RESPONSIBILITY ATTRIBUTIONS AND THE SELF SYSTEM

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Hi, Evelyn.

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CHAPTER I

THE STATEMENT OF THE PROBLEM

Emphasis on the attribution of causality in social psychology was initiated by Heider (1958), who delineated conditions under which causality for actions and outcomes may be assigned to individuals. In the mid-1960's extensions of Heider's work appeared, as Jones and Davis (1965) specified conditions under which attributions of personal disposition can follow from inferences of intentions, and Kelley (1967) studied occassions when external entities (objects) are assigned responsibility or causality for actions and outcomes.

The theories of Jones and Davis (1965) and Kelley (1967) brought about a rapid expansion of attribution literature, causing a loss of central structure and theorization. A survey of current journals reveals that present experiments have studied specific attribution situations and data, and have ignored the more integrative attribution theories. For example, Shaver (1970) considered attributions made by observers (individuals who observe actions and outcomes of others) who share personal or situational similarity to actors (individuals whose actions produce outcomes); Miller and Norman (in press) investigated differences between

active and passive observing; and Jones and Nisbett (1972) hypothesized a divergence between actor and observer attributions.

An additional development has been the emergence of research on attributions of responsibility, rather than causality. Causality implies the question, "Did I/you produce the outcome?" Responsibility implies a narrower question, "Am I/you personally accountable for the outcome which I/you produced?" Empirically the difference is presented in Heider's (1958) levels of commission, which reflect different degrees of relationship and accountability between actors and outcomes. These levels of commission show that under certain conditions individuals are assigned low personal responsibility for actions producing outcomes (causality).

The literature on responsibility attributions alone is vast. Yet, little attempt has been made to integrate this information into a coherent model. The present experiment is part of a research program designed to develop a system that achieves that integration. The goal of this program is to present a model which accurately predicts the responsibility attributions of actors for both good and bad personal outcomes, and of observers who might hold any relationship (e.g., friends, strangers, or enemies) to actors. Briefly, the basic proposition of this integration is that the favorable or unfavorable relevance of an event to an attributor's (either an "actor" or an "observer") self

system determines his attribution of responsibility for that event. Favorable outcomes of personal relevance are attributed to personal responsibility; unfavorable outcomes of personal relevance are attributed to impersonal (environmental) responsibility.

The first experiment in this program (Finney, Merrifield, & Helm, in press) presented subjects with a description of a character and an incident in which he was involved. Subjects were asked to attribute responsibility for the incident from their own, and from their idea of the actor's, viewpoints. This study established that written scenarios can provide sufficient information for subjects to specify that actors and observers would attribute responsibility differently for a negative, harmful outcome. Finney, Merrifield, and Helm also found evidence which can be interpreted as implying that observers who share a role similarity with the actor make responsibility attributions more as the actor would than as unbiased observers.

The next experiment (Finney, Helm, & Fromme, Note 1) also used a scenario, role-playing method to demonstrate that subjects perceive that actors will accept as much responsibility for a good outcome as unbiased observers would assign to them. This experiment also verified that subjects perceive actors as accepting less responsibility for a bad outcome than observers would assign to them. These studies did not directly assess the relevance of attributions to self systems, but their results can be

explained by considering self system motivation, and can be interpreted as indirect support of the contention that self system motivation plays a role in attributions.

Since Finney, Merrifield, and Helm (in press) and Finney, Helm, and Fromme (Note 1) involved attributions regarding outcomes of scenario characters and did not test self system motivations in subjects, the purpose of the present experiment was to provide a more direct laboratory test of the significance of the self system in actor and observer attributions. Consistent with self system considerations, predictions will be made concerning both the effect of success (winning) and of failure (losing) on actors' and observers' responsibility attributions. The study also tested how stranger or friendship relations alter the level of self system arousal in both actors and observers and, therefore, affects responsibility attributions.

At this point it should be mentioned that current literature suggests that the self system is not relevant to attributions. Miller and Ross (1975) present a review of these contentions, emphasizing information-processing rather than ego considerations to account for biases in attributions. They concede, however, that the evidence for completely ruling out self system motives is presently ambiguous. Indeed, Kiesler (Note 2) has argued that the failing of attribution theory is that its current information-processing approach does not incorporate goal-seeking motivations into the model.

Thus, the following literature review has two main purposes. At the same time that a theory regarding the influence of the self system on responsibility attributions is developed, it must be shown that the information-processing approach alone does not adequately predict responsibility attributions. These arguments will be presented in the following sequence. First, self systems will be discussed in terms of the components of the self, the effects of outcomes on the self, and the relationship between expressed emotions and the self. Then, evidence will be presented which shows that the self system approach is a better predictor of an actor's responsibility attributions than is the information-processing approach, and that the type of audience observing an actor (friendly or stranger) affects the degree to which outcomes are relevant to the actor's self system, thereby additionally affecting his responsibility attributions. An argument will next be presented establishing that the same self system factor which influences an actor's attributions also influences the observer's attributions. Finally, hypotheses for the current experiment will be derived.

CHAPTER II

THE SELF SYSTEM

A Description

The focus of this dissertation is the prediction that outcomes have implications for self systems of individuals, and that responsibility attributions made for outcomes reflect this relationship. Attributions are self-protective for relevant outcomes which are bad or unsuccessful; attributions are self-enhancive for relevant outcomes which are good or successful.

The present conception of "self systems" includes three components: self esteem, self image, and ego ideal (ideal self). Ego ideal refers to what an individual ideally aspires to be. Self image refers to the way one actually sees himself. (Self confidence, one's view of his own adaptive abilities, can be considered one component of self image, but self image also includes things such as material possessions and health). Self esteem is a result of the discrepancy between the self image and the ego ideal. If the self image and the ego ideal are similar, self esteem is high. If the self image is perceptibly lower than the ego ideal, then self esteem is low.

Several measures of self esteem utilize the self image versus ego ideal discrepancy as their bases of self esteem. The Q-sort (Stephenson, 1935) is an example of a measure using this discrepancy. In a self concept Q-sort, an individual typically divides a set of personality descriptive items into nine piles. On one sort the individual is to place items in piles so as to construct a continuum varying on the degree to which items are representative of himself, as he presently sees himself. Thus, one endpoint pile reflects descriptions most representative of the person; the other endpoint contains items least descriptive of the person. Next, the individual is instructed to resort the items on a continuum expressing characteristics of his ideal for himself. A correlation coefficient is computed as a measure of relationship between these sorts. High positive correlations reflect high self esteem, while lower correlations reflect lower self esteem.

Bills, Vance, and McLean (1951) developed a similar, popular adjective check list, in which a subject checks a description of himself, satisfaction with himself, and his ideal self. The ego ideal versus self image discrepancy is again calculated. Worchel (1957) and LaForge and Suczek (1955) have developed similar check lists.

The importance of these various methods of measuring self esteem for this dissertation is minimal. What is important is that they reflect the belief of other psychologists that self esteem is measured by the self-ideal discre-

pancy, and that self esteem, self image and ego ideal are the components of the self system. Such a system indicates how self esteem can be influenced. Events which raise self image raise self esteem by decreasing the self image-ego ideal discrepancy. Events which lower self image lower self esteem by increasing the self image-ego ideal discrepancy.

Outcomes and the Self System--Theory

Carl Rogers (1951) stated:

> He (an individual) appears to value those experiences which he perceives as enhancing himself, and to place a negative value on those experiences which seem to threaten himself or which do not maintain or enhance himself (p. 499).

William James (1892), whose theory bears special relevance to this dissertation, came to a similar conclusion. James described three components of the self-as-object (ME). Me is defined as the sum total of all that a person can call his own. The components of Me are: (1) the constituents of Me; (2) the emotions to which those constituents give rise; and (3) the acts that result from those emotions. James lists three classes of constituents of Me: (1) the material self; (2) the social selves; and (3) the spiritual self. Of present importance is the spiritual self, which includes an individual's conception of his abilities and skills. It is theorized by James that, if one's perception of his abilities are favorable (e.g., he has a successful outcome), then he feels happy, feeling happy reflecting "the emotions to which those constituents give rise." If those perceptions

are unfavorable (e.g., he has an unsuccessful outcome), then bad feelings are experienced.

According to James, the type of emotion felt about an outcome mandates the acts that result from those emotions. Self-preservation actions follow from threats to the self and bad feelings. Self-seeking actions follow from positive implications to the self and good feelings. Thus, similar to Rogers (1951), James predicts that self-enhancement follows from good outcomes, and self-maintenance follows from bad outcomes.

Importantly, James (1892) proposed that emotions reflect implications of actions and outcomes upon the self system. Rogers (1951) also believed that pleasant emotions follow from enhancing experiences, and unpleasant emotions follow from negative experiences. Rogers also added that the intensity of emotional reactions should vary directly with the importance of outcomes to the self. The more important the outcome, the stronger the associated emotion.

