for situational foreseeability ($F = 9.74$; $p < .05$), situational ambiguity ($F = 17.16$; $p < .05$), and cognitive set of the observer ($F = 9.21$; $p < .05$). The significant 2-way interaction involves the situational foreseeability and the situational ambiguity variables ($F = 6.00$; $p < .05$). The

Table X.- Simple Main Effects Analysis: Effects of Cognitive Set, and Forseeability on Attribution of Effort Scores of Male Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	0.30	1	0.30	0.10
A at b_1	8.40	1	8.40	2.66
A at b_2	8.49	1	8.49	2.66
B(Forseeability)	20.69	1	20.69	6.54*
B at a_1	44.64	1	44.64	14.13*
B at a_2	0.94	1	0.94	0.29
Residual	158.14	50	3.16	----

$$F_{.05(1,50)}=4.04$$

* $p < .05$

Legend

- B₁ - Forseeability Low
- B₂ - Forseeability High
- A₁ - No Instigation of Logical Set
- A₂ - Instigation of Logical Set

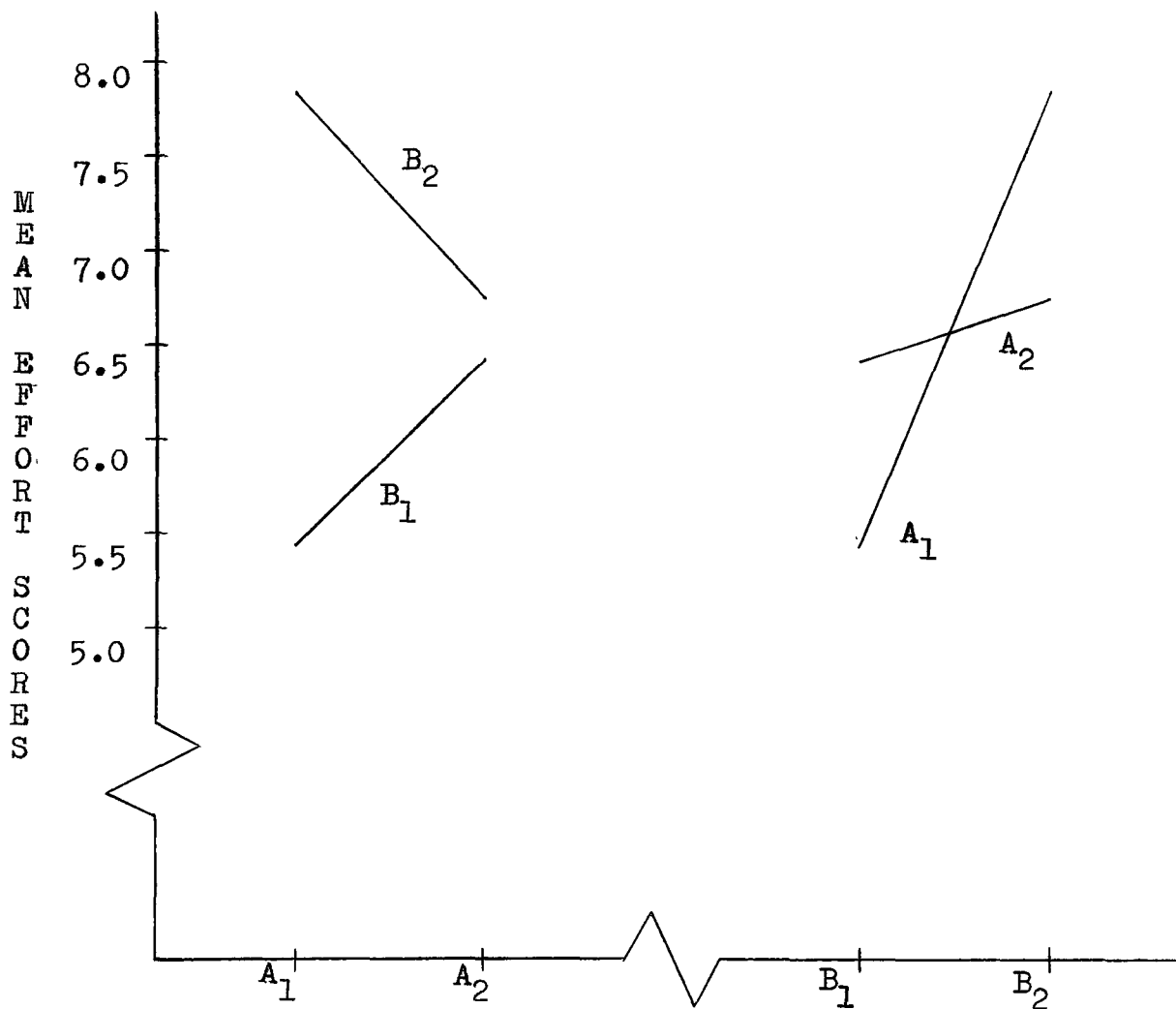


Figure 5.- Diagram of the Interaction Between Cognitive Set and Forseeability on Effort Attribution Scores of Male Observers.

Table XI.- Analysis of Covariance: Effects of Cognitive Set, Forseeability, Ambiguity, and Severity on Attribution of Effort Scores of Female Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	21.86	1	21.86	9.21*
B(Forseeability)	23.10	1	23.10	9.74*
C(Ambiguity)	40.72	1	40.72	17.16*
D(Severity)	0.10	1	0.10	0.04
A X B	1.57	1	1.57	0.66
A X C	4.31	1	4.31	1.82
A X D	2.67	1	2.67	1.13
B X C	14.22	1	14.22	5.99*
B X D	3.26	1	3.26	1.37
C X D	2.68	1	2.68	1.13
A X B X C	0.02	1	0.02	0.01
A X B X D	0.84	1	0.84	0.36
A X C X D	1.28	1	1.28	0.54
B X C X D	4.60	1	4.60	1.94
A X B X C X D	12.16	1	12.16	5.13*
Residual	213.55	90	2.37	----

$$F_{.05(1,90)}=3.96$$

* $p < .05$

significant 4-way interaction involves, of course, all four of the independent variables ($F = 5.13$; $p < .05$). Due to this 4-way interaction, all interpretations of the results had to wait till an analysis of the simple simple simple main effects was completed. Table XII presents such an analysis. This table shows that each of the independent variables had a significant effect on effort attribution only under certain specific conditions.

For one, situational ambiguity had a significant effect on effort attribution under three separate conditions. First of all, there was greater attribution of effort when the situational ambiguity was low (Mean = 7.14) than when the situational ambiguity was high (Mean = 3.86) under the low foreseeability, low severity, and no instigation of logical set condition ($F = 37.78$; $p < .05$). Secondly, there was greater attribution of effort when the situational ambiguity was low (Mean = 8.00) than when the situational ambiguity was high (Mean = 5.86) under the high foreseeability, high severity, and no instigation of logical set condition ($F = 16.07$; $p < .05$). Thirdly, there was greater attribution of effort when the ambiguity was low (Mean = 8.00) than when the ambiguity was high (Mean = 5.84) under the low foreseeability, high severity, and instigation of logical set condition ($F = 14.09$; $p < .05$). This interaction of ambiguity with the other independent variables is illustrated in Figure 6.

Table XII.- Simple Simple Simple Main Effects Analysis:
Effects of Cognitive Set, Forseeability,
Ambiguity, and Severity on Attribution of
Effort of Female Observers.

Source of Variation	SS	df	MS	F
A(Cognitive Set)	21.86	1	21.86	9.21*
A at bcd ₁₁₁	0.41	1	0.41	0.17
A at bcd ₁₁₂	3.23	1	3.23	1.36
A at bcd ₁₂₁	23.14	1	23.14	9.77*
A at bcd ₁₂₂	0.05	1	0.05	0.02
A at bcd ₂₁₁	4.40	1	4.40	1.86
A at bcd ₂₁₂	0.65	1	0.65	0.26
A at bcd ₂₂₁	3.50	1	3.50	1.47
A at bcd ₂₂₂	8.64	1	8.64	3.65
B(Forseeability)	23.10	1	23.10	9.74*
B at acd ₁₁₁	0.31	1	0.31	0.13
B at acd ₁₁₂	3.50	1	3.50	1.47
B at acd ₁₂₁	38.14	1	38.14	16.25*
B at acd ₁₂₂	0.07	1	0.07	0.03
B at acd ₂₁₁	0.81	1	0.81	0.34
B at acd ₂₁₂	0.60	1	0.60	0.25
B at acd ₂₂₁	12.07	1	12.07	5.09*
B at acd ₂₂₂	8.21	1	8.21	3.46

