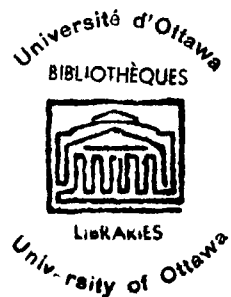


EFFECTS OF FORESEEABILITY, AMBIGUITY OF
CAUSALITY, AND SEVERITY OF OUTCOME ON
ATTRIBUTION OF RESPONSIBILITY FOR
AN ACCIDENT

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ABSTRACT

This study investigated the effects of severity of outcome, foreseeability, and ambiguity of causality upon the attribution of responsibility for a negative accident. Two hundred female students from introductory psychology classes were divided into eight groups, each group hearing an audiotaped situation combining levels of the three independent variables. Since a main effect of severity dependent attribution of responsibility was not found, results failed to uphold the defensive attribution theory. Results showed increased attribution of responsibility under conditions of clear causality, and a foreseeability X severity of outcome interaction. It was concluded that the defensive attribution theory was not powerfully tested by the methods of the present study. Suggestions for future research, which should concentrate upon eliciting high levels of subject involvement and adequate manipulation of the severity of outcome dimension, were made.

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INTRODUCTION

The study of attribution theory begins from the assumption that without necessarily being aware that they are doing so, observers use a series of tests to determine whether an actor's behavior and words reflect underlying characteristics of the person. Criteria used to verify impressions of others are consistency of behavior over time and across different situations, freedom from external constraints, other people's opinion of the actor, and observer expectations of the actor's behavior. Decisions made about the actor may include how responsible he is for the outcome, whether he intends the outcome, and whether he has the abilities to produce the outcome (Heider, 1958). Thus, attribution theory is a broad and fruitful area of research.

The present study focuses on one highly delineated area of attribution research, the attribution or misattribution of responsibility to an actor for an accidental event. Specifically, this study tests some parameters of the defensive attribution theory (Walster, 1966) which proposes that the amount of responsibility attributed is related to the severity of consequences resulting from the accidental event.

While considerable research attention has already been devoted to this theory, results so far are inconsistent; further, the area lacks a study which utilizes all the major

factors known to effect attribution of responsibility in one study. Thus, this study is an attempt to bridge these gaps in the literature.

The first chapter of this thesis is a review of the research in defensive attribution. From this review, the theoretical basis for the study is set out, along with a statement of the hypotheses tested. The second chapter presents the methods used to test the hypotheses such as the selection and description of subjects, manipulation of independent variables, and collection of data. The third chapter sets out the statistical procedures used to analyze measures of the dependent variable. In the fourth chapter, the results are discussed and related to the defensive attribution theory, specifying recommendations for further research in the area.

CHAPTER I

REVIEW OF THE LITERATURE

Human interaction is marked by constant efforts on the part of observers to puzzle out what other people are really like and why they do what they do. A commonly held belief is that behavior and words are not always accurate reflections of another person's characteristics. Consequently, without necessarily being aware, we use a series of tests to determine the person's true characteristics and intentions. Fritz Heider (1958) put forward his concept of phenomenal causality in which he asserted that individuals make attributions about the causes, dispositions, and inherent properties of the people they meet. He posited that a certain psychological economy is achieved since a person is not constantly required to change his views of the other; such categorizations of the other's characteristics provide explanations of the other's behavior. The situational determinants of action are downplayed and the person persists in seeing the other as the source of the other's own actions.

Jones and Davis (1965) have developed the Correspondent Inference Theory in which they focus on the basis on which observers infer the personal attributes of the other. They are concerned with the role of the actor's choice of

alternative behaviors, the assumed desirability of these alternatives, the actor's knowledge of the effects he would produce by his actions, and the actor's intention to produce the action. They generally assert that out-of-role behavior is more informative than role-prescribed behavior.

Kelley (1967) is concerned with the perceptual basis for subjective validity in the attribution process. How does the perceiver know that his impression of the actor is due to the actor's intrinsic qualities and not to his own characteristics or some interaction of himself and the actor? The observer is seen as concerned with the distinctiveness of the impression; that is, does it occur only when the other is present, is the impression consistent over time and in different situations in which the other is present, and is the impression shared by other observers?

These major theories of attribution take into account many situational and personal factors in order to explain the impressions and decisions that observers make about others. However, none of them devotes extensive interest to the effect of the consequences of an action and how these affect attributions made about the actor. Thus, if an actor exhibits a behavior and the effect of that behavior is overwhelmingly positive (or negative), how does this affect attributions made about the actor? Walster (1966) first exhibited concern for this problem in her study of

defensive attribution and the question has since been pursued by numerous other researchers. Of particular interest is the effect of the consequences of negative outcomes that are unpredicted and unexpected--accidents.

Defensive Attribution

The theory of defensive attribution (Walster, 1966) and the Just World theory (Lerner, 1965) are often called upon to explain and predict the attribution of responsibility for accidental events. Walster (1966) remarked that people do not really exert control over many of the events that they encounter. When an accident occurs and the victim's loss is small, an observer may feel sympathy for the victim, attribute his misfortune to chance or bad luck, and acknowledge that such events sometimes happen through no fault of the victim. However, as the losses become more serious, such admissions imply that a similar accident and consequences could befall the observer, and thus such increasingly severe events come to be experienced as threatening to the observer. In order to protect himself, the observer has at hand two alternatives. He may assign characteristics to the actor that account for the accident (for example, carelessness, slow reflexes, ineptitude in necessary skills) that he does not attribute to himself, thus devaluing the actor and so differentiating himself from the actor. The

observer's reasoning might follow, "I myself am not care-
less, inept, slow, and so it is not likely that I would be
involved in a similar accident." The second option is that
the observer may assign responsibility for the accident to
someone in the situation. By assigning responsibility for
the accident and its consequences to someone, the observer
may experience reassurance that a similar event is not
likely to befall him. In short, this is the defensive
attribution hypothesis: if an accidental event has only
mild consequences, no need for defensive attribution is
aroused and the event may be seen as due to chance. How-
ever, as the seriousness of consequences increases, the
observer may become threatened that such an event could
befall him and so takes steps to assign responsibility for
the accident to some person, thus making the event a con-
trollable and avertable one.

Just World Theory

The other predominant formulation is the Just World
theory (Lerner, 1965; Lerner & Matthews, 1967; Lerner &
Simmons, 1966). This suggests that observers often hold a
belief that the world is a just place and that people
generally "get what they deserve." The suffering of an
innocent person threatens this belief. An alternative to
changing the belief is to assume that the victim is not so

innocent. If something happens to an individual he deserves it for one of two reasons: he is basically a good (evil) person and his character merits the outcome, or he has behaved in some specific and direct manner to bring about the outcome. Thus, it is predicted that the observer will assign values and characteristics to the victim that make him worthy of his fate.

The experimental research has not been entirely consistent in support for either of the theories. Walster's severity dependent attribution model has not been generally supported (as will be seen in subsequent portions of this literature review) bringing into question whether a phenomenon of defensive attribution actually occurs (Vidmar & Crinklaw, 1974). A similar inconclusiveness exists for the Just World theory.

Jones and Aronson (1973) found that "respectable" married women and inexperienced women were held more responsible for attempted rapes against them than were divorcees. This is because their intrinsically respectable qualities did not deserve the misfortune, leading to the conclusion that the behaviors of the women provoked the attack. Zuckerman (1975) asked subjects to assign school grades to students from poor home environments and low academic abilities. The tendency to give high grades to children from poor home environments increased among subjects who held a strong belief in a just world, perhaps

on the reasoning that these students had to work harder to achieve in school than students from good home environments. Low academic abilities were not related to the assignment of high grades perhaps because lower abilities do not deserve high grades. These two studies tend to support the Just World theory.

Other studies suggest that the blaming and devaluation of the victim is not so simple a matter as first appears. The theory would predict that as similarity between actor (victim) and observer increases, so should blaming and devaluation of the victim since the fate of a similar person is more threatening than the fate of a dissimilar person. Yet data (Lerner & Agar, 1972; Novak & Lerner, 1968) seem to indicate that when the observer is similar to the victim, the observer tends to avoid the victim and does not attribute derogatory characteristics to the victim. For the observer to devalue a person similar to himself is tantamount to devaluing himself. Cialdini, Kenrick, and Hoerig (1976) state that an observer devalues a victim when there is ambiguity regarding the observer's complicity in inflicting negative consequences on the victim. When it is clear that the observer is not the cause of the victim's suffering in the experimental task, no derogation ensues. However, if the observer participates in some way, or believes himself to have participated in

inflicting the consequences on the victim, derogation occurs. The authors suggest that it is less dissonant with the observer's self concept to believe he has hurt a bad person than a good person. In order to achieve this end, the observer sees the victim as possessing negative traits.

Overall, the two theories, Just World and defensive attribution, need not seem totally incompatible. Victim derogation in the Just World theory is similar to the differentiation of observer and actor in the defensive attribution theory. And when the experimental situation is comprised of only one actor, it is not possible to separate the assignment of responsibility to the "someone" in the scene from the victim in the scene. Still, discrepancies appear when the accident is one which has positive rather than negative results.

Shaw and Skolnick (1971) predicted that the more severe the outcome of a positive accident the less responsibility will be assigned to the actor. Instead, the responsibility will be assigned to chance factors thus increasing the likelihood of a similar positive event befalling the observer. Such an expected finding runs counter to predictions of both defensive attribution and Just World theories. In order to maintain a belief in a just world, an observer would have to conclude that some specific behavior on the actor's part led to the happy outcome. Walster (1967) held that the more important an outcome

positive or negative, the more confident is the observer that he could have predicted the outcome since a serious outcome causes the actor to look more closely at the events leading up to the consequences. Thus, the event seems to be explainable as to its causes. With increasing explanation the actor sees the situation as more predictable and hence feels more secure. In the Shaw and Skolnick (1971) study a student in a laboratory class mixed chemicals which resulted in either a mild pleasant scent or a major scientific discovery. Results showed less responsibility was assigned to the student for the major discovery than for the mild scent. It may be wondered, though, whether observers did not find the possibility of a major scientific discovery to be so improbable that the event must be due to chance. It might be reasoned that if such discoveries were under human control they would be made more often.

Although it can be seen that the assignment of responsibility for an accident is not fully understood on a theoretical basis, current research has demonstrated that attribution of responsibility can be influenced by numerous factors including characteristics of the actor, characteristics of the observer, and aspects of the stimulus situation. Because of its theoretical significance to the defensive attribution theory, the relationship of severity of outcome and the assignment of responsibility has been widely studied.