Finally, it can also be seen that James (1892) anticipates the present model's prediction that responsibility attributions for outcomes (acts resulting from emotions) will reflect the relevance of those outcomes to self systems. For example, an impersonal responsibility attribution by an actor who suffers an unsuccessful outcome would be a self-preserving action. A personal responsibility attribution by an actor who has a successful outcome would be a self-seeking action.

Outcomes and the Self System--Research

A study by Koocher (1971) was designed to see if increasing competence over one's environment enhanced self esteem, and if failure to increase this competence decreased self esteem. His subjects at a summer camp were boys who either learned to swim during camp, or did not develop swimming ability. Learning to swim was stressed for boys in the camp. Each boy's self concept was measured on a modified version of the Index of Adjustment and Values (Bills, Vance, & McLean, 1951), both at the beginning and at the end of camp. It was found that the boys who learned to swim during camp reflected an enhanced self esteem at the end of camp. Boys who did not learn to swim did not show any significant self esteem changes, i. e., no lowering of self esteem for failure.

Wylie (1961) reviewed literature on the effects of success and failure on self esteem. Her conclusion paralleled the results of Koocher (1971). She found that evidence indicates that self esteem rises after success, but rarely has self esteem been found to fall after failure. Diller (1954), however, found that subjects who were told that they had failed on a faked intelligence test did not report "overt" decreases in self esteem, but did reveal a decrease in self esteem on a more "covert" scale. That is, they did not openly report a less of self esteem following failure, but experienced disappointment which they attempted

to disguise. Apparently, one way to protect self esteem is by not giving others an opportunity to lower it by their opinions. Successful outcomes on this intelligence test produced both overt and covert rises in self esteem.

Hence, research does indicate that outcomes potentially affect self systems. Success nearly always produces elevations in self esteem, although failure may not produce self esteem decreases. According to the present conception of self systems, these changes in self esteem are derived from changes in self image, or how the individual currently sees himself.

If all outcomes were to affect self systems, then self systems would be very unstable. Self esteem would rise or fall with every success or failure, joy or sadness. However, the self system is more stable than this. Rises and falls in self esteem do occur, as depression and feelings of worthlessness are sometimes experienced by everyone. Yet, these changes in self systems are not as volatile as events occurring to and around individuals.

Actualization theorists, such as Roger, have maintained that there is a tendency for rises in self esteem over time, and Engel (1959) found an increase in favorability of self esteem in a group of subjects over a two year period. This data corresponds to Wylie's (1961) conclusion that self enhancement occurs more frequently than decreases in self esteem occur. These trends indicate that, apparently, there is a capacity in individuals to find self image elevating

information in favorable outcomes, but to avoid self image lowering information in unfavorable outcomes. It is proposed here that responsibility attributions are the mechanisms by which individuals achieve the ability to associate the self system with good outcomes, and dissociate the self system from bad outcomes. Motivated by the self system, individuals tend to attribute responsibility toward themselves for good outcomes, and away from themselves for bad outcomes.

CHAPTER III

ACTORS

The Question

It has been proposed that successful and unsuccessful outcomes for an actor present the self system with different problems. Good outcomes must be accepted into the self system, thereby increasing the self image and bringing about a corresponding rise in self esteem. Bad outcomes must be prevented from becoming part of the self system, thereby preventing a lowering of the self system. Further, personal responsibility attributions (e.g., "I produced this good outcome.") are the means by which good outcomes are incorporated into the self system, and that impersonal responsibility attributions (e.g., "My environment produced this bad outcome.") are the means by which bad outcomes are prevented from becoming part of the self system.

To support this proposition, it must be found that actors who have good outcomes do actually claim personal responsibility, and actors who have unsuccessful outcomes claim impersonal responsibility. Few tests of this proposition have been conducted (e.g., Beckman, 1970; Finney, Helm, & Fromme, Note 1). However, several indirect tests have

been made in studies which compared the responsibility attributions of actors to unbiased observers for either good or bad outcomes. These experiments have often dealt with information-processing, following the proposition made by Jones and Nisbett (1972). According to the information-processing viewpoint, because of differences in available information (e.g., Actors have available to them information about their past behavior in relevant past situations, but observers do not often have this information available.) and in the processing of that information, observers tend to attribute personal responsibility for outcomes, while actors tend to attribute impersonal responsibility for outcomes. Given the moderate personal responsibility attributions for outcomes suggested by these studies as "typical" for unaroused, unbiased observers, support for the self system proposition would be found if actors were to assign as much or more personal responsibility for good outcomes, and less personal responsibility for bad outcomes, as unbiased observers assign. The implication is that outcomes are more relevant and arousing to the self systems of actors than of unbiased observers, and hence responsibility attributions of actors should vary more with the outcome than would the responsibility attributions of unbiased observers.

It should be noted that the information-processing approach (Jones & Nisbett, 1972; Miller & Ross, 1975; Ross, Bierbrauer, & Polly, 1975) generates different predictions about the attributions of successful actors than the self

system proposition predicts. Information-processing predicts that regardless of outcome, actors attribute more impersonal responsibility than do unbiased observers. Consideration of self systems, however, leads to the prediction that actors will claim as much personal responsibility for a good outcome as unbiased observers attribute. Thus, a survey of the literature regarding good outcomes should reveal how adequately the information-processing approach can predict an actor's responsibility attributions. Data from actors' attributions for good outcomes should reveal if this more parsimonious explanation is sufficient, or if self system considerations should be included with information-processing considerations to improve the fit of theory to data. First, however, responsibility attributions for neutral or bad outcomes, where information-processing and self system models coincide, will be surveyed.

Neutral and Negative Outcome Data

Both the information-processing approach and self system theory predict that a tendency for actors to not claim responsibility for neutral or negative outcomes. The information-processing approach predicts that responsibility will be attributed to circumstances rather than to the self because of the actor's awareness of his environment; the self system approach predicts that this awareness of the environment is motivated by the self system's search for an attribution which will not be self-deprecating. The

responsibility attribution data is the same in either case. Although research for these outcomes does not discriminate between approaches, it seems to support these predictions.

McArthur (1972) asked subjects either to participate in an experiment in interpersonal relations (actors) or to read a written account of the experiment and the actor's involvement in it. Both actors and observers were then asked to attribute responsibility for the actor's agreement to participate in the experiment. Results indicated that actors attributed their participation more to the importance of research (impersonal responsibility) than to their own personal desire to volunteer for research (personal responsibility). Observers reversed the pattern, considering the actor's participation more a function of personal responsibility than of impersonal responsibility, and validating the belief that unbiased observers tend to make personal responsibility attributions.

Nisbett, Caputo, Legant, and Marecek (1973) required an observer to watch an actor either comply or not comply to a request to volunteer his services for a university project. Both actor and observer were then asked to predict whether or not the actor would volunteer for future projects. Results indicated that observers believed that the actors who volunteered for this project would volunteer for future projects, and actors who did not volunteer for this project would not volunteer for future projects. Observers thus expressed their belief in personal dispositions as accounting

for the volunteering act. Actors, on the other hand, did not predict future volunteering on the basis of their present actions, indicating that the situation was more important than personal characteristics in their decision.

Finney, Merrifield, and Helm (in press) asked subjects to attribute responsibility for a scenario accident as observers and as they felt the actor would. The accident clearly could have been prevented by the actor. When assigning responsibility as observers, subjects attributed more responsibility to the actor than to fate. When assigning responsibility as the actor, subjects reversed this attribution, assigning more responsibility to fate than to the actor.

Thus, research utilizing evaluatively neutral or negative events have shown that actors tend to attribute responsibility for these events to impersonal responsibility, while observers tend to assign personal responsibility for these same events. Both the information-processing and self system explanations predict these results.

Positive Outcome Data

Information-processing theory (Jones & Nisbett, 1972) does not distinguish responsibility attributions by actors on the basis of outcomes. Therefore, this theory predicts that actors make impersonal responsibility attributions for good outcomes as well as for bad outcomes. Self system considerations lead to the prediction that, since good out-

comes are self-enhancing, actors are motivated to accept responsibility for them, and will attribute personal responsibility for good outcomes. As shall be seen, the preponderance of evidence fits the self system interpretation, and not the information-processing interpretation.

Only Ruble (1973) has reported attributions for good outcomes which parallel those for negative and neutral outcomes. However, Ruble (1973) is the weakest of the experiments to be cited in this review. A check of a success-failure manipulation was not made, so it cannot be known if subjects actually perceived a difference in the sentence description of outcomes. These sentences described either "good" or "bad" outcomes (e.g., "you/John didn't work well with others on a project"), and subjects were asked to attribute responsibility (actor versus environment) for each event. It was found that subjects attributed more personal responsibility as observers than they did as the actor, regardless of the outcome of the event, indicating that actors seek impersonal explanations of behavior and outcomes.