Table XII.- continued

Source of Variation	SS	df	MS	F
C(Ambiguity)	40.72	1	40.72	17.16*
C at abd ₁₁₁	37.78	1	37.78	15.94*
C at abd ₁₁₂	5.78	1	5.78	2.44
C at abd ₁₂₁	0.66	1	0.66	0.28
C at abd ₁₂₂	16.07	1	16.07	6.78*
C at abd ₂₁₁	3.71	1	3.71	1.56
C at abd ₂₁₂	14.09	1	14.09	5.95*
C at abd ₂₂₁	0.28	1	0.28	0.12
C at abd ₂₂₂	0.08	1	0.08	0.03
D(Severity)	0.10	1	0.10	0.04
D at abc ₁₁₁	0.07	1	0.07	0.03
D at abc ₁₁₂	12.07	1	12.07	5.09*
D at abc ₁₂₁	4.40	1	4.40	1.86
D at abc ₁₂₂	7.14	1	7.14	3.01
D at abc ₂₁₁	0.75	1	0.75	0.32
D at abc ₂₁₂	1.15	1	1.15	0.49
D at abc ₂₂₁	0.65	1	0.65	0.27
D at abc ₂₂₂	2.57	1	2.57	1.08
Residual	213.55	90	2.37	----

$$F_{.05(1,90)}=3.96$$

* $p < .05$

Legend

- | | |
|--|---------------------------------|
| A ₁ - No Instigation of Logical Set | C ₁ - Ambiguity Low |
| A ₂ - Instigation of Logical Set | C ₂ - Ambiguity High |
| B ₁ - Forseeability Low | D ₁ - Severity Low |
| B ₂ - Forseeability High | D ₂ - Severity High |

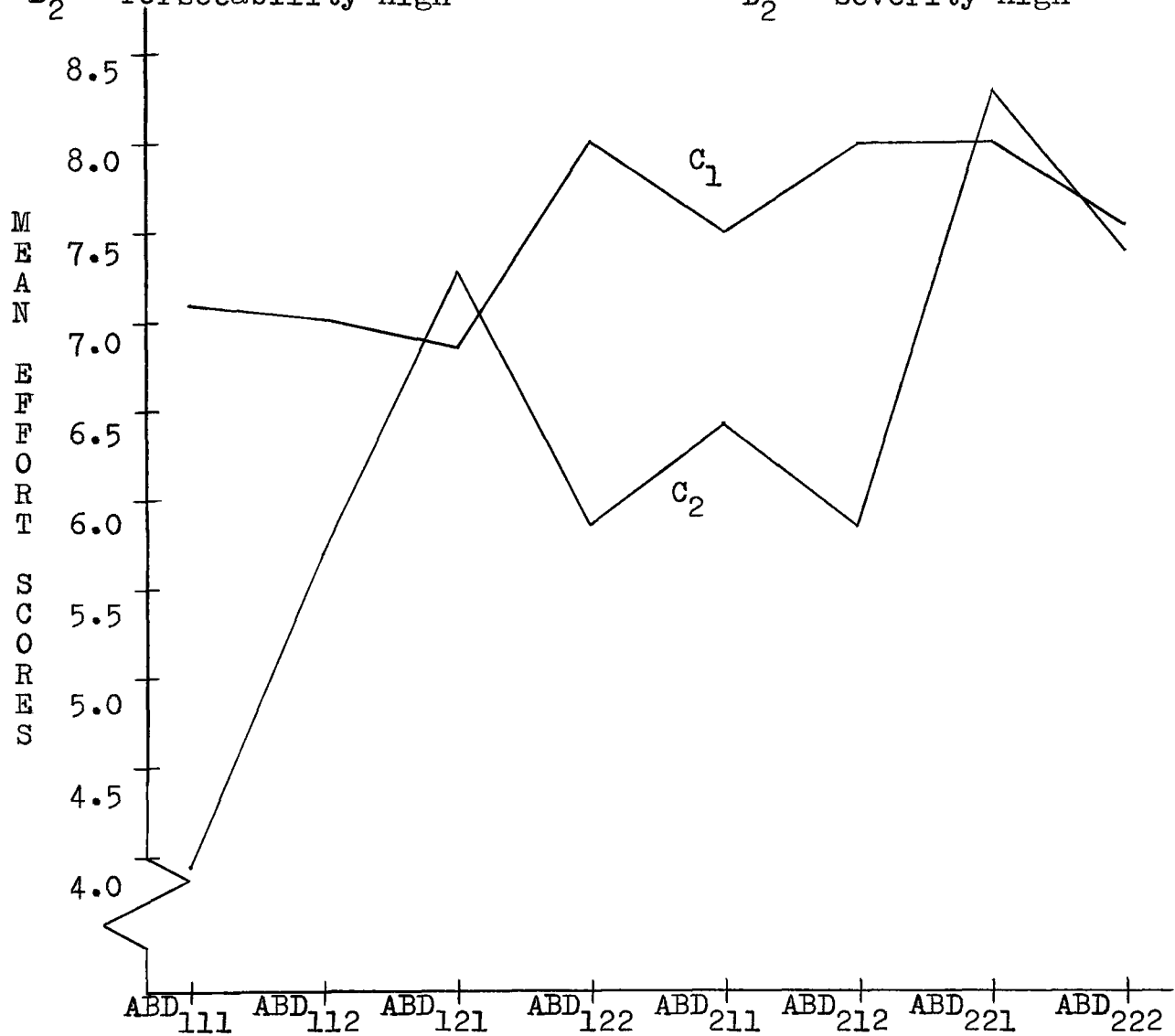


Figure 6.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Effort Attribution Scores of Female Observers.

Situational foreseeability had a significant effect on the attribution of effort under two separate conditions. First of all, there was greater attribution of effort when the situational foreseeability was high (Mean = 7.28) than when the foreseeability was low (Mean = 3.86) under the high ambiguity, low severity, and no instigation of logical set condition ($F = 38.14$; $p < .05$). Second of all, there was greater effort attribution when the situational foreseeability was high (Mean = 8.28) than when the foreseeability was low (Mean = 6.42) under the high ambiguity, low severity, and instigation of logical set condition ($F = 12.07$; $p < .05$). This interaction of foreseeability with the other three independent variables is illustrated in Figure 7.

Cognitive set of the observer had a significant effect on effort attribution in only one case. There was greater attribution of effort when there was the instigation of a logical set (Mean = 6.42) than when there was no such instigation (Mean = 3.86) only under the high ambiguity, low foreseeability, and low severity condition ($F = 23.14$; $p < .05$). The interaction of cognitive set with the other independent variables is illustrated in Figure 8.

Similarly, severity of outcome had a significant effect on effort attribution in only one case. There was greater attribution of effort when the severity of outcome

Legend

- | | |
|--|---------------------------------|
| A ₁ - No Instigation of Logical Set | C ₁ - Ambiguity Low |
| A ₂ - Instigation of Logical Set | C ₂ - Ambiguity High |
| B ₁ - Forseeability Low | D ₁ - Severity Low |
| B ₂ - Forseeability High | D ₂ - Severity High |