Severity of Outcome

Walster (1966) showed that subjects assigned more responsibility to a car owner when his car rolled down a hill and caused severe consequences including injuring onlookers than when causing mild consequences (no injury to anyone). However, these results have been difficult to replicate with other studies either indicating no relationship between outcome severity and the attribution of responsibility (Shaver, 1970b; Shaw & Skolnick, 1971; Walster, 1967; Wortman & Linder, 1973) or lower attribution of responsibility for severe than mild outcomes (McKillip & Posavac, 1972; Shaver, 1970b; Walster, 1967). Thus, research has been directed to the exploration of other variables to discover under what conditions severity dependent attribution of responsibility obtains.

Situational Relevance

Shaver (1970a) suggested that Walster's (1967) scenes involving mud slides in California and government projects in Nevada were irrelevant to the college subjects such that feelings of involvement and threat were not aroused in the subjects. Therefore, no need for defensive attribution existed. Jones and Davis (1965) refer to this involvement as hedonic relevance in which attribution takes place when the outcome either promotes or undermines the observer's

values. Shaver (1970a) calls this relevance and points out that two dimensions are encompassed; situational relevance in which observers have a high likelihood of being in a similar situation someday, and personal similarity in which there is a congruence of beliefs, attitudes, and values between the actor and the observer. The research has tended to support the situational relevance dimension as most important rather than personal similarity (Lerner & Matthews, 1967). Hill (1975) organized a field study around the occurrence of a stabbing of two young women on the college campus. Results showed that female observers assigned a higher likelihood of being in a similar situation than male observers did. Both sexes assigned equal responsibility to the perpetrator of the attack but the females assigned more responsibility for the incident to the severely injured girl, while the males assigned more responsibility to the less severely injured girl. Hence, observers who saw themselves as potential victims attributed more responsibility for the severe outcome than did observers not so likely to suffer the same fate. Sorrentino and Boutilier (1974) examined the Just World prediction that victims of accidents are often derogated in order to maintain the belief in a just world. However, in situations where the observer saw that he might be in a similar situation, he tended not to devalue the victim. These two

studies support the role of similarity of fate. McKillip and Posavac (1972) found that as observers were more personally similar to the victims in terms of age, sex, and marijuana usage, the observers tended to assign less responsibility to the actor than when observers were not similar to the victims. The authors suggest that these results may be due to a tendency on the part of the observers to defend against the idea of a similar fate happening to themselves. On the other hand, it may be that observers did not see these personal characteristics (such as marijuana use) as contributing factors to the accident scene where the car was driven off the road.

While it seems clear that observers who feel that they may suffer a similar fate attribute responsibility differently than non-sufferers do, this concept is tested clearly and specifically by several studies which clearly differentiate perpetrator and victim. Chaikan and Darley (1973) had observers watch an experimental task knowing that they themselves were to take part in the same experiment immediately after watching. Observers were assigned to be either victims or perpetrators before they watched the task. Future perpetrators blamed increasingly severe outcomes (electric shock) on chance factors and defective equipment, and tended to derogate the victim. Future victims attributed equal responsibility to the perpetrator

in the mild and severe conditions and did not derogate victims. Similarly, Ugwuegbu and Hendrick (1974) utilized a non-accident design which clearly set out the roles of perpetrator (bank robber) and victim (bank customer). The robber was held increasingly responsible as the severity of the victim's injuries increased. Likewise, as the severity of the injuries increased so did the amount of punishment assigned to the robber and the amount of compensation awarded the victim. Gleason and Harris (1976) developed an accident scene which clearly separated the perpetrator and the victim (a pedestrian) with results of serious or mild injury to the victim. As in the above study, severity dependent attribution was found.

Although some of the experimental results that failed to support defensive attribution can be accounted for by the situational relevance factor, Medway and Lowe (1975) and Lowe and Medway (1976) pointed out that many studies lack other theoretical conditions that must be satisfied in order for defensive attribution to occur. High involvement on the observer's part must be insured (Heider, 1958; Jones & Davis, 1965). In part, this requirement is related to the aforementioned relevance variable. Secondly, the probability of the occurrence of the severe and mild outcomes must be equal. Last, ambiguous perceptual data must be used, meaning that from the experi-

mental scene it is not possible to clearly determine the causes of the accident. When these three conditions were met, the authors obtained severity dependent attribution of responsibility.

Situational Ambiguity

The role of ambiguity of causality in the situation has not been clearly sorted out. Medway and Lowe (1975) suggest that defensive attribution is an "irrational" process, a perceptual distortion that has its greatest effect in the face of uncertainty. If the evidence is overwhelmingly clear that the actor is innocent or guilty, then the distortion effect will not operate. On the other hand, Phares and Wilson (1972) make an opposite prediction that, as it becomes more clear as to who or what is the cause of the accident, the observers become more willing to assign responsibility. The authors had observers rate accident reports which varied both in ambiguity of causality and severity of outcome. Results showed that more responsibility was assigned when the causality was not ambiguous but clear. However, these scenes had a "legal" context in which observers may have been very aware of the Western tradition of innocent until proven guilty.

Still, there is other evidence to support the non-ambiguous prediction. Wortman and Linder (1973) used a

scene in which a college student left a bottle of medicine on a table which his roommate later drank when he was not home. The roommate became either mildly or seriously sick, but no severity dependent attribution of responsibility was found, perhaps because the student was not present when the accident occurred and so was clearly not to blame. Schroeder and Linder (1976) reasoned that when the primary cause of an accident is environmental, the event should not arouse any defensive needs. Severity of consequences should have an effect on responsibility attributions only when the actor is perceived as the most probable cause of the accident. Thus, when the consequences are severe, the actor's defensiveness will be aroused so that he can avoid blame for similar situations that may befall him in the future.

These predictions were tested out in a scene in which a metals technician was demonstrating a hydraulic press. While he was called to the phone, an alloy exploded sending splinters into a child and causing mild or severe injuries. Other information was supplied to the observers indicating that the technician knew of or did not know of similar accidents in the past. The actor was assigned least responsibility when the injuries were mild and the technician did not know of similar accidents in the past. However, by giving the actor knowledge of previous accidents the observer could easily judge that since similar accidents

had occurred the technician could have and should have better predicted the possibility of such an accident and so taken steps to prevent its occurrence. This study, therefore, points to the role of foreseeability as a factor affecting attribution of responsibility.

Foreseeability

Heider (1958) set out five levels at which people attribute responsibility: (1) association where the actor is held responsible for all effects that are in any way associated with him, (2) causality where the actor is responsible if he was instrumental in producing the effects, (3) foreseeability where the actor is responsible only if he could have foreseen the effects even though he may not have intended to produce them, (4) justification in which the actor is responsible to the extent that his behavior was intended but not justifiable, and (5) intentionality where the actor is responsible only for effects foreseen and intended. Research has indicated (Shaw, 1968; Shaw & Reitan, 1969; Shaw & Sulzer, 1964) that when subjects are asked to judge responsibility across the five levels, the attribution increases from the level of association to causality to foreseeability to intention and then decreases for justifiability. Whitehead and Smith (1976) asked subjects to judge the responsibility that should be

assigned to an actor who bought a home in California which was later damaged by earthquake. Foreseeability was manipulated by either providing or not providing information about the proneness of certain areas of the state to earthquakes. More responsibility was assigned when the event which produced the misfortune was foreseen by the individual, but the severity of earthquake damage did not affect attribution of responsibility.

Internal-External Locus of Control

Besides stimulus characteristics, characteristics of the observer can influence the attribution process. Predominant among these is internal-external locus of control. Rotter (1966) defines this as a generalized expectancy of the extent to which the individual believes that what happens to him is a result of his own actions and characteristics (internal) or of chance, fate, or the action of powerful others (external).

When this characteristic is applied to the attribution of responsibility it is predicted that internals will attribute more responsibility to the actor in the situation, while externals will have a tendency to attribute more responsibility to external, situational factors. Schiavo (1973) suggests that the possibility of an accident happening to internals and externals should be differentially

threatening to them since an unanticipated event would be contradictory to the habitual internal frame of reference but consistent with or easily accommodated by the external one. For the internal, repeated accidental events threaten their belief in personal sources determining outcomes and, being more threatened, would assign more responsibility to the perpetrator of the accident. Rotter (1966) suggests that threatening events, especially involving failure, are more threatening to internals than to externals who can accept outside forces as responsible. It would seem, then, that repeated accidents threaten to rearrange the internal's self concept and belief system.

Hochreich (1972) asked college subjects to judge the extent to which outcomes of the My Lai massacre were the responsibility of the actors. Male internals were less likely to downplay the responsibility of the soldiers, while the male externals blamed the United States war policy and military establishment. Female internals and externals did not differ in attribution of responsibility, and this may be that situational relevance was not met. The actors were all male, the events were far removed from the everyday life, and so involvement might not have been aroused. Stebbins and Stone (1977) gave feedback of success or failure on a communication task to the actors. Externals attributed their success or failure to impersonal external forces (chance, the

experimental situation) more than the internals did. This effect was even more pronounced for failure feedback than success feedback. Kaiser (1975) asked subjects to judge whether test grades given to the subjects (only one of which was the subject's own score) were due to effort and ability on the student's part or to luck and chance. The internals assigned all three grades to internal factors and the externals attributed them to luck and chance more often. The fact that these subjects attributed all three scores, not only their own, to internal factors suggests that internals judge not only their own behavior but also that of others along the dimension of internal sources. This projection is called assimilative projection (Heider, 1958) and contends that individuals assume that whatever applies to themselves also applies to other people. DeCharmes, Carpenter, and Kuperman (1965) report that people who tend to see themselves as origins of activity and control, and motivated by their own intrinsic interests, also see others as origins. Pawns (victims of outside influences) tend to see others as pawns too. Sosis (1974) found that internals assigned most responsibility to the actor for an automobile accident, externals least responsibility, and intermediates assigned intermediate responsibility. In addition, internals judged the defendants most harshly by assigning the longest prison terms, externals the shortest prison terms, and inter-

mediates again intermediate length sentences. Clearly, internals held different perceptions of the accident by citing negligent behavior, while externals blamed bad luck as the causes of the accident.

Phares and Wilson (1972) confirmed that internals assigned more responsibility for an accident to the driver of the car than did externals. Phares and Lamiell (1975) have suggested that the extent to which an observer judges an actor responsible for his own fate is a prerequisite to other interpersonal behavior. The authors asked observers to judge the extent to which an ex-convict, a war veteran, and a welfare recipient were deserving of help, sympathy, understanding, and money. The internals were less willing to give these things to the actors. Thus, not only are negative sanctions but also positive behavior affected by the internal-external dimension.