It is possible that the subjects did not make different attributions for successful and unsuccessful outcomes because they did not perceive that these outcomes were, in fact, different. As can be seen from the example above, the "success" and "failure" outcomes used by Ruble weren't clear success/failure situations, rather more-or-less descriptions of modes of interaction. Thus, only qualified evidence favoring the information-processing explanation with successful outcomes can be claimed from Ruble (1973).

On the other hand, as a part of the study by Harvey, Arkin, Gleason, and Johnston (1974) subjects either assumed the role of therapist for a person with a minor phobia, or observed a similar therapeutic setting. After the session both actors and observers were told the actual outcome (positive or negative) of the therapy. Then, both actor and observer subjects were asked to assess responsibility for the outcome attributable to the actor and to situational factors. Actors subsequently attributed more responsibility to themselves for positive than for negative outcomes. Observers' attributions did not vary across the outcome main effect.

Finney, Helm, and Fromme (Note 1) found similar results. Subjects in this experiment were given a booklet containing six brief, abstract stories--one at each of the six levels of commission proposed by Heider (1958) and amended by Whiteside (Note 3). Half of the subjects received stories with good outcomes; the other half received stories with bad outcomes. Subjects attributed responsibility for the outcome of each story from their own viewpoint and as they felt the actor would. The results indicated that for positive outcomes the subjects believed actors would attribute as much responsibility to themselves as observers would. However, for negative outcomes the subjects saw actors as attributing significantly less responsibility to themselves than observers would, but only when the situation (level of commission) was ambiguous enough for there to be doubt as to

the actor's responsibility level. These results indicate that individuals believe that actors, relative to observers whose self systems are not related to outcomes, vary their attributions in order to enhance or protect their self systems.

Gilmor and Minton (1974) also afford information on an actor's attributions under conditions of success and failure. Their subjects solved a set of anagram problems and then were told that they had performed better (successful) or worse (unsuccessful) than most other subjects. Then, each subject attributed responsibility for his outcome on a scale marked "mainly due to ability" at one extreme (personal responsibility) and "mainly due to luck" at the other extreme (impersonal responsibility). It was subsequently found that subjects who were successful made significantly greater internal (ability attributions) than did subjects who failed. Thus, Gilmor and Minton (1974) also demonstrate that actors will accept more responsibility for a successful outcome than for an unsuccessful outcome.

Beckman (1970) found that teachers of children who had successful learning outcomes attributed more responsibility to themselves for the outcome than did teachers of children who had unsuccessful outcomes. Observers' personal responsibility attributions for teachers were not affected by the learning outcome of the child, as would be expected. The outcome did not have significance for their self systems. In a similar experiment, Johnson, Feigebaum, and Weiby (1964) obtained these same results.

Thus, actors are apparently motivated to accept personal responsibility for favorable outcomes. The information-processing approach, exemplified by Jones and Nisbett (1972), does not account for these attributions; but, when the relevance of the self system of an actor to outcomes is considered within the model, these attributions can be understood.

The Self System and Actor Attributions

There is clear evidence to show that actors disclaim personal responsibility for unsuccessful (bad) and neutral outcomes. Also, the bulk of present evidence shows that actors seem quite willing to accept responsibility for a successful, good outcome. Again, this data indicates that, in addition to the present information-processing theory; a motivational aspect to attributions must also be considered. Individuals seen to actively seek to maintain or enhance their self systems, both as seen by themselves and as seen by others. The self's desire to be seen positively motivates attributions by an actor and also, as shall be seen later, by the observer. As a corrolary to this proposition, it can be added that the more a particular negative outcome is relevant to (arouses) and threatens one's self system, or the more a positive outcome is relevant to (arouses) and enhances one's self system, the greater the effect of the self system on attributions.

The suggestion that motivation from the self influences the attribution process is not new, but it has largely been

ignored. Several experiments (Beckman, 1970; Fitch, 1970; Harvey, Arkin, Gleason, & Johnston, 1974; Mischel, Mailer, & Zeiss, Note 4) have proposed that self factors motivate an actor's attribution of responsibility to himself for a positive outcome. As Heider (1944) stated:

> It is obvious that this tendency to keep the ego level high must play a role in attribution. Since origins are assimilated to acts attributed to them, an act of low value, when attributed to the ego, will lower the ego level, and an act of high value will raise it (p. 368).

Hastorf, Schneider, and Polefka (1970) made the same conclusion, stating:

> We are prone to alter our perception of causality so as to protect or enhance our self esteem. We attribute success to our own dispositions and failure to external forces (p. 73).

Weiner and Kukla (1970) also indicated a need for self system maintenance or enhancement which influences peoples' responsibility attributions. Their research indicates that self-punishment is strongest when one's efforts fall short of his ability in a particular task. A way of avoiding self-punishment, and possibly punishment or condemnation from others would be to attribute impersonal, environmental responsibility for bad outcomes, and therefore preserve the self system. It follows that an actor with a successful outcome would desire a self-enhancing attribution of personal responsibility, and attribute personal responsibility for such outcomes. Rubin and Peplau (Note 5) reflect the self enhancing or deprecating potential of outcomes. They found that subjects who received a good outcome by chance tended

to experience an increase in self esteem, but those who by chance received a bad outcome tended to lose self esteem.

Finally, Frieze and Weiner (1971: Experiment I) conclude:

> Thus, there is a tendency to ascribe success to internal or personal sources, and failure to external or environmental factors. This suggests that locus of control influences affective reactions to an outcome, and that ego-enhancive and ego-defensive attributional tendencies are elicited in achievement contexts (p. 595).

Frieze and Weiner (1971: Experiment II) did not find evidence to fully support this contention. Yet, the wealth of research for actors' attributions cited thus far makes the conclusion quite persuasive.

Thus, although a direct test of the self system proposition has not been made, evidence exists which suggests that an actor is motivated to protect or enhance his self esteem in light of the outcomes of his actions. As noted by Beckman (1970), maintenance (protection) of the self system should become important or aroused when a negative outcome befalls an actor, and he must protect himself from being associated with it; enhancement of the self system should be aroused and occur when the actor desires to associate himself with the responsibility for a positive outcome. Helm and Whiteside (Note 6) have demonstrated that actors can accurately predict when observers will rate them negatively or positively for particular behavior. Thus, individuals are aware of how others might interpret their behavior, and recognize situations in which personal responsibility attributions could be enhancing or deprecating.

The Self System and Information Processing

It should be emphasized here that the proposition that motivation from the self system is important in an actor's responsibility attributions does not deny the information-processing viewpoint that actors utilize information in their attributions which is either unavailable to, or processed differently by, observers. Rather, self system consideration adds another dimension to the information-processing model. The self system approach essentially deals with the information-processing of actors, contending that the self system markedly influences attributions and the manner in which information is processed by actors. The actors' special information is presumably processed in a manner which will either protect or enhance the self system in light of outcomes. For bad outcomes actors will draw from evidence showing that they were not personally responsible for outcomes; for good outcomes actors will employ evidence suggesting personal responsibility.

Possibly the best way to stress this point is by a specific, hypothetical example to show that self system motivation can be used to explain how an actor can use a single piece of information about past performance to make either personal or impersonal attributions for an outcome. These attributions depend on whether the outcome is successful or unsuccessful. Assume that an actor has often been

successful in task A in the past, but now fails at it. This is a negative outcome. Motivated to preserve the self system (in this case, a perception of ability at task A), the actor can appeal to past success with task A to say that it was not a lack of ability on his part which caused the present failure. Rather, external forces, such as bad conditions, bad luck, etc., caused this failure. The negative outcome led to an impersonal attribution of responsibility.

Now, assume the same actor with the same successful history in task A succeeds on the present attempt. Motivated to enhance the self system, the actor appeals to the successful past as a demonstration that superior ability accounts for the present success. The positive outcome led to a personal attribution of responsibility, utilizing the same historical information as used before to establish impersonal responsibility for a bad outcome.

Thus, depending on the outcome, one can make shifting appeals to the same information in an attempt to attach oneself to desirable outcomes and enhance the self system, or to dissociate oneself from undesirable outcomes and maintain the self system. The information available to the actor, both from current circumstances and from the past, is always the vehicle by which the attributional case is presented. Current requirements for maintaining the self system produce processing of information which lead to denial of responsibility for an unsuccessful outcome; enhancement of the self system produces information which leads to accep-

tance of responsibility for a successful outcome. Hence, self system motives dictate how information will be used in attributions.