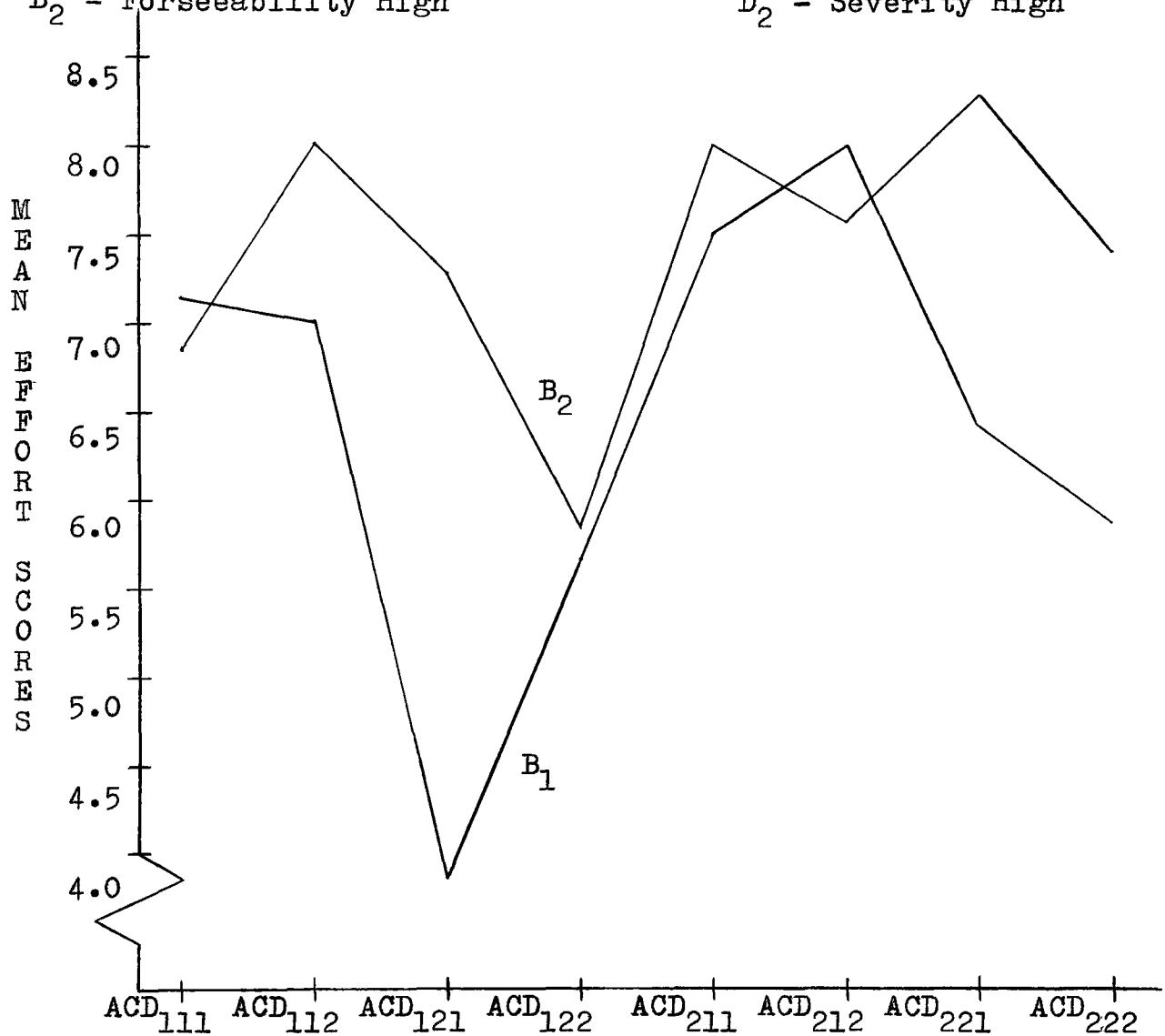


Figure 7.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Effort Attribution Scores of Female Observers.

Legend

- | | |
|--|---------------------------------|
| A ₁ - No Instigation of Logical Set | C ₁ - Ambiguity Low |
| A ₂ - Instigation of Logical Set | C ₂ - Ambiguity High |
| B ₁ - Forseeability Low | D ₁ - Severity Low |
| B ₂ - Forseeability High | D ₂ - Severity High |

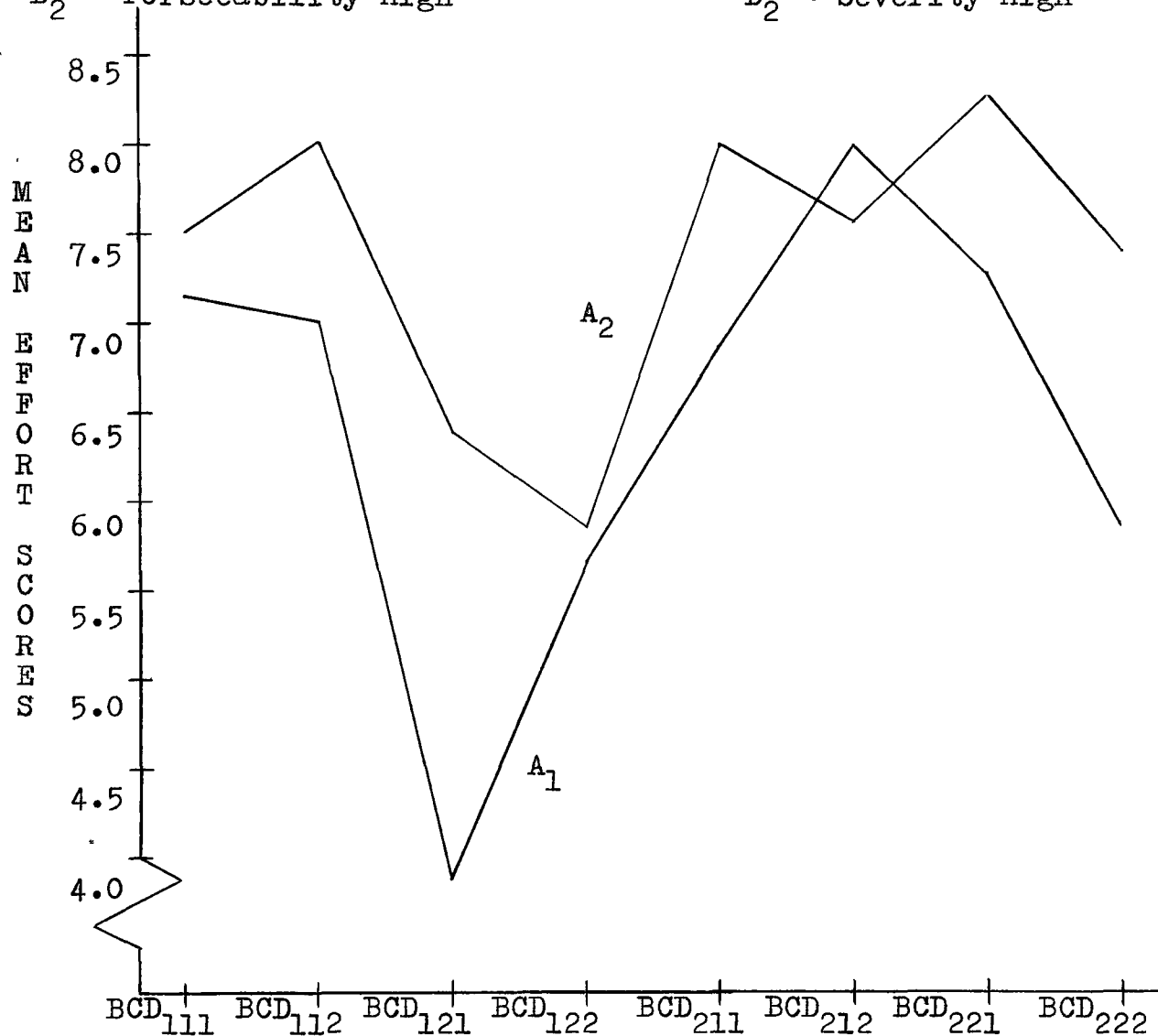


Figure 8.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Attribution of Effort Scores of Female Observers.

was high (Mean = 5.71) than when the severity was low (Mean = 3.86) only under the high ambiguity, low foreseeability, and no instigation of logical set condition ($F = 12.07$; $p < .05$). The interaction of severity of outcome with the other independent variables is illustrated in Figure 9.

In terms of the null hypotheses concerning the attribution of effort presented at the end of Chapter I, the above findings led to the following conclusions. Hypothesis 1, concerning the relationship between severity of outcome and the attribution of effort, was not rejected for either males or females. Hypotheses 2 and 3 concerning, respectively, the relationship between situational ambiguity and effort attribution, and the relationship between situational foreseeability and effort attribution, was rejected for both sexes. Hypothesis 4, regarding the relationship between cognitive set and effort attribution, was rejected for females but not for males. Finally, hypothesis 5, that no significant interactions exist between the four independent variables in terms of their effect on effort attribution, was also rejected for both males and females.

Legend

- | | |
|--|---------------------------------|
| A ₁ - No Instigation of Logical Set | C ₁ - Ambiguity Low |
| A ₂ - Instigation of Logical Set | C ₂ - Ambiguity High |
| B ₁ - Forseeability Low | D ₁ - Severity Low |
| B ₂ - Forseeability High | D ₂ - Severity High |