Hyland and Cooper (1976) found in a positive accident (chemicals mixed accidentally in a laboratory leading to a mild scent or a discovery) that internals attributed higher responsibility for the accident to the actor than externals did. Schiavo (1973) asked college subjects to assign responsibility for an accident in a chemistry lab which had either positive or negative outcomes and outcomes which were either mild or severe. While attribution of responsibility scores were not different for internals and externals, the

internals did report that they were less like the actors than externals. Internals felt that they would have been less likely than the actor to have mixed the chemicals and saw lower likelihood that such an accident should ever happen to them than externals did. This may be seen as a partial support of the defensive attribution theory since internals deny the possibility of a threatening experience by differentiating themselves from the actor, and thereby maintaining their control over transactions with the environment.

Sex of Observer and Attribution of Responsibility

Thus, it is well established that locus of control affects the attribution of responsibility process. Another characteristic of the observers that may be influential in attribution of responsibility is the sex of the observer. While some studies have noted sex differences (Hill, 1975; Hochreich, 1972; Walster, 1966), others have not (Jones & Aronson, 1973; Medway & Lowe, 1975; Walster, 1967; Whitehead & Smith, 1976). Many studies have not taken the factor into account or utilized designs which called for one sex only. Shaw and McMartin (1975) asked male and female subjects to read an account of an auto accident in which the driver and/or bystanders either suffered injury or not. Subjects assigned responsibility for the accident and sentenced the

perpetrator to jail. Male subjects judged the perpetrator more responsible than the females did in all conditions. In assigning jail terms, though, males used an equity principle in which lax jail terms were given whenever the perpetrator was injured or suffering; the females, on the other hand, applied a moral salience principle such that strictness of the jail term was increased when bystanders were hurt. The overall effect of these studies is to suggest that sex of observer probably plays a role in assignment of responsibility for accidents.

Literature Resumé

From the above reviewed literature it is evident that defensive attribution is by no means a simple phenomenon. Theoretically, defensive attribution is defined as severity dependent attribution of responsibility to someone in the accident situation (Walster, 1966). Yet, attempts (McKillip & Posavac, 1972; Shaver, 1970b; Shaw & Skolnick, 1971; Walster, 1967; Wortman & Linder, 1973) to replicate the original findings have not been successful, leading to some criticism that the phenomenon may not even exist (Vidmar & Crinklaw, 1974). However, the bulk of the reviewed studies has not adopted so radical a view and has attempted to search out the conditions under which defensive attribution occurs.

These studies show three classes of variables affecting the occurrence of defensive attribution: (1) characteristics of the perceiver, (2) characteristics of the stimulus scene, and (3) characteristics of the actor.

Evidence has been reviewed that indicates that characteristics of the perceiver that affect attribution are (a) internal-external locus of control, and (b) sex of the observer. Earlier studies of defensive attribution (for example, Shaver, 1970a, 1970b; Shaw & Skolnick, 1971; Walster, 1966, 1967, to name only a few) failed to take into account the differential perceptions of internals and externals. Thus, it is possible that such samples were biased towards one dimension, or that obtained scores of attribution of responsibility were "averages" of the two groups. Usually, sex differences have been accounted for by analyzing data from the male and female respondents separately, but such separation or lack of sex differences has not always been mentioned by the researchers.

In terms of the situation itself, research has pointed out that defensive attribution occurs only under restricted conditions, and several variables have been implicated:

1. Data show that consequences of the accident must vary in severity but still be seen as having equal probability of occurrence in real life (Medway & Lowe, 1975).

2. Furthermore, the consequences must be seen as ones which are relevant in the sense that the observer strongly feels that he too might undergo a similar fate (Hill, 1975; Jones & Davis, 1965; Lerner & Matthews, 1967; Shaver, 1970a).
3. The original defensive attribution theory was based on an accident having negative outcomes (Walster, 1966) and most studies have used negative outcomes. It seems clear, though, that predictions and results of attribution of responsibility differ for positive outcomes (Shaw & Skolnick, 1971).
4. Also, there seems good evidence to suggest that when the actor can foresee the effects of his actions even though he does not intend them (as in an accident) the actor may well be held more responsible than if the results could not have been foreseen (Heider, 1958; Schroeder & Linder, 1976; Shaw, 1968; Shaw & Reitan, 1968; Shaw & Sulzer, 1964; Whitehead & Smith, 1976).
5. Some theoretical difference exists as to whether ambiguity of causality in the stimulus scene is a necessary precondition to the attribution of responsibility (Lowe & Medway, 1976; Medway & Lowe, 1975; Phares & Wilson, 1972; Schroeder & Linder, 1976; Wortman & Linder, 1973).

So far, the literature lacks a study which utilizes all these significant variables in the same stimulus scene, so that an additional study is called for which relates these variables to the attribution of responsibility.

Statement of Purpose and Theoretical Infrastructure

The goal of this study is to examine the effects of severity of outcome, foreseeability of results, and ambiguity of causality on the attribution of responsibility under conditions of high observer involvement and situational

relevance which maximize observer feelings of threat and while minimizing the subject characteristics of locus of control and sex.

From the original defensive attribution theory (Walster, 1966) and from the body of research literature there is good reason to believe that these three variables should affect the attribution of responsibility. Theoretically, severity of outcome is implicated in that events with mild outcomes are not so threatening as events with severe outcomes; such severity and resultant high levels of threat operate to increase the observer's defensive needs. Consequently, given a Just World theory, greater responsibility is assigned to the actor. This aids the security needs of the observer as the negative outcome is thus not due to a chance situation that could just as easily befall him. Ambiguity of causality should, theoretically, affect attribution of responsibility in that under conditions that are unexpected, the observer should feel some pressure to attribute responsibility to someone in the scene and the lack of clarity of causality should render this optimally feasible and plausible. Lastly, foreseeability should theoretically be important since if the actor could have foreseen the results of his actions, he could also have predicted and prevented the occurrence of the results, such that greater responsibility may accompany the actor foreseen results.

Further, it seems theoretically reasonable to expect that combinations of these three variables may also affect attribution of responsibility. All other things being equal, when outcomes are highly threatening and causality is not clear, the observer should feel the greatest pressures to defend himself via defensive attribution.

Similarly, if the outcome is severe and the results could not have been foreseen, the observer theoretically should feel highly threatened by the unpredictability of such negative outcomes and so assign heavier levels of responsibility to the actor. Or, if the results were clearly actor foreseeable but the cause of the effects is not clear, the observer should feel quite threatened (it could happen to him). Thus, to reduce threat, observer defensive attribution should occur.

Finally, a scene which combines unforeseeability with its unexpected quality, severity of outcome with its high levels of threat, and ambiguity of causality with its high potential for actor attribution of responsibility can be expected to affect maximal defensive attribution of responsibility.

As a function of these ideas, the following theoretical expectations will be explored:

1. Scenes with severe outcomes will prompt greater attribution of responsibility than mild outcome scenes.
2. Scenes with unforeseeable consequences will prompt greater attribution of responsibility than scenes with foreseeable consequences.
3. Scenes with ambiguous causality will prompt greater attribution of responsibility than scenes with clear causality.
4. Scenes combining severe outcomes and unforeseeable consequences will prompt greater attribution of responsibility than scenes with mild outcomes and foreseeable consequences.
5. Scenes combining severe outcomes and ambiguous causality will prompt greater attribution of responsibility than scenes with mild outcomes and clear causality.
6. Scenes combining unforeseeable consequences and ambiguous causality will prompt greater attribution of responsibility than scenes with foreseeable consequences and clear causality.
7. Scenes combining severe outcomes, unforeseeable consequences, and ambiguous causality will prompt greater attribution of responsibility than scenes with mild outcomes, foreseeable consequences, and clear causality.

The above theoretical hypotheses will be tested using the following null hypotheses:

1. Holding constant the effect of foreseeability and ambiguity of causality, there will be no statistically significant difference in attribution of responsibility between mild and severe outcomes.
2. Holding constant the effect of severity of outcome and ambiguity of causality, there will be no statistically significant difference in attribution of responsibility between scenes of foreseeable or unforeseeable results.
3. Holding constant the effect of severity of outcome and foreseeability, there will be no statistically significant difference in attribution of responsibility across causally ambiguous and causally unambiguous scenes.
4. Holding constant the effect of foreseeability, there will be no statistically significant interaction between severity of outcome and ambiguity of causality.
5. Holding constant the effect of ambiguity of causality, there will be no statistically significant interaction between severity of outcome and foreseeability of results.
6. Holding constant the effect of severity of outcome, there will be no statistically significant interaction between foreseeability of results and ambiguity of causality.
7. There will be no statistically significant interaction between severity of outcome, foreseeability of results, and ambiguity of causality.

CHAPTER II

EXPERIMENTAL PROCEDURE

The purpose of this chapter is to present the procedures used to test the experimental hypotheses. This material is presented in four sections. First, the subject selection procedures and sample descriptions are set out. Second, the details of the in-classroom collection of data are presented. The third section describes the manipulation of the independent variables, while the fourth section discusses the measurement devices used in the experiment.

Subjects

Subjects in this study were 200 female students enrolled in psychology courses at the University of Ottawa during the fall and winter terms of the 1977-1978 school year. It was decided to use only subjects of one sex since some studies have found sex differences in the attribution of responsibility (for example, Hill, 1975; Hochreich, 1972; Shaw & McMartin, 1975; Walster, 1966). In the present study only female subjects were used, since more women than men register for the Introduction to Psychology courses. It was necessary to use six Introductory Psychology classes in order to obtain the desired number of subjects, all of whom were Anglophone.

All subjects were volunteers who received no financial remuneration but could, in accordance with School of Psychology guidelines, obtain one point toward their final course grade for participation in this experiment.

The average age for the entire sample of 200 subjects was 21.91 with ages ranging from 17 to 51. Of the 200 subjects, 108 were first-year students, 56 were second-year, 14 were third-year, 2 were fourth-year, and 10 were part-time students with less than one-year university experience (see Table 3, p. 31). Overall, the average subject had 1.03 years experience at university. The majority of the subjects (54%, $n = 105$) were Arts students, although other programs were also represented (Management Sciences 5%, $n = 9$; Science & Engineering 11%, $n = 21$; Kinanthropology 18%, $n = 35$; Social Sciences 11%, $n = 22$; and Nursing 2%, $n = 4$; see Table 4, p. 32).