Contradicting Evidence

Ross, Bierbrauer, and Polly (1974) interpret the results of their experiment as shattering propositions that attributions are dependent on motivations from the self system. Since Ross et al. (1974) seem quite convinced of the finality of their results, and since their experiment actually demonstrates problems in summarily rejecting self system motivation in attributions, it is necessary to discuss their arguments.

In Ross et al. (1974) professional teachers and college students with no teaching experience (non-professional) attempted to teach spelling to an 11-year old. The outcome was either good (successful) or poor (unsuccessful) spelling by the child. Observers watched the sessions involving non-professional teachers, but no observers watched the sessions involving professional teachers. After the teaching sessions, all teachers and observers rated the contribution to the outcome of several teacher factors (teaching ability, performance, adjustment to the situation, and technique) and several student factors (scholastic ability, aptitude for spelling, adjustment to the situation, and attention and motivation).

The experiment revealed that teachers (both professional and non-professional) attributed relatively more personal (teacher) responsibility for the child's failure than for his success. Ross et al. concluded that this evidence directly contradicts a self system interpretation, as actors were attributing more responsibility to themselves for failure than for success. However, a comparison of observers' and non-professional teachers' attributions found that observers placed even more responsibility on the non-professional teacher for failure, and even less responsibility for success, than the non-professional teachers had themselves. Therefore, relative to unbiased observers' attributions, non-professional teachers (actors) accepted less responsibility for failure and claimed responsibility for success, which is interpretable as self system protection. The fact that these actors' attributions appear to be defensive when compared to observers' attributions indicates that self system motivation was operating.

A major weakness in the Ross et al. (1974) experiment was that no observers viewed the professional teachers. Hence, no observer responsibility attributions for professional teachers are available for an observer-professional teacher comparison. It cannot be said whether the professionals' attributions, when compared to observers, would have been self-protective. Still, this lack of data cannot be used either against, or for, self system propositions.

The most troublesome finding in Ross et al. (1974) is that professionals attributed more responsibility to themselves for failure, and less for success, than did non-professionals. On face value, it would seem that professionals would be more defensive about their teaching ability than would non-professional teachers, and they would have attributed less responsibility to themselves for failure, and more for success, than would non-professionals. Yet, such an interpretation is valid only if the professionals' self systems were threatened or enhanced by the outcome. Therefore, these results are quite open to the interpretation that professional teachers, knowing their own professional ability and experiences, did not have their self systems unduly influenced by the child's outcome. The current failure of one student relative to successes they probably have had in the past was not important enough to professional teachers to have their self system defenses aroused. Hence, their self systems were probably more stable, and less liable to fluctuate, than were those of non-professionals.

Within the experimental setting, the professionals were able to assume modesty and accept responsibility for failure and give responsibility away for success. (Ross et al. did note the possibility of this modesty in professional teachers' attributions, but dismissed it.) On the other hand, the non-professional teachers did not have other teaching experiences upon which to base their attributions, and the impact of the child-confederate's outcome could have been

more self system arousing to them. Quite possibly they were more threatened or elated by the outcome of the session than were professional teachers, and thus were either more self system protective or enhancive. Under this post hoc, self system arousal interpretation, Ross et al. (1974) is consistent with predictions which could be made from a self system viewpoint.

This example shows that Ross et al's (1974) study is not destructive of theories which attempt to relate self systems to attributions, but is a testimonial to the need for carefully-planned research and careful interpretation. It points out well how two aspects of attribution research dealing with actors and observers must be carefully considered. First, when comparisons of actor and observer attributions are being used to test effects of the self system on attributions, all groups of actors must be paired with observers. Otherwise, important information is lost. Second, when comparing two different actor classifications, tests (or checks) of self system arousal must be made so that it can be known which group, actually, was the more aroused, and dependent on self system motivation for direction of their attributions.

Social Facilitation, Actors and Self Systems

Social facilitation theory (Zajonc, 1965) reasons that the presence of an audience increases a person's drive level

(level of motivation) while performing a task. The increase in motivation, in turn, enhances the likelihood that an actor will react to his situation with his most probable response for that situation. Further, Henchy and Glass (1968) found that enhancement of these most likely reactions is increased when evaluation of performance from the observers is anticipated. This implied future evaluation reflects the increased probability of challange to the actor's self system, as the individual is more likely to have to face and defend his outcome at a later time. Indeed, Wapner and Albert (1952) obtained results which led them to conclude that, "An audience may serve to threaten self-status" (p. 228). In the same line, McTeer (1953) had subjects perform in a laboratory with either their classroom psychology teacher or a stranger as the experimenter. Subjects in this study who performed before their instructors (evaluating observers), with whom they expected future interaction, showed greater signs of anxiety during the experiment than did subjects who performed for strangers. Thus, the more evaluation anticipated from an audience, the greater the threat to the self system.

Since actors seem to expect more evaluation from a friend or associate than from a stranger, and express a greater anxiety (arousal) as a result of anticipated evaluation and future interaction (McTeer, 1953), then dominant responses should be stronger when the actor is familiar with the audience than otherwise. If the dominant response for

success is a personal responsibility attribution by the actor (as proposed by the present model), then, according to the social facilitation concepts, the actor should attribute more personal responsibility for success when observed by a friend than when observed by a stranger. Likewise, if the dominant response for failure is an impersonal responsibility attribution, then more impersonal responsibility for failure should be claimed by an unsuccessful actor when observed by a friend than when observed by a stranger.

CHAPTER IV

OBSERVERS

Four Concepts

To this point this discussion has shown how consideration of an actor's self system can be used in the prediction of attributions. These studies have typically involved observers whose attitudes toward the actors have been "neutral." Yet, in "real life" our attributions as observers of others' behavior are not neutrally-made; we often have predisposing attitudes toward actors (e.g., friendship or animosity) which color and bias our attributions. Four approaches to observer biases have been developed within social psychological theory. The first is in Jones and Davis' (1965) concepts of "hedonic relevance" and "personalism." The second concerns Walster's (1966) and Shaver's (1970) concepts of defensive attribution. These concepts center on the personal or situational relevance of the actor (Walster, 1966; Shaver, 1970) and his actions (Jones & Davis, 1965) to the observer. The third distinction has centered on the difference between "active" and "passive" observers (e.g., Miller & Norman, in press). Finally, the fourth concept involves an observer's empathic set toward an actor (Regan & Totten, 1975).

Each of these approaches will be discussed. Then, each approach will be shown to be based on the relevance of the actor, his actions, and his situation to the self system of the observer. Thus, all biases of observers can be subsumed under self system factors, as are the biases which influence actor attributions.

Hedonic Relevance and Personalism

Jones and Davis' (1965) theory concerns the disposition indicated by an actor's actions. They considered both hedonic relevance and personalism variables which affect observers' attributions of disposition about an actor. Hedonic relevance refers to an actor's actions which either promote or interfere with an observer's goals, yet were not directed specifically at the observer (impersonal relevance). Personalism refers to actions which are directed toward the observer (personal relevance). Jones and Davis (1965) suggest that correspondence increases with increasing relevance (personal or impersonal) and that, with increasing correspondence, the observer's attributions of favorable dispositions to the actor increase when the effects of actions are positive, and attributions of unfavorable dispositions increase when the effects are negative.

Research has supported these concepts. Chaikin and Cooper (1973) found that hedonic relevance which promoted an observer's goals increased reports of liking for a scenario actor, and Potter (1973) found that increasing person-

alism increased appropriate liking or disliking for an actor.

Clearly, hedonic relevance and personalism alter observer attributions. Still, as stated by Jones and Davis (1965), hedonic relevance and personalism deal with dispositional attributions, rather than attributions of responsibility. Also, these concepts concern actions which directly affect the observer. Hedonic relevance and personalism do show, however, that relevance of an action to an observer affects the observer's attributions. These biases occur because certain actions affect observers indirectly, through perceptions of similarity to actors or to circumstances of action.

Defensive Attributions

Walster (1966) found that the more severe the consequences of an accident, the more observers attributed personal responsibility to an actor for it. Though it has been difficult to duplicate these results (see Vidmar & Crinklaw, 1974, for a review), the specific arguments as to whether or not the seriousness of an accident affects observer attributions will not be discussed here. A brief mention of Walster's (1966) rationale for these results will be more helpful. Walster (1966) hypothesized that observers would be motivated to dissociate themselves from an actor who caused a severe, negative outcome, in order to indicate that they would have behaved differently and thereby would have

averted the accident. With the observer feeling that he could have avoided the bad outcome, he would defensively hold the actor highly responsible for not doing so.