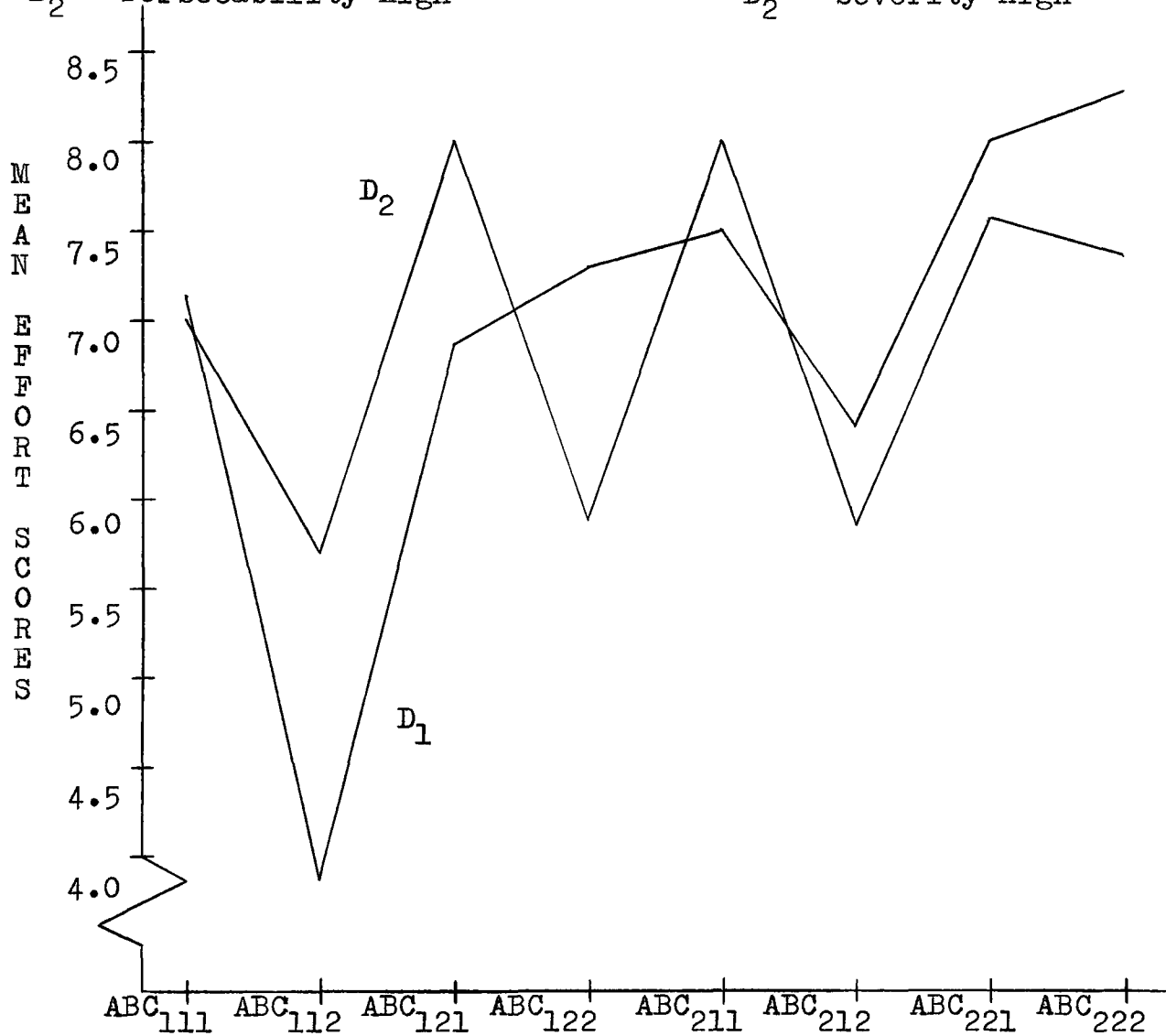


Figure 9.- Diagram of the Interaction Between Cognitive Set, Situational Forseeability, Situational Ambiguity, and Severity of Outcome on Effort Attribution Scores of Female Observers.

2. Discussion of Results

In general, the results of this experiment do not support Walster's¹ defensive attribution hypothesis. There is no support whatsoever in the results from either male or female observers for Walster's contention that the attribution of responsibility is severity dependent. Moreover, the relationship between the attribution of ability and severity of outcome was not significant for male observers. Similarly, the relationship between the attribution of effort and severity of outcome was not significant for the male sample. These findings are all contrary to expectations and, consequently, at odds with the defensive attribution hypothesis.

The only time there was a significant main effect for severity of outcome was for ability attribution by female observers. Though this finding is consistent with predictions, it does not really provide much support for the defensive attribution hypothesis. This is because, as explained in Chapter I, the effect of defensive perceiving on ability

¹ E. Walster, "Assignment of Responsibility for an Accident" in Journal of Personality and Social Psychology, Vol. 3, No. 1, 1966, p. 73-79.

attribution was expected to be minimal when compared to its effect on responsibility and effort attribution. Here we have a significant effect for ability attribution but none for responsibility attribution and none for effort attribution of male observers. Thus, in reality, the above finding does not fit all that well within a defensive attribution paradigm.

The one result that does conform fairly well with expectations is the 4-way interaction on effort attribution by female observers. Effort attribution was found to be severity dependent under the high ambiguity, low foreseeability, and no instigation of logical set condition. Even this result is not exactly what was expected. The severity dependence of attribution was hypothesized^{2,3} to be accentuated under the high foreseeability condition. Here, severity dependence was found to be accentuated under the low foreseeability condition. The above finding does support, though, the position that the occurrence of defensive attribution is facilitated by not instigating into observers a logical, rational set. As well,

2 M. Fishbein and I Ajzen, "Attribution of Responsibility: A Theoretical Note" in Journal of Experimental Social Psychology, Vol. 9, 1973, p. 148-153.

3 N. Vidmar and L. D. Crinklaw, "Attributing Responsibility for an Accident: A Methodological and Conceptual Critique" in Canadian Journal of Behavioural Science, Vol. 6, No. 2, 1974, p. 112-130.

this result provides some support for Medway and Lowe's⁴ emphasis on the importance of situational ambiguity as a facilitator of defensive attribution.

In summary, then, Walster's⁵ defensive attribution hypothesis received little in the way of support from this investigation. Moreover, it received absolutely no support at all from the findings for the male observers. What support it did receive came from the data of the female observers. This sex-related difference in support, in itself, points to a further limitation of the defensive attribution hypothesis. This hypothesis makes no allowances for sex differences.

This limitation is particularly striking because of the pervasive nature of the sex differences found in this experiment. The influence of all four of the dependent variables was significantly mediated by the sex of the observer variable in the analyses of the data of all three of the dependent measures. The mediating influence of the sex variable also extended into the relationship between the two covariates, situational relevance and internal-external locus

4 F. J. Medway and C. A. Lowe, "Effects of Outcome Valence and Severity on Attribution of Responsibility" in Psychological Reports, Vol. 36, 1975, p. 239-246.

5 E. Walster, Op. cit., p. 73.

of control, and two of the dependent measures, responsibility and effort attribution. There were higher negative correlations between internal-external locus of control and both dependent measures for males than for females. As well, the relationship between situational relevance and the same two dependent measures was in opposing directions for males and females. All these sex-related differences in the results are perhaps the most significant finding to emerge from this investigation, in that the consistency of these differences make a strong case for the importance of taking into careful consideration the sex of the observer variable within all further investigations into the attribution process.

The possibility exists that the higher negative correlations between internal-external locus of control and responsibility and effort attribution for males are an indication that the internal-external locus of control construct is not a unitary one for both sexes. Though it is certainly beyond the scope of this investigation to attempt to provide a definite answer as to the likelihood of this possibility, the above result is consistent with the findings of other researchers, such as Feather⁶, who have investigated this problem area.

6 N. T. Feather, "Some Personality Correlates of External Control" in Australian Journal of Psychology, Vol. 19, No. 3, 1967.

Another possibility is that high scores on an internal-external locus of control scale do have the same implications regarding personality for both males and females and that the differences in correlations are more a function, as Vidmar and Crinklaw⁷ suggested, of males and females drawing differing cues from the same stimulus situation or drawing differing inferences from the same cues. This possibility accrues support from the widespread nature of the sex differences in the analyses of the dependent variables. It will be recalled that the prediction was made that no sex differences would emerge from the analyses as long as the stimulus situations were equally relevant for both sexes. No differences in reported situational relevance were detected between male and female observers ($t = 0.09$; non significant). Thus, for the results of this study at least, differential situational relevance may not be utilized as an explanation for sex-related differences in attribution. One must turn to other hypotheses, such as the tentative explanation of Vidmar and Crinklaw outlined above. Essentially, then, the point being made is that as Vidmar and Crinklaw's hypothesis seems the most viable explanation of the numerous sex differences found in the results of the analyses of the dependent variables,

7 N. Vidmar and L. D. Crinklaw, Op. cit., p. 127.

this increases the probability that the same hypothesis can appropriately explain the sex differences in the correlations between internal-external control and the dependent measures. In closing this portion of the discussion of the results, it should be mentioned that the two proposed explanations of the differences in the correlations are not mutually exclusive. Perhaps both influences are at work simultaneously.

Regarding the situational relevance variable, the defensive attribution hypothesis leads us to expect that the higher the situational relevance, the greater the tendency toward defensive attribution. A positive correlation would thus be expected between situational relevance and the dependent measures. This expectation was borne out for the male sample but not for the female sample. The incongruity of this finding is heightened once the realization is made that what little support was mustered for the defensive attribution hypothesis comes from the female sample. The correlation values would have led us to expect the opposite, that is, that the support would have come from the male observers. This anomaly reinforces the impression that the defensive attribution hypothesis and its correlates are overly simplistic, that they do not take into sufficient account the complexities of the attribution process.

In closing this section, it is important to note that there were certain other results which were consistent with predictions. For one, there was as predicted much less overall attribution of ability (Mean = 2.63) than either attribution of responsibility (Mean = 6.72) or attribution of effort (Mean = 6.80). This finding supports the view that ability is a far more stable disposition, and a far less central one to personal causation, than either effort or responsibility. Also of note is that there was no correlation between either covariate and the attribution of ability. This finding also fits in well with the above view that ability is very stable and not that central to personal causation. Finally, whenever either the situational foreseeability or situational ambiguity independent variables were found to have a significant effect on any of the three dependent measures, the obtained effect was always in the expected direction. In other words, the attribution was always greatest when the foreseeability was high rather than when the foreseeability was low and greatest when the ambiguity was low rather than high. This finding is consistent with the findings in the bulk of the literature concerning the facilitative effect on attribution of these two variables.