In the experiment, the 200 subjects were randomly assigned to one of eight experimental groups. Detailed information regarding demographic data on each of these eight groups may be found in Tables 1, 3, and 4 on pp. 29, 31, and 32, respectively. Of particular interest here is the fact that the eight groups differ significantly among themselves regarding age. A one-way analysis of variance (see Table 2, p. 30) illustrates this finding ($F(7, 183) = 3.722, p < .001$). The Newman Keuls procedure delineates

Table 1
Age Description of the Eight Experimental Groups

Group No.	Mean Age (in years)	SD (in years)	No. of Subjects Responding
1	24.9	7.39	23
2	24.2	8.43	24
3	24.4	8.54	25
4	19.9	1.15	25
5	20.6	4.93	25
6	22.0	7.07	23
7	19.7	3.07	25
8	19.0	0.94	21

Table 2

Analysis of Variance: Age Differences among the Eight
Experimental Groups

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u> Ratio
Between groups	933.477	7	133.359	3.722*
Within groups	6556.023	183	35.825	
Total	7489.500	190		

*p < .001

Table 3
 University Experience of the Eight Experimental Groups
 (expressed in percentages)

Year at University	Group Number								Total Group
	1	2	3	4	5	6	7	8	
First	68.0	66.7	54.2	20.0	21.7	73.9	72.0	81.0	56.8
Second	8.0	29.2	25.0	64.0	52.2	17.4	20.0	19.0	29.5
Third	4.0	0.0	8.3	16.0	26.1	4.3	0.0	0.0	7.4
Fourth	4.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	1.1
Special	16.0	4.2	12.5	0.0	0.0	4.3	4.0	0.0	5.3
	100.0	100.1*	100.0	100.0	100.0	99.9 *	100.0	100.0	100.1*
<u>n</u>	25	24	24	25	23	23	25	21	190

*Due to rounding error.

Table 4

Faculties Represented in the Eight Experimental
Groups (expressed in percentages)

Faculty	Group Number								Total Group
	1	2	3	4	5	6	7	8	
Arts	64.0	44.0	56.0	48.0	45.5	44.0	72.0	54.2	53.6
Management Sciences	16.0	4.0	4.0	0.0	0.0	0.0	0.0	12.5	4.6
Science & Engineering	8.0	16.0	16.0	0.0	4.5	12.0	20.0	8.3	10.7
Kinanthropo- logy	8.0	12.0	12.0	20.0	18.2	40.0	8.0	25.0	17.9
Social Sciences	4.0	20.0	8.0	32.0	27.3	0.0	0.0	0.0	11.2
Nursing	0.0	4.0	4.0	0.0	4.5	4.0	0.0	0.0	2.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>n</u>	25	25	25	25	22	25	25	24	196

two subsets of groups that differ significantly from each other. Groups 1, 2, and 3 were significantly older than groups 4, 7, and 8. In addition, group 1 was significantly older than group 5. Group 6 did not differ from any of the other seven groups.

A Pearson correlation computed between age and the dependent measure of attribution of responsibility was .31. This indicated that, as subject's age increased, so did the amount of responsibility assigned to the actor in the scene. While this is a significant correlation ($p < .001$), it was judged not to account for enough variance ($r^2 = 9\%$) to merit use of analysis of covariance procedures in the statistical treatment of data. It should also be mentioned that the eight groups contain significant differences among themselves in regards to amount of university experience ($\chi^2 (28) = 73.74$, $p < .001$) and faculty representation ($\chi^2 (35) = 66.83$, $p < .001$). However, these variables are considered to be of little theoretical importance to attribution of responsibility since similarity of fate is considered more influential than personal similarity along dimensions of years of university experience or faculty membership in the attribution of responsibility.

Data Collection

The experimenter informed the students that participation would include listening to a short audiotape of

approximately 1-minute duration and then filling in two questionnaires. They were also told that after completion of their participation, they would receive an explanation of the project after which they could ask any questions they had about the research. In accordance with the School of Psychology policy the students were also told that it was possible to earn one point toward their final course by participating in this project.

The experimenter then told interested students of a prearranged time and place where they could listen to the tape and fill in the questionnaires under the experimenter's supervision. If students were unable to meet the experimenter at this time, they were asked to leave their name and phone number with the experimenter who would in turn call the students and arrange a more convenient time to meet.

The presentation of the scenes and collection of data was done in groups ranging in size from four people to 20 people. All subjects, regardless of which of the eight experimental scenes they heard, listened to an identical introductory speech (see Appendix 1 for exact wording) that explained the experimenter's interest in studying how students overcome the academic difficulties they encounter throughout their three or four years of study. Within this introduction subjects were asked to see themselves in Anne's situation and answer the questions as if they were Anne.

The purpose of these instructions was to increase subject involvement.

After this, the audiotape of one of the eight scenes was played for the group after which subjects completed the questionnaires. Only after all subjects had returned their questionnaire to the experimenter, who checked to see that all items were completed, was a short explanation of defensive attribution given. In no case did the experimenter reveal expectations about the current research or mention hypotheses that were being investigated. The subjects were free at this time to ask any questions that they wished. Before dismissing the group, the experimenter thanked the subjects and asked them not to discuss their knowledge of the study with other students or friends.

This group meeting generally lasted about 40 minutes, occasionally longer.

Manipulation of Independent Variables

In order to test the effects of the three independent variables, eight audiotaped scenes were developed which showed the academic difficulties of Anne, an 18-year-old first year student. Each of the eight scenes was a combination of one level of each of the three independent variables: foreseen-unforeseen, ambiguous-unambiguous causality, and mild-severe outcome. The text of the eight scenes appears

in Appendix 1. Within each scene, foreseeability was manipulated by having Anne know the exact date of the exam (foreseen level) or by having the test be a surprise exam (unforeseen level). Ambiguity of causality was manipulated by having Anne either be unsure of what to expect on the exam, although some of the other students seemed clear on this (ambiguous), or by having Anne know ahead of time what material would be covered on the exam (unambiguous). The severity of outcome variable had a mild outcome in which Anne had to retake the exam or a severe outcome which required Anne to make up the year due to low grades in several other classes as well.

Measurement Devices

The first item that the subjects were asked to complete was an open-ended question asking subjects to discuss Anne in terms of her personal qualities and her characteristics as a student. The purpose of this question was to warm up subjects to their task. This information was not used in the statistical analyses.

The dependent variable, attribution of responsibility, was measured by a 9-point Likert scale item (see Appendix 2, question 1) that ranged from no responsibility at all accorded to Anne (value 1) to total responsibility on Anne's part for failing the exam (value 9).

After subjects replied to this item, they subsequently completed three other Likert scale items which were used to assess the manipulation of the independent variables. These items were placed after the attribution of responsibility item so that subject responses would not bias their judgment of the amount of responsibility to be assigned to Anne. Thus, each subject was asked her perception of the severity of outcome, the foreseeability, and the ambiguity of causality in the scene that she heard. For exact wording of these items see Appendix 2, questions 2, 3, and 4. Like the question assessing attribution of responsibility, these three questions utilized a 9-point range. The lower the value answered to this item, then the scene was more foreseeable, milder in outcome, or more ambiguous in causality.

Next, the subjects were asked to answer two other 9-point Likert scale items which asked how likely they felt it was that they themselves would someday be in a situation similar to Anne's and how personally involving they found the experimental task (see Appendix 2, questions 5 and 6). These questions were used to check subject involvement.

The second portion of the questionnaire which subjects were asked to complete was the Rotter Internal-External Locus of Control Scale (Rotter, 1966; see Appendix 3). This was included so as to control for the effects of this personality variable which has been shown to affect

attribution of responsibility (for example, Hochreich, 1972; Hyland & Cooper, 1976; Kaiser, 1975; Phares & Lamiell, 1975; Phares & Wilson, 1972; Schiavo, 1973; Sosis, 1974; Stebbins & Stone, 1977). The locus of control was not manipulated as an independent variable.

This scale consists of 29 items including six filler items used to make the purpose of the test more ambiguous. On each item the subject chooses either a or b, whichever he feels most closely corresponds with his belief about the nature of the world. The individual items do not follow a thematic order, but instead represent a variety of attitudes about many different situations. The scale is scored according to a key presented in Rotter's (1966) monograph on locus of control; the score is the number of external choices such that the higher the total score, the more external is the subject's orientation. The maximum obtainable score is 23. Conversely, the lower the total score, the more internal the subject's orientation.

Since the locus of control concept has been extensively studied since its introduction in 1966, its reliability and validity have been well established. Such research has been summarized in several reviews to which the reader is referred (Hersch & Scheibe, 1967; Lefcourt, 1972; Rotter, 1966). These reviews report consistent measures of reliability. Test-retest reliabilities range

from .43 to .84 for various subject samples, and for time periods ranging from one to two months. For college women, Rotter (1966) reports test-retest coefficients at one month to be .83 and at two months .61. Hersch and Scheibe (1967) report a test-retest correlation of .72 for a 1-year period on 18 college students. In terms of internal consistency, the reviews report estimates ranging from .65 to .79. Rotter (1966) reports that female college students obtained internal consistency coefficients of .79, .76, and .70.

In terms of validity, Rotter's (1966) report of strong discriminant validity is supported by low correlations with measures of intelligence (-.22 to .01) and social desirability (-.41 to -.12). These results were confirmed by Hersch and Scheibe (1967) who found nonsignificant correlations between scale scores and three different measures of intelligence.

CHAPTER III

PRESENTATION OF RESULTS

In this chapter the statistical procedures used to analyze the data are presented. The chapter consists of four sections. Section one is concerned with a pilot study and questionnaire items that assessed the manipulation of the independent variables. Section two discusses questionnaire items that reflect personal involvement of subjects. The third section examines the relationship of locus of control and attribution of responsibility. Section four presents analysis of variance procedures used to test whether differential attribution of responsibility occurred as a result of the manipulation of independent variables.

Checks of Manipulation of Independent Variables

Before actual collection of data, it was necessary to determine whether the scenes presented utilized levels of the independent variables that were perceived significantly different from each other. Therefore, a number of volunteer subjects were recruited from the same Introductory Psychology classes as subjects for the main study (no subjects were permitted to take part in both pilot and main studies), and were asked to listen to the taped scenes and respond to one question about one of the independent variables.

For example, one set of subjects listened to a tape with a mild outcome, while another group of subjects listened to the same scene with a severe outcome. Both sets of subjects were asked to rate the severity of outcome on a 9-point Likert scale item. Similarly, different groups of subjects judged the two levels of foreseeability and ambiguity of causality. The exact wording of these items is the same as the three Likert items used to assess independent variable manipulation in the main study (see Appendix 2, questions 2, 3, and 4). A series of uncorrelated t tests determined that the levels of the independent variables were judged significantly different from each other in the appropriate direction by the subjects (see Table 5, p. 42).