Shaver (1970) noted that this situation would produce a "defensive" attribution, and concluded that at least two factors, personal and situational relevance, contributed to observers' defensiveness. Situational relevance occurs when the observer feels that he might someday experience a situation similar to the actor's. Personal relevance occurs when the actor and the observer are linked in some way (e.g., by friendship or attitudes). Shaver (1970) feels that, when the observer cannot deny personal similarity to an actor, the observer (like the actor) is likely to attribute negative outcomes to situational responsibility, especially so under conditions of situational relevance. Although support for these propositions has been far from unanimous (see Vidmar & Crinklaw's, 1974, review), McKillip and Prosavak (1972) show that greater situational relevance decreases observers' attributions of personal responsibility for an accident, and Chaikin and Darley (1973) have found that greater personal or situational relevance decreases personal responsibility attributions to actors for bad outcomes. Regan, Strauss, and Fazio (1974) found that personal relevance in the form of liking or disliking an actor influences an observer's attributions, in that good outcomes for liked actors and bad outcomes for disliked actors are attributed to personal responsibility.

Fromme (Note 7) has also discussed the observer who is a friend of an actor (personal relevance) involved in a competitive situation. His predictions are similar to those suggested by defensive attribution considerations. Fromme believes that the affective bonds or feelings of "we" between the observer and the actor cause the actor's outcomes and feelings to be shared by the observer. Like the actor, a friend observer would, therefore, assign the actor's success to personal responsibility and losses to impersonal responsibility. In addition, both the actor and the friend observer should assign impersonal responsibility to the actor's opponent's success, and personal responsibility to the opponent's failure.

Active and Passive Observers

Miller and Norman (in press) define an active observer as:

> a participant in a social interaction situation who, in addition to observing the behavior of the other participants, influences the behavior of the other participants and is himself behaviorally influenced by the other participants (p. 1).

Thus, an active observer not only observes the actions of others in a social situation, but also acts and is observed in turn by both co-actors and passive observers. This "active" viewpoint is different than the typical "passive observer," who:

> neither influences, nor is influenced by the actor he is observing (p. 1).

Miller and Norman (in press) found that in a conflict situation active observers attribute more personal responsibility for the behavior of another actor (e.g., an opponent) than do passive observers. Miller and Norman conclude that this occurs because another actor's behavior is highly personalistic to an active observer; thus active observers infer greater dispositional and responsibility attributions than do passive observers.

Empathy

Empathy deals with one person vicariously assuming the role and feelings of another. Empathy within an actor-observer framework usually involves the observer assuming the role, feelings, etc. of the actor in some situation. As discussed earlier, Finney, Merrifield, and Helm (in press) and Finney, Helm, and Fromme (Note 1) found that subjects could predict actor-like attributions in scenario research, indicating the ability of observers to empathically assume an actor's role. Also, Regan and Totten (1975) instructed one group of observers to empathize with one of two conversants in a video-taped "get-acquainted" conversation, and did not instruct another group to do so. Results indicated that subjects instructed to take an empathic set attributed more situational and less dispositional responsibility for the actor's behavior than did standard observers. Regan and Totten (1975) concluded that shared emotional experiences, which were reported in the empathic situations may result

from the observer's assumption of an actor-like perspective toward the environmental contingencies surrounding the actor's behavior.

The Self System and Observer Biases

The four observer biases discussed here were presented as distinct concepts, yet it will be shown that they are interrelated both in and of themselves, and also by a more predominant motivation, support or enhancement of the self system. Within these concepts, it has already been observed that Jones and Davis' (1965) hedonic relevance and personalism are related to the attributions of active observers. These concepts deal with observers who are, in one way or another, the target of an action. Defensive attributions are attributions of passive observers, who are not the targets of actions, but who share personal or situational similarity with actors. For active observers, actions are the most salient factor for self system arousal; for passive observers, the actor and his situation is most salient.

Empathic attributions deal with an observer's ability to imagine the circumstances and feelings of the actor. The ability of an observer to empathize with the actor is largely drawn from the observer's own experiences. His own feelings and actions in similar situations are the prime base for his empathic inferences to the current actor. Thus, situational or personal relevance of the actor to the observer should increase the observer's ability to empathize

with the actor, as these conditions of relevance give the observer a base on which to make empathic attributions.

It should be apparent at this point that each of these observer biases increase the relationship or bonds between the observer and the actor. Hedonic relevance, personalism, situational relevance, personal relevance, active rather than passive observing, and increased empathic ability each involve increased similarity between actor and observer, thereby giving the observer certain actor-like characteristics. It follows that, if the predominant bias on an actor's attributions is self system motivation, this motivation should also influence the attributions of an observer who is somewhat like the actor. Thus, each of the four concepts discussed here can be considered as different manners in which the observer's self system motivation influences his attributions.

The passive observer of a personally or situationally relevant friend who has a good outcome should consider that outcome a product of personal responsibility of the actor. By making this attribution, the observer would enhance his self esteem by expressing the belief that he is a person who associates himself with persons who produce good outcomes (personal relevance) or is similar to persons who produce good outcomes (situational relevance), and he should be expected to produce these outcomes, also.

In the case of the defensive attributions of passive observers, an observer who is a friend to an actor suffering

a negative or bad outcome should, because of the personal and situational relevance of their relationship, direct impersonal responsibility attributions toward the actor. In circumstances of personal or situational relevance, condemnation of the actor by the observer would be tantamount to a self-condemnation, with the implication that the observer commonly associates himself with those who experience bad outcomes (losers), and expects bad outcomes for himself. Leniency toward an actor friend is self-protective for the passive observer.

Passive observers of actors who are strangers have been shown to regularly attribute personal responsibility to them (McArthur, 1972; Nisbett, Caputo, Legant, & Marecek, 1973). Yet, evidence exists which suggests that these individuals are not entirely uninfluenced by outcomes. To a lesser degree than those who are acquainted with the actors, their attributions are also influenced to self system motivations. Shaw and Skolnick (1971) suggest that it is important for people to beleive that good outcomes are distributed among all people. Thus, it is reassuring and self-protective for observers who are unrelated to actors to infer that good outcomes to others are somewhat more a result of situational responsibility than are bad outcomes to others. Shaw and Skolnick (1971) and Stephen (1975) found evidence to support this contention, especially as the intensity of the good outcome increased. Also, Shaw and Sulzer (1964), testing across Heider's (1958) five levels of commission for good

and bad outcomes, found that greater personal responsibility was assigned for a bad outcome than for a good outcome. This supports Shaw and Skolnick's hypothesis that an observer's responsibility attributions for good outcomes for others are somewhat based on self system defensiveness. Still, present arguments contend that increasing the relationship between observer and actor increases this defensiveness, expressed both by emotion and by attribution.

Next, imagine the case of an active observer who observes a bad outcome for another produced by, or coexistent with, a good outcome for himself. He should attribute responsibility for the other's outcome to personal responsibility as a way to say that, relative to his own ability, the other's inability (at the task) produced the bad outcome. Other times, the other's good outcome coexists with an actor's own bad outcome. In this case, the actor should attribute the good outcome to impersonal responsibility as a way to say that external factors, such as luck, caused both the good and bad outcomes. Both these attributions serve to either protect or enhance the active observer's self system.

Finally, passive observers who are related to actors should attribute responsibility for another actor's outcomes in the same manner as their friend actors do. Passive observers who are unrelated to actors should not differentiate responsibility attributions between competing actors.

CHAPTER V

HYPOTHESES

A Methodological Overview

Method

The present experiment required sets of two subjects (strangers) to compete in a message-modified Prisoner's Dilemma Game (PDG). At the conclusion of the game, one player was declared the winner, while the other player was named the loser. Also, during the competition each player was observed by either a friend or a stranger, thus creating actor-observer dyads consisting of friends or strangers.

The PDG was chosen over other possible competitive interactions so as to guarantee the unfamiliarity of all subjects with the experimental situation, and to be able to provide a clear win/loss outcome in a free, nondeceptive interaction.

Dependent Variables

Responsibility. Subsequent to the competition and the determination of winner and loser, every subject (actors and observers) attributed responsibility for both the winning and the losing actor's outcomes. The primary method of

determining personal and impersonal responsibility attributions was to ask subjects to assign a given actor's responsibility for his outcome on a continuum labeled from "Himself" to "The Circumstances."

Emotions. The theory of self presented by James (1892) and the data of Rubin and Peplau (Note 4) suggest that the potential effects of outcomes on the self system are, in fact, represented by emotions. Subjects in the present study rated their feelings about each player's outcome in the experiment. This measure of feelings about outcomes was expected to reflect the impact of the outcome on the self system of the subject.

Independent Variables and Analyses

Four independent variables were included in the responsibility attribution and emotion analyses. These are Outcome, Dyad, Viewpoint, and Ratee. 2x2x2x2 analyses of variance were performed on the responsibility and emotion attributions. These analyses were not directly summarized or evaluated for their results, as the following hypotheses concerned comparisons of means from individual cells in the higher order interactions. The summary analyses of variance were used to supply error terms for these comparisons.