3. Suggestions for Further Research

In the summary section of Chapter I, it was stated that the purpose of the experiment was to study "the complex process that is the attribution of responsibility by an observer to others". After surveying the confusing and often contradictory mass of results, it is clear that little in the way of light has been shed on this process. Attribution remains a complex and poorly understood process. The reality of this statement is illustrated by the fact that, despite the manipulation or control of seven variables in this study, the error variances for all of the analyses remained quite large. A large portion of the variability in the attribution scores simply was not being accounted for by these seven variables. This fact points to the necessity of further and more integrative theoretical analyses of the attribution process. The goal of these analyses would be the formulation of hypotheses which would indicate what other variables, other than the ones already considered, are significant contributors to the attribution of responsibility, ability, and effort.

Perhaps the major contribution of this experiment was to point out the deficiencies of the defensive attribution hypothesis, as it now exists. As was made clear in the section

on the discussion of the results, the defensive attribution hypothesis is certainly deficient in that it makes no allowances for sex differences. There is need of further research to help clarify the relationship between the sex of the observer variable and the attribution process. Do males and females really focus on different cues when evaluating the same stimulus situation, as Vidmar and Crinklaw⁸ suggest? Or, as Vidmar and Crinklaw alternatively suggest, do males and females draw differing inferences from the same cues? Questions like these need answers before there can be much hope that future versions of the defensive attribution hypothesis will be able to accurately predict research findings.

Another variable whose relevance to the attribution process is certainly in need of further study is the personality of the observer variable. Herein, it has been mentioned more than once that what research and theorizing there has been that has considered this variable has focused largely on the internal-external locus of control construct. Though this emphasis is certainly useful, it needs to be considerably broadened. It is felt that such results as the sex-related differences in the relationship between internal-external

8 N. Vidmar and L. D. Crinklaw, Op. cit., p. 127.

locus of control and responsibility and effort attribution may only be properly understood within the broader context that would be provided by a better understanding of how the personality of the observer is related to the attribution process.

One interesting result which has not as yet been mentioned is the greater sensitivity to variations in the independent variables that was shown by the effort ratings over the responsibility ratings. The same result was found in the only other study, Medway and Lowe's⁹, which has utilized the same dependent measures. This consistency in findings increases the likelihood of the appropriateness of Medway and Lowe's suggestion that perhaps inferences about effort are more sensitive and measurable antecedents of moral attribution than are inferences about responsibility. Perhaps the term responsibility has too many different meanings for different people. Perhaps the above finding is due to other factors as yet undiscerned. Whatever, the point is that there are as yet no definitive answers as to the nature of the inter-relationships between the dependent measures. Further research might provide a few of these answers.

9 F. J. Medway and C. A. Lowe, Op. cit., p. 245.

It might be argued that a limitation of this experiment is that it was not sufficiently involving for the subjects. As was explained, the attempt was made to guarantee sufficient involvement by accepting only university students as subjects in an experiment where the task was to make ratings about a typical university student. Despite this attempt the possibility still remains that the defensive attribution hypothesis is only really appropriate in highly involving situations. So as to evaluate this possibility, further studies should be done using designs where the subjects get more personally involved rather than designs where all the interaction is via paper and pencil.

In summary, the attribution process appears to be a highly complex process which is just beginning to be understood. There is a need for a lot more research in this area. A few specific suggestions as to what future researchers might fruitfully begin by studying were provided.

SUMMARY AND CONCLUSIONS

The defensive attribution hypothesis received little in the way of empirical support from the experimental findings. In general, the independent variables did not influence any of the three measures of attribution in the expected fashion. These findings, when considered in the context of many similar experimental failures to support the defensive attribution hypothesis, point to the inadequacy of this hypothesis as it has been formulated. It seems clear that the attribution process is far more complex than this hypothesis allows for. Moreover, the experimental findings also point to the inadequacy of the explanations proffered by a number of authors in order to explain the failures to support the defensive attribution hypothesis. These authors pointed to the failure to consider such variables as situational foreseeability and cognitive set of the observer as potential explanations of the non significant results of some investigations of responsibility attribution. The present experiment considered these variables. Unfortunately, rather than clarifying the attribution process, the inclusion of these other variables just made it more confusing. This is not to say that these variables are not important to the attribution process. It appears they are

important. Rather, the point is that they seem insufficient as explanations for failures to support the defensive attribution hypothesis.

The word 'seems' has been repeatedly utilized in the above comments because of the necessity to allow for the possibility that the results of this study were due more to the limitations of the study rather than to any limitations of the defensive attribution hypothesis. It is possible that the non-significant findings were at least partially due to such factors as: (1) a limitation in the power of some of the statistical analyses; (2) the well-known poor reliability of self-report rating scales; and/or (3) the heterogeneity of the research sample (A number of the subjects were teachers taking summer courses. Their approach to the attribution process may have been significantly different from the approach of the other subjects.).

This having been said, it nonetheless seems likely that the process involved in making judgements of responsibility, ability, and/or effort is a complex one not easily reducible to the interplay of a few measurable variables. It would appear that much more research will be needed before there is much hope that any predictive hypotheses will begin to accurately forecast the outcome of this process.

BIBLIOGRAPHY

Chaikin, A. L., and J. M. Darley, "Victim or Perpetrator?: Defensive Attribution of Responsibility and the Need for Order and Justice" in Journal of Personality and Social Psychology, Vol. 25, No. 2, 1973, p. 268-275.

This article found the attribution of responsibility to be severity dependent and thus supports the defensive attribution hypothesis. It is also interesting in that it provided perhaps the best manipulation of situational relevance of any article yet published.

Fishbein, M., and I. Ajzen, "Attribution of Responsibility: A Theoretical Note" in Journal of Experimental Social Psychology, Vol. 9, 1973, p. 148-153.

A theoretical article which argued that the inconsistent findings in the literature were at least in part due to the failure to take into account Heider's schema concerning the levels at which responsibility may be attributed.

McKillip, J., and E. J. Posavac, "Judgments of Responsibility for an Accident" in Journal of Personality, Vol. 43, 1975, p. 248-265.

These authors, in a well designed study, tested the defensive attribution hypothesis with a large sample and the manipulation of both seriousness of outcome and similarity to the stimulus person. Their findings did not support the defensive attribution hypothesis.

Medway, F. J., and C. A. Lowe, "Effects of Outcome Valence and Severity on Attribution of Responsibility" in Psychological Reports, Vol. 36, 1975, p. 239-246.

Another article which supported the defensive attribution hypothesis for negative outcomes. However, the severity dependence of responsibility attribution was not significant for positive outcomes. This article is also significant in that it is the first article to have studied effort and ability attribution concomittantly with responsibility attribution.

Phares, E. J., and J. I. Lamiell, "Internal-External Control, Interpersonal Judgments of Others in Need, and Attribution of Responsibility" in Journal of Personality, Vol. 43, 1975, p. 23-38.

This article supported the hypothesis that internal-external locus of control is an important personality variable which has a significant effect on the attribution of responsibility to others. Internals were found to attribute significantly more responsibility than externals.

Phares, E. J., and K. G. Wilson, "Responsibility Attribution: Role of Outcome Severity, Situational Ambiguity, and Internal-External Control" in Journal of Personality, Vol. 40, 1972, p. 392-406.

These authors proposed and found support for the hypothesis that defensive attribution is facilitated when the situation is structured rather than ambiguous. They also found that internals attributed more responsibility for an accident than did externals.

Shaver, K. G., "Defensive Attribution: Effects of Severity and Relevance on the Responsibility Assigned for an Accident" in Journal of Personality and Social Psychology, Vol. 14, No. 2, 1970, p. 101-113.

Shaver's article is significant for two reasons. First of all, because she failed to replicate Walster's finding that responsibility attribution is severity dependent. Second of all, because she was the first to propose the importance of the situational and personal relevance variables to the attribution process.

-----, "Redress and Conscientiousness in the Attribution of Responsibility for Accidents" in Journal of Experimental Social Psychology, Vol. 6, 1970, p. 100-110.

Two experiments were conducted to test the possibility that greater attributed responsibility to persons potentially at fault for severe accidents reflects a greater perceived necessity for compensation of the victim of the accident. The results did not support this hypothesis. Again, Shaver failed to replicate Walster's findings. Furthermore, the provision of compensation was not found to be a significant consideration when attributing responsibility.

Shaw, J. I., and P. Skolnick, "Attribution of Responsibility for a Happy Accident" in Journal of Personality and Social Psychology, Vol. 18, No. 3, 1971, p. 380-383.

This experiment tested the possibility that the defensive attribution hypothesis might also apply to positive outcomes of an accident. The results supported the applicability of such an extension of the defensive attribution hypothesis.