Since it appeared from the pilot study that the independent variables had been effectively manipulated, the scenes were presented to the 200 subjects in the main study. Thus, in the main study, as part of the post scene data collection, each of the subjects answered a question regarding manipulation of the three independent variables (see Appendix 2, questions 2, 3, and 4) as well as the attribution of responsibility item. This manipulation check was used in addition to the pilot study because of the large number of subjects participating in the main study, thus increasing the sensitivity and precision of the statistics. Manipulation check items were answered only after responding

Table 5

Pilot Study t Tests Showing Success of Manipulation of Independent Variables

Independent Variable	\bar{X}	<u>SD</u>	\bar{X}	<u>SD</u>	<u>n</u>	<u>t</u> obs.
Severity of outcome	4.20 (mild)	.87	7.20 (severe)	.97	20	6.86*
Foreseeability	7.83 (foreseen)	1.21	6.00 (unforeseen)	1.22	24	3.52*
Ambiguity of causality	4.36 (ambiguous)	2.10	7.18 (unambiguous)	1.02	22	3.81*

*p < .01

to the attribution of responsibility item so as to preclude any biasing of the attribution of responsibility. As in the pilot study, two-tailed t tests were run between the two levels of each of the independent variables. As in the pilot study, the levels of each variable were judged by the subjects to be statistically significantly different from each other in the appropriate direction (see Table 6, p. 44).

These two sets of manipulation checks provided substantial evidence that the manipulation of the independent variables was successful. The mild outcome was judged significantly milder than the severe one, the ambiguous situation was judged significantly more unclear as to causality than the unambiguous situation, and the foreseeable condition was judged significantly more foreseeable than the unforeseen condition.

Personal Involvement and Relevance

Among the questions to which subjects responded after hearing the taped scenes were two questions designed to measure self reported involvement in the task (see Appendix 2, question 6) and perceived similarity of fate between actor and observer (see Appendix 2, question 5). These questions were included because of the heavy theoretical emphasis placed upon personal involvement, feelings of threat, and likelihood that the observer could suffer

Table 6

t Tests Showing Success of Manipulation of Independent Variables in the Main Study

Independent Variable	\bar{X}	<u>SD</u>	\bar{X}	<u>SD</u>	<u>N</u>	<u>t</u> obs.
Severity of outcome	4.04 (mild)	1.91	7.53 (severe)	1.52	200	14.26*
Foreseeability	6.73 (foreseen)	1.55	3.50 (unforeseen)	1.27	200	16.05*
Ambiguity of causality	4.11 (ambiguous)	2.21	7.16 (unambiguous)	1.63	200	11.10*

*p < .01

the same fate as the actor (see Literature Review, pp. 9-13).

Subjects ($N = 200$) reported that there was slightly less than a 50-50 chance that they would someday undergo a similar situation to the one Anne was currently in (see Appendix 2, question 5; $\bar{X} = 4.7$). A one-way analysis of variance indicated that all groups reported equal estimates of similarity of fate ($F(7, 192) = 1.859, p < .07$; see Table 7, p. 46). A Pearson correlation showed self reported similarity of fate to be significantly correlated $-.16$ to attribution of responsibility ($p < .01$). In other words, as subjects reported decreasing similarity of fate, the amount of responsibility placed on Anne increased. This is contrary to expectations as set out in the Review of the Literature in which increasing similarity of fate was related to increasing attribution of responsibility.

In the present study, this inverse relationship of similarity of fate and attribution of responsibility may be a form of distancing. Thus, in the observer's mind, the more the outcome is Anne's fault the less I am like her and, therefore, the less likely that the same event could befall me. Such reasoning serves to make the accidental event one of specifiable causes, not a chance one. Further, the just world belief would support the observer's rationale that Anne deserved her fate, but that the observer, as a

Table 7

Analysis of Variance: Showing Equivalent Similarity of Fate
across the Eight Experimental Groups

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between groups	42.954	7	6.136	1.859
Within groups	633.918	192	3.301	
Total	676.873	199		

$\underline{p} < .078$

different type of person than Anne would not deserve a similar fate.

Subjects ($N = 200$) also reported that they were only "somewhat" involved in the experimental task (see Appendix 2, question 6; $\bar{X} = 4.7$). Thus, the subjects seemed to indicate only moderate task involvement. A one-way analysis of variance indicated that all groups reported being equally involved ($F(7, 192) = 1.348, p < .22$; see Table 8, p. 48). A Pearson correlation showed that personal involvement in the task and attribution of responsibility were related $-.05$. This is not a significant correlation ($p < .23$).

The overall conclusion drawn from these two questions was that subject involvement was only moderate.

Locus of Control and Attribution of Responsibility

As set out in the previous review of literature, locus of control has been established as a strong personality variable which affects the attribution of responsibility (see Literature Review, pp. 16-20). In this study, the Rotter Internal-External Locus of Control Scale was administered to the subjects with the aim of controlling for the effect of the locus of control rather than manipulation of locus of control as an independent variable.

A one-way analysis of variance showed that overall the eight groups did not differ from each other on this

Table 8

Analysis of Variance: Showing Equivalent Personal Involvement across the Eight Experimental Groups

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between groups	37.279	7	5.325	1.348
Within groups	758.718	192	3.951	
Total	795.998	199		

$p < .229$

variable. That is to say, no group or set of groups were significantly different from the other groups on this measure of locus of control ($F(7, 192) = .946, p < .47$; see Table 9, p. 50). It thus appeared that locus of control was randomly distributed within all eight groups.

In this sample of 200 subjects a Pearson correlation showed that locus of control and attribution of responsibility were significantly correlated $-.24 (p < .001)$. That is, the more internal the subject's orientation, the more responsibility was attributed to the actor. The coefficient of determination (r^2) indicated that the relationship between locus of control and attribution of responsibility explained about 5.7% of the total variance. Because of the small amount of variance accounted for by locus of control and the evidence for random distribution of locus of control in the groups, it was decided that an analysis of covariance would not be needed in the analysis of attribution of responsibility data.

Analysis of Attribution of Responsibility Data

The main analysis of the dependent variable (see Appendix 2, question 1, attribution of responsibility) consisted of a 2 X 2 X 2 univariate factorial analysis of variance (Statistical Package for the Social Sciences, Nie, Hadlai Hull, Jenkins, Steinbrenner & Bent, 1975). The

Table 9

Analysis of Variance: Showing Equivalency of Eight Experimental Groups on the I-E Scale

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between groups	117.915	7	16.845	.946
Within groups	3417.270	192	17.798	
Total	3535.185	199		

p < .471

three independent variables were: severity of outcome (mild, severe; see Appendix 2, question 2), situational foreseeability (foreseen, unforeseen; see Appendix 2, question 3), and ambiguity of causality (ambiguous, unambiguous structure; see Appendix 2, question 4). The alpha level against which all main effects and interaction effects were tested was set at .05.

As shown in Table 10 (p. 52), several significant results were found. First, a main effect for ambiguity of causality was noted ($F(1, 192) = 27.923, p < .001$). This indicated that significantly more responsibility was attributed to Anne in the situation where it was clear that Anne knew ahead of time what to study for the exam ($\bar{X} = 7.14$) than when it was not so clear what was to be studied ($\bar{X} = 5.97$). Thus, when it was perceived by the subjects that Anne alone was the cause of the failure, more responsibility was attributed to her than when mitigating environmental effects could also have contributed to the failure. An eta value of .28 was obtained suggesting that although the effect of ambiguity was a significant one, its presence in this study did not explain a large proportion of the variance.

Secondly, a main effect for foreseeability was noted ($F(1, 192) = 126.471, p < .001$). This meant that the amount of responsibility accorded to Anne was greater in

Table 10
 Analysis of Variance: Effects of Severity of Outcome, Fore-
 seeability, and Ambiguity of Causality on Attribution of
 Responsibility

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Severity of outcome (A)	1.125	1	1.125	.459
Foreseeability (B)	310.005	1	310.005	126.471**
Ambiguity (C)	68.445	1	68.445	27.923**
A X B	11.045	1	11.045	4.506*
A X C	2.205	1	2.205	.900
B X C	6.125	1	6.125	2.499
A X B X C	1.805	1	1.805	.736
Residual	470.627	192	2.451	
Total	871.382	199	4.379	

* $\underline{p} < .035$

** $\underline{p} < .001$

situations where the outcome could be clearly foreseen ($\bar{X} = 7.80$) than when outcome could not be foreseen ($\bar{X} = 5.31$). However, this was not an unqualified finding. The significant severity of outcome X foreseeability interaction effect ($F(1, 192) = 4.506, p < .035$) suggested that the effect of foreseeability was not a uniform one, but was affected by the conditions of severity of outcome. Simple main effects procedure (see Table 11, p. 54) showed that the effect of foreseeability was more pronounced under mild outcome conditions than under severe outcome conditions (see Figure 1, p. 55). Within the level of foreseeability, no difference in attribution of responsibility was found from mild to severe outcomes (foreseeability mild outcome $\bar{X} = 7.96$, foreseeability severe outcome $\bar{X} = 7.80$). However, within the unforeseen level, attribution of responsibility from mild to severe situations increased significantly ($F(1, 192) = 3.92, p < .05$; see Table 11, p. 54; unforeseen mild $\bar{X} = 5.0$, unforeseen severe $\bar{X} = 5.62$).