Each independent variable contained two levels. The two levels of Outcome reflected whether the actor making the attribution, or the actor observed by the observer making the attribution, was (1) the winner or (2) the loser; the

two levels of Dyad denoted (1) friendship and (2) stranger; the two levels of Viewpoint determine (1) the actor and (2) the observer; and the two levels of Ratee (person being rated) denoted ratings of (1) the actor within the actor-observer dyad (ingroup) and (2) the actor of the other dyad (other group). Outcome, Dyad, and Viewpoint were between-subjects factors, while Ratee was a within-subject factor, as it involved attributions made by one person about responsibility of the ingroup actor versus the othergroup actor.

Formulation of Hypotheses

An Overview of the Hypotheses

Eight sets of hypotheses will be presented for this experiment. Each set concerns emotions and responsibility attributions made by a limited set of subjects (e.g., the attributions of actors about their own outcomes). Each hypothesis involves a simple comparison between the means of two sets of subjects (e.g., attributions of actors who had successful outcomes and were observed by friends, versus attributions of actors who had successful outcomes and were observed by strangers).

Hypothesis Sets 1 and 5 concern emotions and responsibility attributions actors express about their own and their opponent's outcomes, respectively. Hypothesis Sets 2 and 6 concern emotions and responsibility attributions observers express about the outcomes of the actors they observed and

of the opposing actors, respectively. Hypothesis Sets 3 and 7 compare emotions and responsibility attributions expressed by actors and by observers for successful outcomes of the actors within the dyads and successful outcomes of the opponents, respectively. Hypothesis Sets 4 and 8 compare emotions and responsibility attributions expressed by actors and by observers for unsuccessful outcomes of the actors within the dyads and unsuccessful outcomes of the opponents, respectively. Thus, Hypothesis Sets 1 through 4, and hypotheses within sets, parallel Hypothesis Sets 5 through 8; the difference is that Hypothesis Sets 1 through 4 deal with ratings of the outcome of the actors within dyads, and Hypothesis Sets 5 through 8 deal with ratings of opponents' outcomes.

Each Hypothesis Set contains two or three orthogonal emotion hypotheses and two or three orthogonal responsibility hypotheses. Each responsibility hypothesis concerns comparisons of means for responsibility attributions. Emotion hypotheses concern comparisons of means for emotion attributions. Each emotion hypothesis has a corresponding responsibility hypothesis.

Within a Hypothesis Set, (responsibility or emotion) hypothesis "a" concerns attributions within friendship dyads, hwile hypothesis "b" concerns attributions within stranger dyads. Occassionally, corollaries will be presented. Corollaries deal with dyadic attributions, where attributions by actors and by observers within a dyad are

not distinguished. That is, the Viewpoint variable is collapsed within corollaries. Also, hypotheses without "a" or "b" suffixes concern attributions of actors or observers, without regard to the dyad relationship in which they are involved. That is, hypotheses without "a" or "b" subscripts are collapsed across the Dyad variable. Another way to state this is that hypotheses with "a" or "b" subscripts involve comparisons of means found in the Outcome X Dyad X Viewpoint X Ratee interaction, while hypotheses without the "a" or "b" subscripts, and corollary hypotheses, involve comparisons of means from the Outcome X Dyad X Ratee and Outcome X Viewpoint X Ratee interactions, respectively.

Statistical Comments

None of the following responsibility hypotheses, emotion hypotheses, responsibility corollaries, or emotion corollaries are directly tested by specific main effects or interactions of the primary responsibility or emotion analyses of variance. Instead, they are tested by specific comparisons of means within various interactions. Accordingly, in the following section the background for each Hypothesis Set will be established, followed by a descriptive sentence stating the hypotheses (responsibility and emotion), finally followed by a statement of the hypotheses in statistical form.

For the sake of clarity in the following discussion of hypotheses and comparisons of means, the following list of

variables will be referred to when speaking of independent variables:

Outcome (A): 1 = Successful 2 = Unsuccessful

Dyad (B): 1 = Friendship 2 = Stranger

Viewpoint (C): 1 = Actor 2 = Observer

Ratee (D): 1 = Ingroup 2 = Othergroup

Hypothesis Set 1

If outcomes have relevance to the self systems of of actors, then this relevance should be reflected by emotions expressed about outcomes. Good feelings should be expressed by actors about good outcomes, thereby reflecting the ego-enhancing capability of such outcomes. Personal responsibility attributions should follow from such outcomes and emotions. Bad feelings should be expressed by actors about bad outcomes, thereby reflecting the ego-deflating potential of those outcomes. Environmental responsibility attributions should follow from such outcomes and emotions.

Supporting these concepts, evidence previously presented (e.g., Beckman, 1970; Gilmor & Minton, 1974; Finney, Helm, & Fromme, Note 1) suggests that actors accept more personal responsibility for successful personal outcomes than for unsuccessful personal outcomes.

Emotion Hypothesis 1: Actors who have successful outcomes will express better feelings about these outcomes than will actors who have unsuccessful outcomes.

Responsibility Hypothesis 1: Actors who have successful outcomes will attribute more personal responsibility for these outcomes than will actors who have unsuccessful outcomes.

In addition to these general predictions, according to social facilitation theory (Zajonc, 1965; Henchy & Glass, 1968) the presence of an audience has motivating properties on an actor, and expectations for increases in interaction and evaluation from the audience increases this motivation. This heightened arousal should be reflected in higher levels of self system motivation in the actor when he is observed by a friend than when he is observed by a stranger. Thus, actors should feel better about successful outcomes, and worse about unsuccessful outcomes, when observed by friends than when observed by strangers, reflecting the heightened motivation derived from an evaluating audience. Actors should attribute more personal responsibility for good outcomes, and less for bad outcomes, when observed by a friend than when observed by a stranger.

Emotion Hypothesis 1a: Actors who have successful outcomes and are observed by friends will feel better about those outcomes than will actors who have successful outcomes and are observed by strangers.

Responsibility Hypothesis 1a: Actors who have successful outcomes and are observed by friends will attribute more personal responsibility for those outcomes than will actors who have successful outcomes and are observed by strangers.

Emotion Hypothesis 1b: Actors who have unsuccessful outcomes and are observed by friends will feel worse about those outcomes than will actors who have unsuccessful outcomes and are observed by strangers.

Responsibility Hypothesis 1b: Actors who have unsuccessful outcomes and are observed by friends will attribute less personal responsibility for those outcomes than will actors who have unsuccessful outcomes and are observed by strangers.

Support for Emotion and Responsibility Hypotheses 1 would be found in a significant comparison between levels of A at C_1D_1 in the emotion and responsibility attributions, respectively. Support for Emotion and Responsibility Hypotheses 1a would occur in a significant comparison between levels of B at $A_1C_1D_1$ in the emotion and responsibility attributions, respectively. Support for Emotion and Responsibility Hypotheses 1b would be found in a significant comparison between levels of B at $A_2C_1D_1$ in the emotion and responsibility attributions, respectively.

Hypothesis Set 2

It has been proposed that an observer's relationship with an actor is part of the observer's self system, and an actor's outcomes should be relevant to the observer. To show that an actor's outcome does, actually, have ego-relevant implications for a friend who observes him, it must be shown that a friend's reaction to the actor's out-

come is different than the reaction of a stranger. Friends should feel better about successful outcomes, and feel worse about unsuccessful outcomes, than do strangers. Accordingly, friends of actors should also attribute more personal responsibility for success, and less personal responsibility for failure, than would strangers.

Evidence has been presented (Shaver, 1970; Regan & Totten, 1975; Fromme, Note 7) suggesting that observers who are friends of actors do attribute responsibility for friends' outcomes more as the friend than as an observer who is unrelated to the actor.

Emotion Hypothesis 2a: Observers who have watched friends have successful outcomes will express better feelings about those outcomes than will observers who have watched strangers have successful outcomes.

Responsibility Hypothesis 2a: Observers who have watched friends have successful outcomes will attribute more personal responsibility for those outcomes than will observers who have watched strangers have successful outcomes.

Emotion Hypothesis 2b: Observers who have watched friends have unsuccessful outcomes will express worse feelings about those outcomes than will observers who have watched strangers have unsuccessful outcomes.

Responsibility Hypothesis 2b: Observers who have watched friends have unsuccessful outcomes will attribute less personal responsibility for those outcomes than will observers who have watched strangers have unsuccessful outcomes.

Emotion and Responsibility Hypotheses 2a would each be supported by a significant comparison between levels of B at $A_1C_2D_1$ of the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 2b would each be supported by a significant comparison between levels of B at $A_2C_2D_1$ of the emotion and responsibility attributions, respectively.