Shaw, M. E., and H. T. Reitan, "Attribution of Responsibility as a Basis for Sanctioning Behaviour" in British Journal of Social and Clinical Psychology, Vol. 8, 1969, p. 217-226.

This article is significant in that it studied the attribution of responsibility at each of the levels of Heider's schema and demonstrated that the effect of outcome intensity on the attribution of responsibility is much less at the level of commission than at the level of foreseeability.

Shaw, M. E., and J. L. Sulzer, "An Empirical Test of Heider's Levels in Attribution of Responsibility" in Journal of Abnormal and Social Psychology, Vol. 69, 1964, p. 39-46.

Herein, the relevance of Heider's levels to the attribution of responsibility was also studied. The findings supported Heider's hypothesis of the importance of the environmental factors that comprise his levels to the attribution of responsibility.

Sosis, R. H., "Internal-External Control and the Perception of Responsibility of Another for an Accident" in Journal of Personality and Social Psychology, Vol. 30, No. 3, 1974, p. 393-399.

Sosis studied the effect of the internal-external locus of control variable on the attribution of responsibility. Like Phares before her, Sosis found that internals attributed significantly more responsibility for an accident than did externals.

Vidmar, N., and L. D. Crinklaw, "Attributing Responsibility for an Accident: A Methodological and Conceptual Critique" in Canadian Journal of Behavioural Science, Vol. 6, No. 2, 1974, p. 112-129.

This is an important theoretical article which reviewed the literature on the attribution of responsibility and made a number of suggestions as to which variables should be considered in future research. Among the suggestions were the consideration of situational foreseeability, cognitive set of the observer, and sex of the observer.

Walster, E., "Assignment of Responsibility for an Accident" in Journal of Personality and Social Psychology, Vol. 3, No. 1, 1966, p. 73-79.

Walster is the author who first proposed the defensive attribution hypothesis and this article includes her first attempt to validate her hypothesis. Her findings support her hypothesis that responsibility attribution is severity dependent for negative outcomes.

-----, " 'Second Guessing' Important Events" in Human Relations, Vol. 20, 1967, p. 239-250.

This article reported a series of experiments in which Walster attempted to replicate her earlier results concerning the defensive attribution hypothesis. In every case, Walster failed to replicate her earlier findings.

APPENDIX A

TWO SEPARATE INSTRUCTION SHEETS, EACH OF WHICH
WAS GIVEN TO ONE-HALF OF THE SUBJECTS.

Our interest is in the variability of people's opinion of others. Consequently, it would greatly be appreciated if you would read the following description and then give us your opinion by answering the questions which are found after the description. Remember, there are no right or wrong answers. Also keep in mind that we are interested in your opinion and not in how you think others might react or in how you feel you should react to the given description.

Our interest is in studying the feasibility of having students on promotion committees. As you might well imagine, this would only be feasible to the extent that the students involved can be impartial in their evaluations of students being considered for promotion. The nature of the job also demands that the person involved be as logical and rational as possible. We would like you to assume that you are a student applying for a position on this committee. Then, we would like you to read the following description and answer the associated questions. Remember, it is important to be as logical and impartial as possible.

APPENDIX B

EIGHT BASIC STIMULUS DESCRIPTIONS, EACH OF WHICH REPRESENTS ONE COMBINATION OF THE LEVELS OF THE FOLLOWING THREE INDEPENDENT VARIABLES: SITUATIONAL AMBIGUITY, SITUATIONAL FORSEEABILITY, AND SEVERITY OF OUTCOME.

Paul is a 19 year old student attending a large Canadian university. Just last week, he had been forced to write an important but surprise exam in one of his courses. Before the exam, Paul had not had any suspicion whatever that an exam was forthcoming. In fact, the professor in question had never been known to give surprise exams before. However, the professor involved had been giving regular reading assignments and at one point became angry with the class because it was obvious the majority of the students were not doing the assigned reading regularly. Furthermore, Paul was one of those students who was guilty of not having done most of his reading assignments. This was not because he had too much other work to do. In fact, this year was a rather easy one for Paul. He just never got around to doing it. There always seemed something better to do than to spend time doing his reading assignments. Paul did, however, listen in class. As a consequence, even though he did not do his reading assignments, he managed to almost pass his surprise exam. Paul failed this important exam by only a couple of marks.

Ann is a 20 year old student at a large Canadian university. A few weeks back, she wrote an important exam in one of her courses. The exam had consisted of 3 questions, chosen by the professor, out of the 8 on the list the professor had given the class a month or so before the exam. Around the same time he had given out the list of questions, the professor had suggested to Ann that she work harder since she was not doing all that well. However, Ann still did not get around to studying for the exam until 2 nights beforehand. This was much too late to properly prepare all 8 questions on the list. Ann realized this and thus decided to prepare only 4 questions thoroughly. This she did. The other 4 questions she hardly prepared at all. When asked by a friend, on the day of the exam, why she had waited so long before starting to study, Ann could not think of a reply. She just hadn't got around to it. Unfortunately for Ann, the professor asked 3 questions on the exam that Ann had not prepared. Consequently, Ann failed her important exam quite miserably. To make matters even worse, Ann's failure means that she will have to put in an extra six hours of lab time during the next semester.

Joan is a 19 year old student attending a large Canadian university. Just last week, she had been forced to write an important but surprise exam in one of her courses. Before the exam, Joan had not had any suspicion whatever that an exam was forthcoming. In fact, the professor in question had never been known to give surprise exams before. However, the professor involved had been giving regular reading assignments and at one point became angry with the class because it was obvious the majority of the students were not doing the assigned reading regularly. Furthermore, Joan was one of those students who was guilty of not having done most of her reading assignments. This was not because she had too much other work to do. In fact, this year was a rather easy one for Joan. She just never got around to doing it. There always seemed something better to do than to spend time doing her reading assignments. Joan did, however, listen in class. As a consequence, even though she did not do her reading assignments, she managed to almost pass her surprise exam. Joan failed this important exam by only a couple of marks.

Tom is a 20 year old student at a large Canadian university. A few weeks back, he wrote an important exam in one of his courses. The exam had consisted of 3 questions, chosen by the professor, out of the 8 on the list the professor had given the class a month or so before the exam. Around the same time he had given out the list of questions, the professor had suggested to Tom that he work harder since he was not doing all that well. However, Tom still did not get around to studying for the exam until 2 nights beforehand. This was much too late to properly prepare all 8 questions on the list. Tom realized this and thus decided to prepare only 4 questions thoroughly. This he did. The other 4 questions he hardly prepared at all. When asked by a friend, on the day of the exam, why he had waited so long before starting to study, Tom could not think of a reply. He just hadn't got around to it. Unfortunately for Tom, the professor asked 3 questions on the exam that Tom had not prepared. Consequently, Tom failed his important exam quite miserably. To make matters even worse, Tom's failure means that he will have to put in an extra six hours of lab time during the next semester.

Joan is a 19 year old student attending a large Canadian university. Just last week, she had been forced to write an important but surprise exam in one of her courses. Before the exam, Joan had not had any suspicion whatever that an exam was forthcoming. In fact, the professor in question had never been known to give surprise exams before. However, the professor involved had been giving regular reading assignments and at one point became angry with the class because it was obvious the majority of students were not doing the assigned reading regularly. Furthermore, Joan was one of those students who was guilty of not having done most of her reading assignments. Still, Joan did not feel that the exam was fair. She told herself that there were three reasons she had not done her assigned reading regularly. Firstly, it was because she had a heavy work load this year. She felt she could only do that part of her work which needed to be done immediately. The rest she would do later. Secondly, last week had been one of the worst weeks yet this year. She had spent nearly all her time studying for two scheduled exams. Thirdly, she had been quite ill for a large portion of last month. Consequently, she had fallen behind in her work and since had not quite been able to catch up. Joan did, however, listen in class. As a consequence, even though she did not do her reading assignments, she managed to almost pass her surprise exam. Joan failed this important exam by only a couple of marks.

Ann is a 20 year old student at a large Canadian university. A few weeks back, she wrote an important exam in one of her courses. The exam had consisted of 3 questions, chosen by the professor, out of the 8 on the list the professor had given the class a month or so before the exam. Around the same time he had given out the list of questions, the professor had suggested to Ann that she work harder since she was not doing all that well. However, Ann still did not get around to studying for the exam until 2 nights beforehand. This was much too late to properly prepare all 8 questions on the list. Ann realized this and thus decided to prepare only 4 questions thoroughly. This she did. The other 4 questions she hardly prepared at all. When asked by a friend, on the day of the exam, why she had waited so long before starting to study, Ann replied that it was because she had so much other work to do this year, particularly lately. She went on to say that the exam schedule had also worked against her. She was stuck writing four exams the same week and as a result did not really have the time to properly prepare for all her exams. To top it all off, she had been quite sick for three weeks the previous month. Consequently, she had fallen behind in her work and since had not quite been able to completely catch up. The exam consisted of one question which Ann had prepared and two which she had not. As a result, Ann was able to almost pass her important exam. She failed by only a couple of marks.