Several correlations run between the independent variables and attribution of responsibility data were used to examine the amount of variance accounted for by the independent variables in this study. The multiple correlation of the three independent variables with attribution of responsibility was .66 (see Table 12, p. 56). Therefore,

Table 11

Simple Main Effects: Effects of Foreseeability and Severity
of Outcome Interaction on Attribution of Responsibility
(N=200)

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Severity of outcome (A)	1.125	1	1.125	.459
A at b_1	2.56	1	2.56	1.044
A at b_2	9.61	1	9.61	3.92*
Foreseeability (B)	310.005	1	310.005	126.471***
B at a_1	219.04	1	219.04	89.367**
B at a_2	102.01	1	102.01	41.619**
A X B	11.045	1	11.045	4.506*
MS within	470.627	192	2.451	
Total	871.382	199	4.379	

* $\underline{p} < .05$

** $\underline{p} < .01$

*** $\underline{p} < .001$

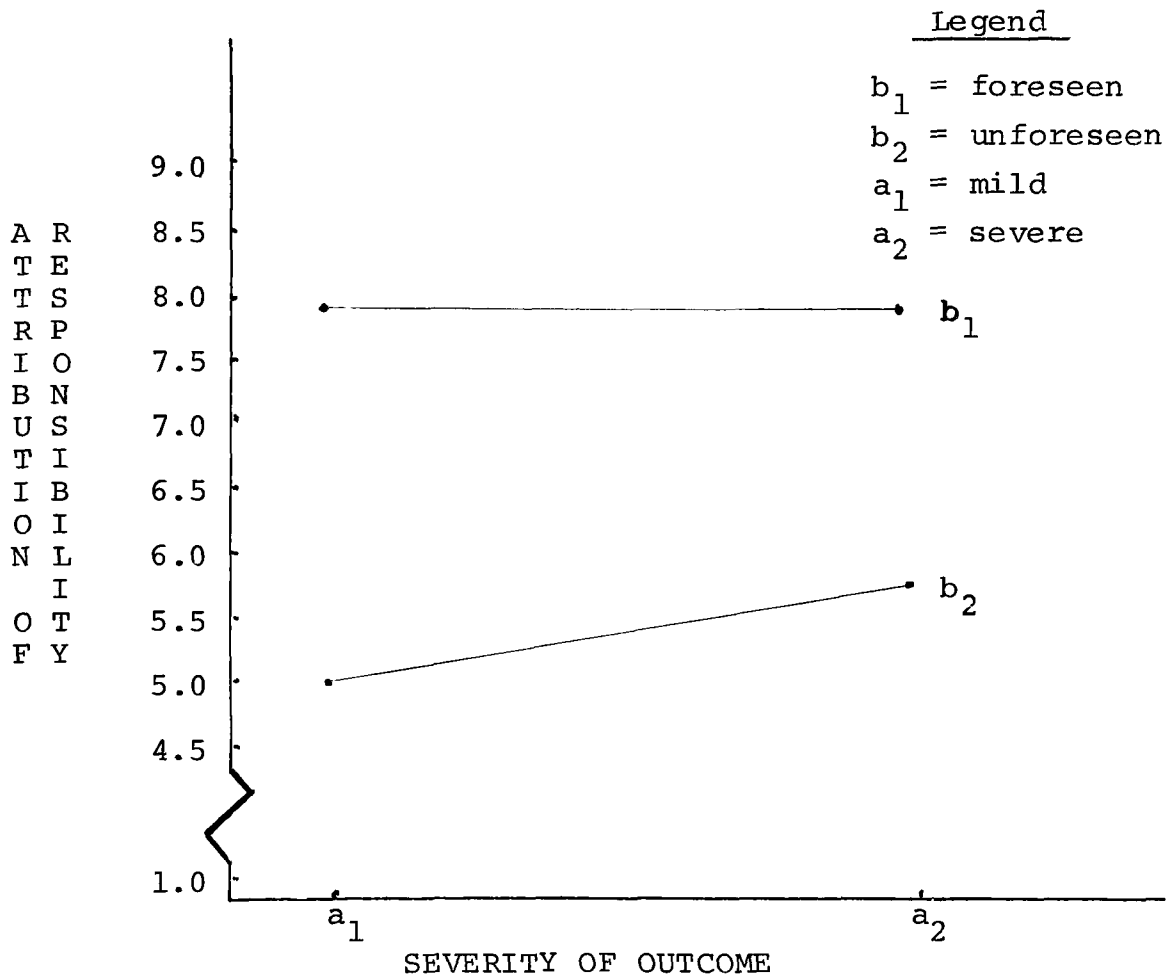


Figure 1. Graph Showing Interaction Effects of Foreseeability and Severity of Outcome.

Table 12

Correlations of Independent Variables with the Attribution
of Responsibility

Variable	Eta	Eta ²	
Severity of outcome	.04	.0016	
Foreseeability	.60	.36	
Ambiguity of causality	.28	.078	
Multiple R			.66
Multiple R ²			.43

the three independent variables accounted for 43% of the variance in attribution of responsibility scores.

It was possible to delineate the contributions of each of the independent variables in explaining attribution of responsibility variations (see Table 12, p. 56). Severity of outcome explained less than 1% of the variance, while ambiguity of causality explained about 8% of the variance. Clearly, foreseeability was most useful in explaining the attribution of responsibility since it accounted for 36% of the variance.

It was evident, however, both from correlational data and the large residual sum of squares term (470.627 of a total variance 871.382; see Table 10, p. 52) that other factors besides those utilized in this study can be expected to affect attribution of responsibility.

CHAPTER IV

DISCUSSION OF RESULTS

The intent of this study was to explore the defensive attribution theory in an experiment which elicited high involvement on the subjects' part and which controlled for the effects of subject characteristics. The goal was to clarify the role of situational factors, specifically severity of outcome, foreseeability, and ambiguity of causality, in the attribution of responsibility for an accident. In this respect, the results of the study can first be related to the experimental hypotheses presented in the Review of the Literature. Second, significant results as well as nonsignificant results are examined, particularly for their impact on the defensive attribution theory. Lastly, recommendations for future research are addressed.

Experimental Hypotheses

Since there were no significant effects of the severity of outcome factor, hypothesis 1 which posited no significant differences in attribution of responsibility between mild and severe outcomes could not be rejected.

Hypothesis 2 (no significant differences in attribution of responsibility between foreseen and unforeseen scenes) was rejected due to the significant main effect of

foreseeability. It was found that more responsibility was attributed to Anne in foreseen than unforeseen situations. Null hypothesis 4 was also rejected since there was differential attribution of responsibility due to the combined effects of severity of outcome and foreseeability.

Hypothesis 3, which predicted no significant differences in attribution of responsibility between scenes ambiguous in causality and unambiguous in causality, was rejected. It was seen that more responsibility was attributed to Anne in those situations in which it was clear that she alone was causal in her exam failure (unambiguous causality).

Hypotheses 5, 6, and 7 were not rejected. Results showed that there was no differential attribution of responsibility due to the two-way interaction effects of foreseeability and ambiguity of causality, due to the two-way interaction of severity of outcome and ambiguity of causality, or due to the three-way interaction of severity of outcome, foreseeability, and ambiguity of causality.

Theoretical Significance of Results

Ambiguity

In this study it was found that more responsibility for failing the exam was attributed to Anne when it was clear

that she alone was responsible for the failure than when mitigating environmental factors were present.

The original defensive attribution hypothesis (Walster, 1966) did not address the role of ambiguity per se in the situation, but did mention that even when disaster reports clear accident victims of any part in causality, the reports still reveal attempts to attribute responsibility to someone in the scene. From the defensive attribution theory we can conclude that when outcomes are mild, little significance is attached to responsibility for the event and, therefore, attributions of responsibility are easily made to the actor. In this case, little importance is attached to the role of ambiguity of causality, because of the low levels of threat and low defensive needs. However, as the outcomes are increasingly severe, the level of threat also rises and hence a greater need exists to attribute responsibility for the event. Ambiguity here plays a more important role since, when causality is not clear, the observer still feels defensive pressures to blame someone. Hence, ambiguity must be overcome, principally by efforts to make the causality more clear, so as to be able to pin down responsibility in a manner which satisfies the observer that the "someone" really is "objectively responsible" for the events. In this way, the need for attribution of responsibility has perceptually distortive qualities in that

the causality is made clear by the observer through subjective internal processes. This differs from the case where causality is clear: in such an instance, the pressure to attribute is not so strong because the observer instantly perceives the cause of the event. When causality is clear, the means of prevention are also clear, and predictability of the event (retrospectively on the observer's part) is also higher. In summary, we may say that from the defensive attribution hypothesis ambiguity of causality should raise the level of defensive needs, while clear causality makes the situation a more objective instance of attributing responsibility to the source, and as such increases the observer's feelings of predictability and control.

Phares and Wilson (1972) suggested that clarity of causality made observers more willing to assign responsibility because such clarity decreased the hesitance associated with making an "incorrect" or "unfair" attribution. The present results showed that more responsibility for failing the exam was attributed to Anne when it was clear that she alone was responsible for the failure than when mitigating environmental events were also present. Thus, these results are consistent with those of Phares and Wilson (1972). It is suggested that this is due to the fact that it is easier to attribute responsibility when causality is clear, and that such a situation does not rely on defensive attribution,

but on a more or less objective and accurate assignment of responsibility because predictability and control are built into the accidental situation where causality is clear.

It does become necessary to explain why the ambiguous situation did not at least equal, if not surpass, the amount of responsibility attributed for the clear causality situation. Why were the attributions harsher for the clear causality situation than for the ambiguous causality situation? It must be remembered that, hypothetically, ambiguity only becomes an active factor when the outcomes are so severe that attributions must be made in order to defend the observer. On this basis, it seems most likely that one or both of the two preconditions (truly ambiguous causality and truly severe outcomes) is not present in this study. Checks on independent variable manipulations showed that on a relative scale the two levels of both ambiguity of causality and severity of outcome were significantly different from each other statistically. However, it is possible that the levels of the variables were not great enough to prompt a need to defend on the part of the subjects. This is especially true for the severity of outcome variable, where the levels must not only represent statistical differences, but also different levels of threat and defensive arousal. Thus, it seems most likely that the ambiguous situation did not elicit equal or higher attribution than the clear causality

situation because the severe outcome manipulations did not sufficiently arouse threat and defensiveness so as to force subjects to attribute responsibility to Anne. The lower attribution of responsibility scores in the ambiguous causality situation may reflect a hesitancy to attribute the attendant negative qualities of blaming Anne, a hesitancy that should have been overcome by the threat of the severe outcome.

Thus, these results do not support the defensive attribution theory, but doubt can be raised that the independent manipulations were sufficient to fully test the theory.

Foreseeability

The finding in the present study, that more responsibility was attributed for foreseeable situations than unforeseeable ones (especially in the mild outcome condition) supports the results of several other studies (Shaw, 1968; Shaw & Reitan, 1969; Shaw & Sulzer, 1964; Whitehead & Smith, 1976). On the one hand such a result is not surprising. When a situation can be foreseen, it seems reasonable that such a situation could have been more easily predicted and prevented or controlled. On the other hand, if results are clearly foreseeable, it may be argued that the situation is no longer an accidental one and, as such, is not an appropriate scene to test the defensive

attribution theory which relies on unexpected and unpredictable situations. It is true that the perception of how foreseeable an event is depends on the point of view of the observer or the actor. Fischhoff (1974) suggests that when we observe other people acting in a situation, the observers tend to overestimate the clarity with which the actors were able to foresee consequences. The defensive attribution theory (Walster, 1966) implies that when accidental outcomes are sufficiently severe as to arouse defensive needs on the observer's part, the observer looks at the situation specifically aiming to make it more predictable and controllable. Hence, estimates of situational foreseeability in severe situations are reactions to defensive needs and, as such, are overestimates of foreseeability.