Hypothesis Set 3

Hypothesis Sets 1 and 2 compared attributions by actors and by observers, respectively, for successful and unsuccessful outcomes. Hypothesis Set 3 takes a somewhat different approach, comparing the emotion and responsibility attributions of actors to the emotion and responsibility attributions of observers. It has been previously shown that one way to test the effect of self system motivation on attributions of actors and observers is to directly compare the emotions and responsibility attributions of one group of actors (or observers) with another group of actors (or observers). A second method is to compare emotions and responsibility attributions of sets of actors and observers. Hypothesis Sets 3 and 4 make these comparisons, with the

intent of obtaining additional information from a different perspective in the data. It should be mentioned that these comparisons are not orthogonal to, but overlapping, those of Hypothesis Sets 1 and 2.

Research indicates that actors who have successful outcomes feel good about those outcomes (Finney, Helm, & Fromme, Note 1) and attribute as much personal responsibility for those outcomes as do observers (Beckman, 1970; Finney, Helm, & Fromme, Note 1). The social facilitation data from Henchy and Glass (1968) suggests that being observed by a friend increases arousal, and the present self system model suggests that this arousal heightens one's good feelings about success and motivation to attribute personal responsibility for the outcome (Hypothesis Set 1). The present conception of the self system also suggests that observers who are friends of actors become like actors in their emotions and attributions, as friends' outcomes are relevant to observers' self systems (Hypothesis Set 2). Therefore, for successful outcomes observers in friendship dyads should feel as good, and attribute as much personal responsibility, as do actors in friendship dyads.

Actors in stranger dyads should also feel similar, and attribute as much personal responsibility, as do observers in stranger dyads. Also, since self system arousal is lower for both actors and strangers who observe them than for actors and friends who observe them, the above contentions (Emotion and Responsibility Hypotheses 3a and 3b), in effect,

predict that social facilitation effects cause more intense emotions to be felt, and more personal responsibility to be attributed to the actor, in successful friendship dyads than in successful stranger dyads. This proposition can be tested as a corollary to Responsibility and Emotion Hypotheses 3a and 3b.

Emotion Hypothesis 3a: No significant difference in emotion will be felt between successful actors and their observers in friendship dyads.

Responsibility Hypothesis 3a: No significant difference in personal responsibility attributions will occur between successful actors and their observers in friendship dyads.

Emotion Hypothesis 3b: No significant difference in emotion will be felt between successful actors and their observers in stranger dyads.

Responsibility Hypothesis 3b: No significant difference in personal responsibility attributions will occur between successful actors and their observers in stranger dyads.

Emotion Corollary 1: Better feelings about a successful outcome will be attributed in friendship dyads than in stranger dyads.

Responsibility Corollary 1: More personal responsibility will be attributed for successful outcomes in friendship dyads than in stranger dyads.

Emotion and Responsibility Hypotheses 3a would each be supported by nonsignificant comparisons between levels of C at $A_1B_1D_1$ of the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 3b would each be supported by nonsignificant comparisons between levels of C at $A_1B_2D_1$ of the emotion and responsibility attributions, respectively. Emotion and Responsibility Corollaries 1 would each be supported by a significant comparison between levels of B at A_1D_1 of the emotion and responsibility attributions, respectively.

Hypothesis Set 4

Previous research (Finney, Merrifield, & Helm, 1976) and the present conception of the self system suggests that actors feel bad about unsuccessful outcomes and attribute impersonal, environmental responsibility for such outcomes. Stranger observers do not share these bad feelings and, as with successful outcomes, attribute personal responsibility for unsuccessful outcomes. Therefore, in the present experiment unsuccessful actors should feel worse, and attribute less personal responsibility, than do the strangers who observe them.

Within friendship dyads, however, defensiveness on the part of observers (Shaver, 1970), resulting from feelings of similarity or the bonds shared with actors (Fromme, Note 7), should cause observers to feel as bad about unsuccessful outcomes for friends as the friends do. Like the unsuccess-

ful actors, friends should attribute impersonal responsibility for the outcomes.

Emotion Hypothesis 4a: No significant difference will exist in feelings about an unsuccessful outcome between actors and their observers in friendship dyads.

Responsibility Hypothesis 4a: No significant difference will exist between the responsibility attributions of unsuccessful actors and their observers in friendship dyads.

Emotion Hypothesis 4b: Unsuccessful actors in stranger dyads will feel worse about their outcomes than will the strangers who observed them.

Responsibility Hypothesis 4b: Unsuccessful actors in stranger dyads will attribute less personal responsibility for their outcomes than will their observers.

Emotion and Responsibility Hypotheses 4a predict a nonsignificant comparison between levels of C at $A_2B_1D_1$ in the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 4b predict a significant comparison between levels of C at $A_2B_2D_1$ in the emotion and responsibility attributions, respectively.

Hypothesis Set 5

Hypothesis Set 5 begins a survey of another set of ratings by subjects in the present experiment--attributions concerning the outcome of the actor in the opposing dyad.

As noted in the discussion of arguments presented by Fromme (Note 7) and Miller and Norman (in press) concerning the attributions of actors and observers in competitive situations, attributions about an opponent's outcome also seem to serve one's self system. It has already been shown that an actor both feels good and attributes personal responsibility for his successful outcomes, and both feels bad and attributes less personal responsibility for his unsuccessful outcomes, as means by which he enhances or protects his self system. Yet, actors should also feel bad about an opponent's successful outcomes and attribute impersonal responsibility to the opponent for those outcomes, implying that both his own failure and the opponent's success were circumstantially caused. Actors should also feel good about an opponent's unsuccessful outcomes and attribute personal responsibility for those outcomes, implying that his own superior ability relative to the opponent caused both outcomes. These attributions, too, would serve to enhance or protect an actor's self system.

Emotion Hypothesis 5: Actors will feel better about an opponent's unsuccessful outcome than they will feel about an opponent's successful outcome.

Responsibility Hypothesis 5: Actors will attribute more personal responsibility to an opponent for the opponent's unsuccessful outcome than they will for his successful outcome.

Also, the social facilitation argument of increased drive for anticipated evaluation should be reflected in feelings and responsibility attributions concerning an opponent's outcome. The actor in a friendship dyad should feel better about the outcome of an unsuccessful opponent than should the actor in a stranger dyad. Therefore, actors in friendship dyads should attribute more personal responsibility to an opponent for the opponent's unsuccessful outcome than should actors in stranger dyads. The actor in a friendship dyad should feel worse about the outcome of a successful opponent than should the actor in a stranger dyad. Therefore, actors in friendship dyads should attribute less personal responsibility (more impersonal responsibility) to an opponent for the opponent's successful outcome than should actors in stranger dyads.

Emotion Hypothesis 5a: Actors who are observed by friends will feel better about an opponent's unsuccessful outcome than will actors who are observed by strangers.

Responsibility Hypothesis 5a: Actors who are observed by friends will attribute more personal responsibility to an opponent for the opponent's unsuccessful outcome than will actors who are observed by strangers.

Emotion Hypothesis 5b: Actors who are observed by friends will feel worse about an opponent's successful outcome than will actors who are observed by strangers.

Responsibility Hypothesis 5b: Actors who are observed by friends will attribute less personal responsibility to an opponent for the opponent's successful outcome than will actors who are observed by strangers.

Emotion and Responsibility Hypotheses 5 would each be supported by a significant comparison between levels of A at C_1D_2 of the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 5a would each be supported by a significant comparison between levels of B at $A_1C_1D_2$ of the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 5b would each be supported by a significant comparison between levels of B at $A_2C_1D_2$ of the emotion and responsibility attributions, respectively.

It should be noted that the successful outcome of an actor (or observer of a successful actor), level A_1, implies the unsuccessful outcome of the opponent. Therefore, when ratings are to be analyzed about an outcome of an opponent, these ratings would be found under the opposite outcome, the actual outcome of the actor (or observer) making the rating. That is, to look at attributions about an opponent who loses, one must look at the attributions of an actor who succeeds.

Hypothesis Set 6

The present self system conception and Fromme (Note 7) have proposed that an observer who is a friend of an actor

involved in a competitive situation shares mutual feelings and attributions with the actor, in effect making the actor's outcome his own. Such a relationship is also proposed to increase the observer's defensiveness (Shaver, 1970) and empathy (Regan & Totten, 1975). Present self system views, however, have extended this logic farther than preseltly considered by defensive or empathy hypotheses. It is proposed that observers who are friends of the actors whom they are observing will feel worse about an opponent's success and attribute that outcome more to impersonal responsibility than will observers who are strangers of the actors they are observing. Also, friends of actors will feel better about an opponent's failure and attribute that outcome more to personal responsibility than will observers who are strangers of the actors they are observing.

Emotion Hypothesis 6a: Observers who have watched friends have successful outcomes will express better feelings about an opponent's unsuccessful outcome than will observers who have watched strangers have successful outcomes.