Paul is a 19 year old student attending a large Canadian university. Just last week, he had been forced to write an important but surprise exam in one of his courses. Before the exam, Paul had not had any suspicion whatever that an exam was forthcoming. In fact, the professor in question had never been known to give surprise exams before. However, the professor involved had been giving regular reading assignments and at one point became angry with the class because it was obvious the majority of students were not doing the assigned reading regularly. Furthermore, Paul was one of those students who was guilty of not having done most of his reading assignments. Still, Paul did not feel that the exam was fair. He told himself that there were three reasons he had not done his assigned reading regularly. Firstly, it was because he had a heavy work load this year. He felt he could only do that part of his work which needed to be done immediately. The rest he would do later. Secondly, last week had been one of the worst weeks yet this year. He had spent nearly all his time studying for two scheduled exams. Thirdly, he had been quite ill for a large portion of last month. Consequently, he had fallen behind in his work and since had not quite been able to catch up. Unfortunately for Paul, his not having done his reading assignments resulted in him failing this important exam quite miserably. To make matters even worse, Paul's failure means that he will have to put in an extra six hours of lab time during the next semester.

Tom is a 20 year old student at a large Canadian university. A few weeks back, he wrote an important exam in one of his courses. The exam had consisted of 3 questions, chosen by the professor, out of the 8 on the list the professor had given the class a month or so before the exam. Around the same time he had given out the list of questions, the professor had suggested to Tom that he work harder since he was not doing all that well. However, Tom still did not get around to studying for the exam until 2 nights beforehand. This was much too late to properly prepare all 8 questions on the list. Tom realized this and thus decided to prepare only 4 questions thoroughly. This he did. The other 4 questions he hardly prepared at all. When asked by a friend, on the day of the exam, why he had waited so long before starting to study, Tom replied that it was because he had so much other work to do this year, particularly lately. He went on to say that the exam schedule had also worked against him. He was stuck writing four exams the same week and as a result did not really have the time to properly prepare for all his exams. To top it all off, he had been quite sick for three weeks the previous month. Consequently, he had fallen behind in his work and since had not quite been able to completely catch up. Unfortunately for Tom, the professor asked 3 questions on the exam that Tom had not prepared. Consequently, Tom failed his important exam quite miserably. To make matters even worse, Tom's failure means that he will have to put in an extra six hours of lab time during the next semester.

APPENDIX C

RATING SCALES WHICH PROVIDED MEASURES OF THE THREE
DEPENDENT VARIABLES, THE FOUR INDEPENDENT VARIABLES,
AND ONE OF THE TWO COVARIATES, SITUATIONAL RELEVANCE.

Please make the following ratings.

(1) How responsible do you think Paul is for having failed his surprise exam?

	1	2	3	4	5	6	7	8	9	
not at all responsible										completely responsible

(2) How much is Paul's failure in his surprise exam due to lack of ability?

	1	2	3	4	5	6	7	8	9	
not at all due to lack of ability										completely due to lack of ability

(3) How much is Paul's failure in his surprise exam due to lack of effort?

	1	2	3	4	5	6	7	8	9	
not at all due to lack of effort										completely due to lack of effort

(4) How negative a consequence do you think failing the surprise exam is for Paul?

	1	2	3	4	5	6	7	8	9	
not at all negative										severely negative

(5) How foreseeable should failing the surprise exam have been for Paul?

	1	2	3	4	5	6	7	8	9	
not at all foreseeable										completely foreseeable

(6) How sure are you that Paul is completely at fault for having failed his surprise exam?

	1	2	3	4	5	6	7	8	9	
completely unclear as to where the major fault lies										completely clear that Paul is totally at fault

(7) How likely is it that you might find yourself in the same or a similar position to the one Paul found himself in?

	1	2	3	4	5	6	7	8	9	
not at all likely										very likely

(8) To what extent do you feel that you looked at Paul's situation in a logical and impartial fashion?

	1	2	3	4	5	6	7	8	9	
did not at all feel I was looking at the situa- tion in this fashion										felt I was being completely logical and impartial

APPENDIX D

NOWICKI-STRICKLAND INTERNAL-EXTERNAL LOCUS OF CONTROL
SCALE FOR ADULTS

NOWICKI STRICKLAND SCALE FOR ADULTS

Name: _____

Circle One:

- Yes No 1. Do you believe that most problems will solve themselves if you just don't fool with them?
- Yes No 2. Do you believe that you can stop yourself from catching cold?
- Yes No 3. Are some people just born lucky?
- Yes No 4. Most of the time do you feel that getting good grades meant a great deal to you?
- Yes No 5. Are you often blamed for things that just aren't your fault?
- Yes No 6. Do you believe that if somebody studies hard enough he or she can pass any subject?
- Yes No 7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
- Yes No 8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
- Yes No 9. Do you feel that most of the time parents listen to what their children have to say?
- Yes No 10. Do you believe that wishing can make good things happen?
- Yes No 11. When you get criticized does it usually seem its for no good reason at all?
- Yes No 12. Most of the time do you find it hard to change a friend's (mind) opinion?
- Yes No 13. Do you think that cheering more than luck helps a team to win?
- Yes No 14. Did you feel that it was nearly impossible to change your parent's mind about anything?
- Yes No 15. Do you believe that parents should allow children to make most of their own decisions?

- Yes No 16. Do you feel that when you do something wrong there's very little you can do to make it right?
- Yes No 17. Do you believe that most people are just born good at sports?
- Yes No 18. Are most of the other people your age stronger than you are?
- Yes No 19. Do you feel that one of the best ways to handle most problems is just not to think about them?
- Yes No 20. Do you feel that you have a lot of choice in deciding whom your friends are?
- Yes No 21. If you find a four leaf clover, do you believe that it might bring you good luck?
- Yes No 22. Did you often feel that whether or not you did your homework had much to do with what kind of grades you got?
- Yes No 23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?
- Yes No 24. Have you ever had a good luck charm?
- Yes No 25. Do you believe that whether or not people like you depends on how you act?
- Yes No 26. Did your parents usually help you if you asked them to?
- Yes No 27. Have you felt that when people were angry with you it was usually for no reason at all?
- Yes No 28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
- Yes No 29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?
- Yes No. 30. Do you think that people can get their own way if they just keep trying?
- Yes No 31. Most of the time do you find it useless to try to get your own way at home?
- Yes No 32. Do you feel that when good things happen they happen because of hard work?

- Yes No 33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?
- Yes No 34. Do you feel that it's easy to get friends to do what you want them to do?
- Yes No 35. Do you usually feel that you have little to say about what you get to eat at home?
- Yes No 36. Do you feel that when someone doesn't like you there's little you can do about it?
- Yes No 37. Did you usually feel that it was almost useless to try in school because most other students were just plain smarter than you are?
- Yes No 38. Are you the kind of person who believes that planning ahead makes things turn out better?
- Yes No 39. Most of the time, do you feel that you have little to say about what your family decides to do?
- Yes No 40. Do you think it's better to be smart than to be lucky?

APPENDIX E

RAW SCORES FOR THE THREE DEPENDENT MEASURES, THE
FOUR INDEPENDENT VARIABLES, AND THE TWO COVARIATES.

APPENDIX E

RAW SCORES FOR THE THREE DEPENDENT MEASURES, THE
FOUR INDEPENDENT VARIABLES, AND THE TWO COVARIATES.

A.R.	A.A.	A.E.	S.O.	FORS.	AMB.	SIT. REL.	C.S.	I.-E.
9	1	9	8	9	8	2	8	5
7	3	6	8	8	8	5	4	8
8	2	5	5	8	5	8	3	5
5	1	7	7	7	3	5	6	10
6	3	3	6	7	7	6	5	11
8	4	4	9	6	5	9	8	2
9	1	9	2	8	8	3	7	6
8	2	8	7	8	7	7	8	2
7	3	8	6	6	1	5	4	6
7	3	8	6	7	5	3	8	10
4	4	7	6	5	6	2	7	11
9	3	8	5	6	1	7	6	11
7	3	8	2	5	6	3	7	6
8	3	7	5	8	6	4	6	9
6	3	7	8	7	5	3	6	9
8	3	7	3	7	7	6	9	9
1	2	6	3	8	7	3	6	8
8	2	9	4	8	7	8	8	6
4	6	7	6	8	7	9	9	8
4	3	5	4	8	3	2	4	4
8	2	8	5	8	8	6	4	6
8	2	7	5	5	8	7	8	7
7	2	8	6	8	4	5	5	8
8	2	9	7	9	8	5	4	11
3	6	8	9	8	6	4	4	7
9	3	9	3	7	9	6	8	7
6	6	9	4	8	6	7	5	7
9	3	7	5	6	9	3	8	11
9	2	9	8	7	9	3	5	8
3	2	8	6	9	7	9	8	8