The present findings, however, showed a significant interaction of foreseeability and severity of outcome such that with increasing severity slightly less responsibility was attributed in the foreseeable scenes and significantly more responsibility was attributed in the unforeseen scenes. The lessened responsibility in the foreseen-severe outcome situation runs contrary to the defensive attribution theory which holds that severe outcome scenes should elicit higher attribution of responsibility than mild ones. The increasing responsibility associated with the unforeseen-severe scene is in support of and predicted by the defensive attribution

theory. In view of the inappropriateness of foreseeable scenes in testing defensive attribution, the comparison of attribution of responsibility in unforeseen-mild and unforeseen-severe scenes seems most theoretically important, because unforeseeability is almost a precondition for defensive attribution. Here, the unforeseeability raises feelings of threat because of its unpredictable character, and the severity raises threat because of its increased possibility of significant harm. Thus, the increasing attribution of responsibility in the severe outcome situation is entirely in keeping with the defensive attribution theory. However, it must be remembered that the observed difference in means between mild and severe outcomes for the foreseeable scenes was nonsignificant. Thus, this interaction finding is only based on trends, such that interpretation must be cautious and tentative.

In summary, the higher attribution of responsibility with foreseen than unforeseen situations is consistent with other research, but the question must seriously be asked whether a scene which is objectively foreseeable is an appropriate one for testing defensive attribution. Certainly, such scenes are used as comparison levels against which the unforeseen situation should be compared. However, on their own, such scenes rely on accurate attribution of responsibility, not defensive attribution.

Severity of Outcome

The most unexpected finding and the one of most theoretical import was the lack of significance for the severity of outcome variable. The core of the defensive attribution theory is severity dependent attribution of responsibility (Walster, 1966), but other studies (McKillip & Posavac, 1972; Shaver, 1970b; Shaw & Skolnick, 1971; Walster, 1967; Wortman & Linder, 1973) as well as the present one have failed to establish severity dependent attribution of responsibility.

Two reasons for such lack of significant findings present themselves: inadequate manipulation of severe and mild consequences and inadequate involvement of observers.

The results of this study showed that severe outcomes did not prompt increased attribution of responsibility as the defensive attribution theory calls for. Only one significant interaction effect of severity of outcome was found, and here results were partially contrary to theoretical predictions. One explanation lies in the fact that the precursor of defensive attribution, severe outcomes that arouse feelings of threat and defensive needs for control on the observer's behalf, was not met. Even though t tests demonstrated that subjects judged the two outcomes as statistically significantly different from each other in both

the pilot study and the main study, this does not insure that the observers actually experienced differing levels of threat with the different outcomes. Psychometrically, the means of the two outcomes were adequately separated (mild condition $\bar{X} = 4.04$, severe condition $\bar{X} = 7.5$). The differences between the means of the two outcomes (3.41) was slightly greater than the differences between the two levels of foreseeability (3.23) and the two levels of ambiguity (3.05). Statistical power of the contrasts was high (99%) so that any significant differences that did occur would have been detected. However, the two groups may not have been separated enough in terms of felt threat to produce defensive attribution. Specifically, with the advantage of hindsight, it is most probable that low levels of threat were produced by both outcomes. The threat levels did not reach a high enough level to produce the inaccurate, predictable misperception that defensive attribution describes. Hence, it seems most likely that a truly severe outcome was not present in this study and in the numerous studies which have not supported the defensive attribution predictions.

Secondly, the subjects, as observers, may not have been adequately involved (pp. 43-47) in the scenes presented so that the prerequisite of high subject involvement was not met. Involvement and interest on the subjects' part

must be present before the subjects can be expected to feel anything about the scenes, including threat. Likewise, a person who is threatened is involved in the situation.

Surely the scenes were applicable to the subjects in terms of similarity of fate, relevance of the scene, and actor's personal characteristics. The fact that the groups did differentially attribute across foreseeability and ambiguity levels points out that the subjects were at least intellectually involved. Subjects' replies to questions 5 and 6 about personal involvement and relevance point out that all the groups were equally involved. However, the lack of any significant findings which were predicted by the theory raises the question whether the theoretical assumptions were met. In this experimenter's opinion, despite extensive pretesting, the necessary preconditions were not fully met and, as such, the defensive attribution theory was not put to a conclusive test.

Age and Locus of Control Findings

Two other interesting findings merit discussion. First, the significant correlation of age and attribution of responsibility ($r = .31$, $p < .001$) showed that as age increased so did the amount of responsibility attributed to Anne for failing the exam. The possibility exists that

older subjects judged Anne's failure as more serious and threatening because of their greater experience with and proximity to the world of work. For example, to persons acquainted with or anticipating the process of applying for jobs, the failure of exams or courses might seriously threaten their own perceived ability to get a job. Observers in this age group might reason that poor grades might influence employer impressions that the actor who has failed exams or courses must be careless in work habits, poorly motivated, or intellectually incapable of mastering material presented. Thus, seeing courses and grades as more relevant to their personal occupational success than the younger students, the older subjects may have felt more threatened by Anne's situation and thus prompted them to attribute more or misattribute responsibility to Anne.

Second, the correlation between locus of control and attribution of responsibility ($r = -.24$, $p < .001$) suggests that the more internal the subject's locus of control orientation, the higher the responsibility attributed to Anne for the failure. In order to further explore this finding, the 200 subjects were median split into two groups. Subjects scoring 11 or less on the Rotter scale were used as internals, while subjects scoring 12 or greater were used as externals. A 2 X 2 factorial analysis of variance was computed with the independent variables being locus of

control (internal-external) and severity of outcome (mild-severe). Results showed a significant main effect for the locus of control variable ($F = 16.303$, $p < .001$; see Table 13, p. 71). Significantly more responsibility was attributed to Anne by the internal group ($\bar{X} = 7.09$) than by the externals ($\bar{X} = 5.92$). No main effect on severity of outcome was found, nor were there any significant interactions between locus of control and severity of outcome.

The locus of control main effect was theoretically expected, since the occurrence of events which seem not to be under one's own control should be more threatening to internals than to externals. This is because internals hold the belief that events are under personal rather than impersonal, external, or chance forces. This finding is consistent with previous research in the defensive attribution area showing that internals attributed more responsibility to the actor than externals did (Hochreich, 1972; Hyland & Cooper, 1976; Phares & Wilson, 1972; Sosis, 1974) for accidental events.

Given these results, it seems possible that defensive attribution is a phenomenon more applicable to internals than to externals. It has been demonstrated that forms of attribution other than responsibility for an accident vary with locus of control. For example, internals more often attribute success or failure on a task to

Table 13

Analysis of Variance: Effects of Locus of Control and
Severity of Outcome on Attribution of Responsibility

Source of Variation	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Locus of control (A)	66.784	1	66.784	16.303*
Severity of outcome (B)	.055	1	.055	.014
A X B	.567	1	.567	.139
Residual	802.906	196	4.096	
Total	871.382	199	4.379	

* $p < .001$

personal factors than externals (Stebbins & Stone, 1977) who attributed success or failure to situational or external or chance factors. Kaiser (1975) showed that internals tended to attribute good grades in school to actor ability and effort, while externals stressed luck or chance in obtaining good grades. It has also been reported that persons who tend to see themselves as the origin of activity (internals) also see other people as origins, while people who see themselves as subject to outside influences (external) tended to see others as pawns (DeCharmes et al., 1965).

One explanation for these findings is that internals hold a stronger belief in a just world than do externals. The internal who observes negative consequences befalling an actor believes that the actor is the source of causality. As such, any consequences which the actor undergoes are a result of specific behaviors on the actor's part. This being a just world, the internal may feel that the actor got what he deserved as a result of his behavior. In the same sense, if internals believe that they are the source of their own consequences in the same way that the actors are responsible for their consequences, then internals should be more threatened by observing negative consequences befalling the actor than the externals should be. Thus, given the higher level of threat felt by the internal observers, the internals may more easily misattribute responsibility to the actors than the externals.

If this reasoning is correct, earlier studies in the area of defensive attribution which failed to control this factor may have had nonsignificant results because a majority of their subjects may have been externally oriented and hence less threatened by the accidents posed in the experiment. Likewise, mixed groups of internals and externals may not have yielded significant results because their attribution of responsibility scores were "averages" of persons, some of whom were threatened, some of whom were not threatened, by the experimental scenes.

Recommendations for Further Research

Future research should be directed to more adequately meeting the preconditions of defensive attribution. Any scene which is presented either in paper-and-pencil procedures, or on audio or videotapes, still allows the subject to feel at a distance, that they are observing an incident after the fact. Perhaps the best experimental method to elicit involvement would be to have observers witness a scene in vivo which they fully believe to be "real" but which, in actuality, is staged by confederates of the experimenter. For example, a scene might be contrived in which a subject comes to the psychology lab to take part in an experimental task involving achievement on some task (like a test of "mental abilities")

and overhears the experimenter discussing with the previous subject his failure on the task.

Another source of involving scenes might be newspaper reports of recent public events, say car accidents, homes burning down, physical assault, or passage of certain highly controversial laws. Reports of such events must be ambiguous or lacking in detail, however, so that the experimenter can manipulate variables such as severity of outcome, foreseeability, or ambiguity of causality. These scenes, because they are publicly known and debated, might thus insure greater involvement on the subject's part.

By so utilizing involving scenes which arouse greater feelings of threat on the observer's part, the defensive attribution theory could best be tested. However, the present study also suggests that the phenomenon might involve situation and personality characteristics interactions. It has already been set out that internals attribute differently than externals, not only in attribution of responsibility for an accident (Hochreich, 1972; Hyland & Cooper, 1976; Phares & Wilson, 1972; Sosis, 1974), but also in attribution of success or failure (Stebbins & Stone, 1977), ability and effort (Kaiser, 1975), and perceptions of others as origins of activity (DeCharmes et al., 1965). Age may be implicated in the attribution of responsibility, possibly due to the higher evaluation of courses and grades by older subjects

as important variables in obtaining jobs. Other personality variables such as anxiety levels or ego development might also be investigated. It seems reasonable to expect that persons with high levels of neurotic anxiety, for example, might be more threatened by accidental events than a person of low anxiety and secure personality. If the neurotically anxious person is continually mobilized for defensive action, he may overreact to the threat of accidentally occurring situations and feel more alarmed and vulnerable than the less anxious person when observing the negative outcome of events. The more secure person, who sees the outside world as less threatening than the anxious person and who feels capable of coping with stressful events, may more accurately and objectively judge accidental events since he feels less personally threatened by the accident.

SUMMARY AND CONCLUSIONS

The results of the present study do not provide much support for the defensive attribution theory. No severity dependent attribution of responsibility was found as a main effect and the direction of the one significant interaction between foreseeability and severity of outcome was partially contrary to prediction. The only support for the defensive attribution theory occurred in the increased attribution of responsibility assigned to Anne in severe unforeseen scenes rather than the mild unforeseen ones.