A.R.	A.A.	A.E.	S.O.	FORS.	AMB.	SIT. REL.	C.S.	I.-E.
9	3	9	6	8	9	3	7	10
2	5	7	6	7	7	2	8	10
6	3	8	8	6	3	2	8	2
8	3	7	2	8	7	7	6	18
8	1	8	3	7	8	2	8	6
9	3	7	5	7	6	5	7	9
8	9	8	9	6	9	8	9	9
8	1	7	6	8	8	9	3	12
7	6	8	6	8	8	6	6	11
8	2	9	9	9	9	9	6	6
6	5	5	2	8	9	3	4	15
5	1	8	2	8	9	3	6	11
5	2	5	9	6	2	8	7	14
9	1	5	6	7	4	9	6	7
3	11	3	9	7	1	7	9	7
7	3	3	2	5	6	2	2	9
4	5	6	8	6	4	5	8	9
7	1	5	6	8	4	6	7	7
5	1	1	6	6	8	9	7	15
6	2	3	5	3	3	7	8	13
8	6	6	7	4	2	3	8	3
7	8	7	7	8	6	8	7	7
6	2	5	9	6	7	5	8	5
8	2	9	3	8	7	9	5	7
9	4	6	4	6	8	2	6	7
7	3	8	2	7	7	8	8	5
3	3	2	11	7	3	3	6	5
4	5	2	6	7	4	3	8	5
7	1	6	7	7	7	3	9	2
6	2	2	5	6	4	4	6	17
7	1	5	4	4	5	5	6	5
5	1	1	8	1	1	9	9	11
7	3	7	7	7	8	5	4	9
3	2	5	8	2	4	9	6	8
7	2	4	5	6	4	1	6	9
7	1	4	5	6	3	3	5	3
8	1	8	7	7	8	4	8	8
8	2	8	5	3	5	4	4	13

A.R.	A.A.	A.E.	S.O.	FORS.	AMB.	SIT. REL.	C.S.	I.-E.
8	2	8	8	5	8	2	7	9
7	3	8	9	5	7	3	8	3
3	3	4	4	5	3	4	4	19
9	1	9	4	9	8	3	6	7
8	3	4	5	5	5	7	7	8
7	5	9	3	8	8	9	9	17
9	1	9	6	9	9	5	9	5
6	7	6	8	2	7	6	6	14
7	2	5	7	6	8	8	7	10
7	2	7	7	7	8	7	7	10
5	1	9	7	7	7	5	8	14
8	1	3	6	4	6	1	1	8
5	2	7	7	5	6	8	5	6
5	3	3	7	2	4	5	8	12
8	2	8	3	8	9	9	8	9
5	1	7	7	7	7	9	1	10
6	2	7	6	5	6	5	8	6
8	3	7	7	8	9	3	7	10
9	1	9	1	4	9	2	9	5
8	2	8	2	7	9	7	8	9
9	5	5	9	5	9	2	9	10
7	4	8	5	8	5	4	5	7
3	1	3	9	5	3	9	9	9
7	2	7	8	6	6	4	8	7
9	7	6	8	6	6	7	7	6
8	1	8	9	8	6	5	8	8
3	5	8	6	8	6	3	8	10
7	4	9	4	8	7	2	9	2
8	5	9	7	9	6	2	8	6
4	2	6	8	5	3	9	9	5
9	2	9	5	9	7	2	9	5
6	2	6	6	8	4	8	5	5
8	2	9	4	7	6	5	4	6
6	4	3	7	7	5	3	8	7
7	3	6	8	6	5	6	8	14
9	3	9	5	9	8	2	7	5
9	2	8	7	9	6	7	9	9
5	3	3	5	7	2	2	8	6

A.R.	A.A.	A.E.	S.O.	FORS.	AMB.	SIT. REL.	C.S.	I.-E.
7	3	8	6	8	7	2	8	5
9	1	9	4	6	6	1	9	12
8	2	8	5	7	6	6	9	13
7	2	9	7	7	6	3	8	4
8	3	9	9	7	7	9	7	10
7	2	3	8	4	7	7	8	8
9	1	6	9	7	9	2	8	6
8	3	8	4	7	7	7	6	10
9	1	9	6	8	8	8	9	11
1	1	9	5	9	9	3	5	10
9	1	7	5	7	9	7	9	8
9	3	9	6	6	9	3	9	3
9	6	9	6	7	9	3	9	8
7	2	9	9	8	9	1	7	15
7	3	7	8	8	8	5	9	8
9	1	9	6	7	9	2	8	5
7	3	8	3	8	8	5	7	6
9	3	7	7	9	9	8	9	5
9	5	9	6	9	9	3	9	9
8	1	8	7	7	7	7	5	12
9	1	9	4	9	9	3	9	9
9	3	7	3	9	5	4	5	7
8	2	8	7	7	8	2	8	11
5	2	5	7	5	5	7	9	15
7	3	8	2	8	5	9	5	8
8	1	8	7	8	7	6	8	8
5	2	6	6	6	3	2	7	15
4	5	4	7	6	3	8	7	15
2	2	3	8	4	2	9	5	18
1	1	1	9	7	5	1	9	15
6	2	6	6	6	5	6	8	5
3	2	6	6	7	5	5	8	7
6	2	8	8	6	7	8	8	12
7	5	5	8	5	6	4	8	7
6	3	3	6	7	5	5	9	8
7	4	8	9	6	5	3	9	8
5	4	7	6	3	4	6	7	5
5	1	5	6	5	5	9	9	8

A.R.	A.A.	A.E.	S.O.	FORS.	AMB.	SIT. REL.	C.S.	I.-E.
7	1	7	6	6	6	3	7	8
3	1	4	5	2	6	1	9	7
5	1	7	4	7	7	9	9	12
4	3	6	5	5	3	8	7	14
5	6	6	4	6	4	7	4	19
9	1	6	6	7	7	5	7	7
7	2	7	5	6	6	9	8	10
8	1	6	4	5	6	5	8	8
7	2	8	6	7	6	7	7	3
5	1	8	5	7	3	5	6	14
8	2	8	6	4	7	5	5	11
7	2	9	8	5	7	8	8	7
8	5	8	5	7	8	6	7	6
9	5	5	7	2	5	7	6	9
1	1	9	6	7	7	3	7	8
5	6	7	7	5	5	5	5	1
7	1	9	7	5	8	3	8	7
9	1	9	7	3	9	9	9	14
9	3	7	6	7	7	8	9	16
6	2	8	7	6	6	3	7	9
3	5	7	7	6	7	4	7	12
7	2	8	5	4	5	3	8	8
5	2	9	7	2	6	7	7	7
9	2	7	4	5	7	9	7	9
9	1	7	3	6	9	6	8	9
7	3	7	4	6	7	5	7	6
7	2	8	6	6	7	6	8	13
7	1	9	5	7	8	2	8	4
7	3	7	5	4	6	6	6	14
7	3	5	3	2	5	2	9	6
7	2	8	2	7	7	6	8	9
8	2	7	3	2	7	3	7	4

Legend

A.R. - Attribution of Responsibility
 A.A. - Attribution of Ability
 A.E. - Attribution of Effort
 S.O. - Severity of Outcome
 FORS.- Forseeability
 SIT.
 REL. - Situational Relevance
 AMB. - Ambiguity
 C.S. - Cognitive Set
 I.-E.- Internal-External
 Locus of Control

APPENDIX F

ABSTRACT OF

A Study of Factors Affecting
the Defensive Attribution
of Responsibility to Others

APPENDIX F

ABSTRACT OF

A Study of Factors Affecting
the Defensive Attribution
of Responsibility to Others¹

The review of the literature made it quite clear that the defensive attribution of responsibility is a complex process that is significantly affected by a number of variables. Among these variables are severity of outcome, situational ambiguity, situational foreseeability, situational relevance, cognitive set, sex, and internal-external locus of control. The purpose of this experiment was to study how these variables interacted in their influence on responsibility attribution and in the process provide a further test of the validity of the defensive attribution hypothesis.

The attribution of responsibility and the other two dependent measures, ability and effort attribution, were measured via rating scales filled out by subjects after they had read a description of some academic difficulties a university student had found himself in.

¹ Kenneth R. MacKinnon, Master of Arts thesis presented to the School of Graduate Studies of the University of Ottawa, Ottawa, Ontario, 1976.

In general, the results did not support the hypotheses of the experiment. The predicted dependence of responsibility attribution on severity of outcome did not emerge. Neither did the predicted interactions between the independent variables occur, except in modified form for the attribution of effort. Perhaps the most striking finding was the pervasiveness of the sex differences in attribution for all three dependent measures.

In discussing the results, the importance of further research was emphasized. In particular, the interactions of the sex of the observer and personality of the observer variables with measures of moral attribution were felt to be in need of further investigation.