Ambiguity of causality and foreseeability are not explicitly discussed and manipulated within the original defensive attribution theory (Walster, 1966) and the significant main effects of ambiguity can be explained without referring to defensive attribution but by invoking accurate attribution of responsibility as an explanation. Similarly, the finding of higher attribution of responsibility under foreseeable scenes than unforeseeable scenes has been established outside the area of defensive attribution, i.e., accurate attribution of responsibility. In fact, an argument exists that when foreseeability is high and causality is clear the scene may not be "accidental" and unexpected.

While it seems, then, that the defensive attribution theory was not strongly supported, arguments were set out to

show that perhaps the theory has not been effectively tested. Current experimental designs may lack manipulation of levels of threat, particularly as experienced in the severe outcomes, to prompt the "misperception" of defensive attribution. Also, current designs, although relevant, probably lack sufficient involvement of the subjects, so that the necessary high levels of threat and defensiveness are probably not aroused. Current paper-and-pencil or videotaped presentation of scenes lack the experiential reality of witnessing either a live accident or a live "staging" of an accident. Experiments should be directed towards comparing attribution of responsibility under conditions of "staged" accidents and under more traditional presentation of scenes.

Further exploration of personality variables and their relation to defensive attribution seems warranted. Studies utilizing a subject situation interaction seem to show greater probability of tying down the conditions under which defensive attribution should be most likely to occur--if, indeed, it is a replicable phenomenon in the first place.

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APPENDIX 1

EIGHT EXPERIMENTAL SCENES

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Standard Introduction

We in the faculty of psychology are interested in studying the problems faced by students as they begin and pass through their university studies. In order to better accomplish this, I am posing here to you a situation which many students might conceivably meet. I would like you to imagine yourself in the situation presented in the tape you will hear. Listen to the circumstances in this case, and then answer the questions following the story with your own thoughts and feelings as if you were the person involved.

Introductory Remarks by Actor for Each Scene

Hi! I'm Anne. I'm 18 years old and I'm in my first year at university. In high school I received fairly good marks and so far this year I enjoy university life and have made several new friends. Right now, though, I'm pretty upset.

Group 1 - Foreseen - unambiguous - mild outcome:

In one of my courses we were told that there were to be three exams during the term and the test dates were set. One of the exams was given last week. Now, I had not studied all semester even though I knew basically what material would be on the exam because we had discussed this at the beginning of the term. Well, I failed the exam and now I'll have to take the exam over again.

Group 2 - Foreseen - unambiguous - severe outcome:

In one of my courses we were told that there were to be three exams during the term and the test dates were set. One of the exams was given last week. Now, I had not studied all semester even though I knew basically what material would be on the exam because we had discussed this at the beginning of the term. Well, I failed the exam and now I'll have to take the whole year over again because I was kind of low gradewise in several of my other courses.

Group 3 - Foreseen - ambiguous - mild outcome:

In one of my courses we were told that there were to be three exams during the term and the test dates were set. One of the exams was given last week. Now, I had studied somewhat throughout the semester but the teacher hadn't really told us what material each exam was to cover. Some of the other students seemed to have a good idea of what to expect but, really, I didn't know what was happening or what to expect. Well, I failed the exam, and now I'll have to take the exam over again.

Group 4 - Foreseen - ambiguous - severe outcome:

In one of my courses we were told that there were to be three exams during the term and the test dates were set. One of the exams was given last week. Now, I had studied somewhat throughout the semester but the teacher hadn't really told us what material each exam was to cover. Some of the other students seemed to know what to expect, but really, I didn't know what was happening or what to expect. Well, I failed the exam, and now I'll have to take the whole year over again because I was kind of low gradewise in several of my other courses.

Group 5 - Unforeseen - unambiguous - mild outcome:

In one of my courses we were told that there were to be three exams during the term but no specific test dates were set. One day last week the teacher walked in and gave us a surprise exam! Now, I had not studied all semester even though I knew basically what material would be on the exam because we had discussed this at the beginning of the term. Well, I failed the exam, and now I'll have to take the exam over again.

Group 6 - Unforeseen - unambiguous - severe outcome:

In one of my courses we were told that there were to be three exams during the term but no specific test dates were set. One day last week the teacher walked in and gave us a surprise exam! Now, I had not studied all semester even though I knew basically what material would be on the exam because we had discussed this at the beginning of the term. Well, I failed the exam, and now I'll have to take the whole year over again because I was kind of low gradewise in several of my other courses.

Group 7 - Unforeseen - ambiguous - mild outcome:

In one of my courses we were told that there were to be three exams during the term but no specific test dates were set. One day last week the teacher walked in and gave us a surprise exam! Now, I had studied somewhat throughout the semester but the teacher hadn't really told us what material each exam was to cover. Some of the other students seemed to have a good idea of what to expect, but I really didn't know what was happening or what to expect. Well, I failed the exam and now I'll have to take the exam over again.

Group 8 - Unforeseen - ambiguous - severe outcome:

In one of my courses we were told that there were to be three exams during the term but no specific test dates were set. One day last week the teacher walked in and gave us a surprise exam! Now, I had studied somewhat throughout the semester but the teacher hadn't really told us what material each exam was to cover. Some of the other students seemed to have a good idea of what to expect, but I didn't really know what was happening or what to expect. Well, I failed the exam and now I'll have to take the whole year over again because I was kind of low gradewise in several of my other courses.

APPENDIX 2

POSTTAPE QUESTIONNAIRE

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In your own words, how would you describe Anne as a person and as a student?

Please answer the following questions about the situation just presented to you on the tape. A separate answer sheet is provided. Blacken the space corresponding to your answer.

1. How responsible do you think Anne was for the failing mark?

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

2. How negative a consequence do you think failing the exam was for Anne?

1	2	3	4	5	6	7	8	9
not at all negative		a little negative, but not too serious		somewhat negative; bordering on a serious problem		fairly negative; a serious problem		severely negative; a very serious problem

3. How much should Anne have been able to foresee her failing the exam?

1	2	3	4	5	6	7	8	9
not at all fore- seeable		only a little bit fore- seeable		somewhat foresee- able		mostly foresee- able		completely foreseeable

4. How sure are you that Anne is completely at fault for failing the exam?

1	2	3	4	5	6	7	8	9
completely unclear as to where major fault lies	a little bit sure that Anne is at fault			about half sure that Anne is at fault		mostly sure that Anne is at fault		completely sure that Anne is totally at fault

5. How likely is it that you might find yourself in a situation similar to Anne's?

1	2	3	4	5	6	7	8	9
not at all likely; would never find myself in a similar situation	a small likelihood that I could be in a similar situation			about 50% likely that I could be in a similar situation		very likely that I could be in a similar situation		some day I will be in a similar situation

6. How personally involving do you find this task?

1	2	3	4	5	6	7	8	9
not at all		a little		somewhat		very much		totally

APPENDIX 3

PERSONAL OPINION QUESTIONNAIRE *

Note: Items numbered 7 to 35 to correspond to answer sheet.

*Rotter Internal-External Locus of Control Scale.

APPENDIX 3

PERSONAL OPINION QUESTIONNAIRE

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously there are no right or wrong answers.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you most strongly believe to be the case as far as you are concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice.

Please circle the alternative (a) or (b) which you have selected.

7. (a) Children get into trouble because their parents punish them too much.
(b) The trouble with most children nowadays is that their parents are too easy with them.
8. (a) Many of the unhappy things in people's lives are partly due to bad luck.
(b) People's misfortunes result from the mistakes they make.
9. (a) One of the major reasons why we have wars is because people don't take enough interest in politics.
(b) There will always be wars, no matter how hard people try to prevent them.

10. (a) In the long run, people get the respect they deserve in this world.
(b) Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
11. (a) The idea that teachers are unfair to students is nonsense.
(b) Most students don't realize the extent to which their grades are influenced by accidental happenings.
12. (a) Without the right breaks one cannot be an effective leader.
(b) Capable people who fail to become leaders have not taken advantage of their opportunities.
13. (a) No matter how hard you try, some people just don't like you.
(b) People who can't get others to like them don't understand how to get along with others.
14. (a) Heredity plays the major role in determining one's personality.
(b) It is one's experiences in life which determine what they're like.
15. (a) I have often found that what is going to happen will happen.
(b) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
16. (a) In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.
(b) Many times exam questions tend to be so unrelated to course work that studying is really useless.
17. (a) Becoming a success is a matter of hard work; luck has little or nothing to do with it.
(b) Getting a good job depends mainly on being in the right place at the right time.

18. (a) The average citizen can have an influence in government decisions.
(b) This world is run by the few people in power, and there is not much the little guy can do about it.
19. (a) When I make plans, I am almost certain that I can make them work.
(b) It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
20. (a) There are certain people who are just no good.
(b) There is some good in everybody.
21. (a) In my case, getting what I want has little or nothing to do with luck.
(b) Many times we might just as well decide what to do by flipping a coin.
22. (a) Who gets to be the boss often depends on who was lucky enough to be in the right place first.
(b) Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
23. (a) As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
(b) By taking an active part in political and social affairs the people can control world events.
24. (a) Most people don't realize the extent to which their lives are controlled by accidental happenings.
(b) There are really is no such thing as "luck."
25. (a) One should always be willing to admit mistakes.
(b) It is usually best to cover up one's mistakes.
26. (a) It is hard to know whether or not a person really likes you.
(b) How many friends you have depends upon how nice a person you are.

27. (a) In the long run the bad things that happen to us are balanced by the good ones.
- (b) Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
28. (a) With enough effort we can wipe out political corruption.
- (b) It is difficult for people to have much control over the things politicians do in office.
29. (a) Sometimes I can't understand how teachers arrive at the grades they give.
- (b) There is a direct connection between how hard I study and the grades I get.
30. (a) A good leader expects people to decide for themselves what they should do.
- (b) A good leader makes it clear to everybody what their jobs are.
31. (a) Many times I feel that I have little influence over the things that happen to me.
- (b) It is impossible for me to believe that chance or luck plays an important role in my life.
32. (a) People are lonely because they don't try to be friendly.
- (b) There's not much use in trying too hard to please people; if they like you, they like you.
33. (a) There is too much emphasis on athletics in high school.
- (b) Team sports are an excellent way to build character.
34. (a) What happens to me is my own doing.
- (b) Sometimes I feel that I don't have enough control over the direction my life is taking.
35. (a) Most of the time I can't understand why politicians behave the way they do.
- (b) In the long run the people are responsible for bad government on a national as well as on a local level.