Responsibility Hypothesis 6a: Observers who have watched friends have successful outcomes will attribute an opponent's unsuccessful outcome more to the opponent's personal responsibility than will observers who have watched strangers have successful outcomes.

Emotion Hypothesis 6b: Observers who have watched friends have unsuccessful outcomes will feel worse about an opponent's successful outcome than will observers who have watched strangers have unsuccessful outcomes.

Responsibility Hypothesis 6b: Observers who have watched friends have unsuccessful outcomes will attribute an opponent's successful outcome less to the personal responsibility of the opponent than will observers who have watched strangers have unsuccessful outcomes.

Emotion and Responsibility Hypotheses 5a would each be supported by a significant comparison between levels of B at $A_1C_2D_2$ for the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 5b would each be supported by a significant comparison between levels of B at $A_2C_2D_2$ for the emotion and responsibility attributions, respectively.

Hypothesis Set 7

Hypothesis Sets 5 and 6 concerned emotions and responsibility attributions for an opponent's outcome from actors' and observers' viewpoints, respectively. Hypothesis Sets 7 and 8 compare actor and observer attributions for successful and unsuccessful outcomes of an opposing player. Again, Hypothesis Sets 7 and 8 are not orthogonal to Hypothesis Sets 5 and 6, but information concerning various relation-

ships in the data may be gained from these analyses and their results.

Miller and Norman (in press) argued that an actor's behavior is more hedonically relevant and personalistic to active observers than to passive observers. Therefore, active observers should make greater personal responsibility attributions about the causes of another's behavior and outcomes than should passive observers. The present argument, however, has established that hedonic relevance and personalism give rise to self system defensiveness, an attributional adjustment which is designed to either protect or enhance the self system of the attributor. If self system protection would result from attributing another person's behavior and outcomes to the personal responsibility of the person, then such an attribution would be made. But, if enhancement or protection of the self system would be afforded by attributing responsibility away from the other person and toward his circumstances, then that attribution would be made. In the specific case of a successful outcome for an opponent, the actor (active observer) should feel worse and attribute less personal responsibility to the opponent for that outcome than should a stranger who observed the interaction (passive observer). For the actor to feel good about an opponent's successful outcome and attribute personal responsibility for it would be an admission that the opponent had greater ability than the self, a deprecating and unlikely attribution.

However, it has been hypothesized that observers who are friends of actors express emotions and attribute responsibility more like the actors than like observers who are strangers of actors. Thus, observers who are friends of the actors they observed should feel as bad about an opponent's successful outcome and attribute the same level of personal responsibility for it as the actors do. In Miller and Norman's (in press) terms, passive observers who are friends of actors should become like active observers in their attributions about opponents' outcomes.

Emotion Hypothesis 7a: Actors and observers in friendship dyads will not express significantly different emotions about an opponent's successful outcome.

Responsibility Hypothesis 7a: Actors and observers in friendship dyads will not attribute significantly different responsibility to an opponent for the opponent's successful outcome.

Emotion Hypothesis 7b: Actors in stranger dyads will feel worse about an opponent's successful outcome than will observers in stranger dyads.

Responsibility Hypothesis 7b: Actors in stranger dyads will attribute less personal responsibility to an opponent for the opponent's successful outcome than will observers in stranger dyads.

Emotion and Responsibility Hypotheses 7a would each be supported by a nonsignificant comparison between levels of C at $A_2B_1D_2$ of the emotion and responsibility attribu-

tions, respectively. Emotion and Responsibility Hypotheses 7b would each be supported by a significant comparison between levels of C at $A_2B_2D_2$ of the emotion and responsibility attributions, respectively.

Hypothesis Set 8

Just as successful outcomes of opponents have ego-relevant implications for actors and their friends (Hypothesis Set 7), unsuccessful outcomes for opponents should have implications for their self systems. According to the present self system model, actors and observers in friendship dyads should feel the same about an opponent's unsuccessful outcome and attribute equal responsibility to the opponent for it. Calling the opponent personally responsible for his loss is a way to indicate that the opponent had less ability in the competition than did the self (or friend). Such an attribution would seem to maximally separate characteristics of the winning self (or friend) from the losing opponent, as personal responsibility attributions for one's own success indicates that one's own ability and effort produced the successful outcome.

Actors in stranger dyads should also express this same self system enhancing tendency of feeling good about an opponent's unsuccessful outcome and attributing personal responsibility to the opponent for it. Yet, because of the social facilitation concepts which suggest that greater self system motivation occurs in friendship dyads than in stran-

ger dyads, this tendency should be less for actors in stranger dyads than it would be for actors in friendship dyads (Emotion and Responsibility Hypotheses 5a). Emotion and Responsibility Hypotheses 6a also predicted this same tendency for observers, as observers in friendship dyads should feel better about an opponent's failure and attribute more personal responsibility to an opponent for it than should an observer in a stranger dyad. It then follows that actors and observers in either friendship or stranger dyads would feel similar about an opponent's failure and attribute equal responsibility for it, and that these emotions and attributions in friendship dyads would be greater than those in stranger dyads.

Emotion Hypothesis 8a: No significant difference in emotions about an opponent's unsuccessful outcome will be felt between actors and observers in friendship dyads.

Responsibility Hypothesis 8a: No significant difference in personal responsibility attributed to an opponent for an opponent's unsuccessful outcome will occur between actors and observers in friendship dyads.

Emotion Hypothesis 8b: No significant difference in emotions about an opponent's unsuccessful outcome will be felt between actors and observers in stranger dyads.

Responsibility Hypothesis 8b: No significant difference in personal responsibility attributed to an opponent for the opponent's unsuccessful outcome will occur between actors and observers in stranger dyads.

Emotion Corollary 2: Better feelings about an opponent's unsuccessful outcome will be felt in friendship than in stranger dyads.

Responsibility Corollary 2: More personal responsibility will be attributed to an opponent for the opponent's unsuccessful outcome in friendship than in stranger dyads.

Emotion and Responsibility Hypotheses 8a would each be supported by a non-significant comparison between levels of C at $A_1B_1D_2$ of the emotion and responsibility attributions, respectively. Emotion and Responsibility Hypotheses 8b would each be supported by non-significant comparisons between levels of C at $A_1B_2D_2$ of the emotion and responsibility attributions, respectively. Emotion and Responsibility Corollaries 2 would each be supported by a significant comparison between levels of B at A_1D_2 of the emotion and responsibility attributions, respectively.

Summary

The mass of hypotheses presented in this chapter should be conceptualized, or visualized, for the reader. Possibly the best way to summarize these hypotheses would be in a diagram which would show general responsibility attributions

(personal or environmental/impersonal) and emotions (good or bad) anticipated for each actor (successful or unsuccessful) or observer (friend or stranger). Such a diagram is represented in Table I. Degrees of attribution, such as those predicted in hypotheses dealing with social facilitation effects (e.g., a somewhat personal responsibility attribution versus a very personal responsibility attribution), cannot be distinguished within this figure. Nevertheless, the expression of the general anticipated attributions of subjects might be helpful in conceptualizing these hypotheses.

To interpret this diagram, for example, the "X's" in the first line for "actor-friend" indicates that actors in friendship dyads should attribute personal responsibility for success, environmental responsibility for failure, feel good about success, and feel bad about failure.

TABLE I

A CONCEPTUALIZATION OF THE HYPOTHESES

Attributor-Dyad (Attributee)	Attribution				Emotion			
	Success		Failure		Success		Failure	
	Person	Environ.	Person	Environ.	Good	Bad	Good	Bad
Actor-Friend (Self)	X			X	X			X
Actor-Stranger (Self)	X			X	X			X
Actor-Friend (Opponent)		X	X			X	X	
Actor-Stranger (Opponent)		X	X			X	X	
Observer-Friend (Actor)	X			X	X			X
Observer-Stranger (Actor)	X		X		X*			X*
Observer-Friend (Opponent)		X	X			X	X	
Observer-Stranger (Opponent)	X		X		X*			X*

* These emotions should be more neutral than either good or bad.

CHAPTER VI

METHODOLOGY

Subjects

Eighty male subjects from various psychology classes at Oklahoma State University participated in this experiment. Twenty sessions involving four subjects per session were scheduled. For ten sessions four subjects were signed up individually (Stranger condition of the Dyad variable). For the other ten sessions two individuals signed up, and each was required to bring a friend to the experiment (Friend condition of the Dyad variable).

Apparatus

Pre-interaction

Random assignment of subjects to roles in the experiment was done by random drawing of slips of paper from a can. On each slip of paper was written one of the four roles in the experiment--Player at Unit 1 (A1); Player at Unit 2 (A2); Observer at Unit 1 (O1); and Observer at Unit 2 (O2). For the Stranger condition all four slips of paper were inserted into the can prior to the experiment. For the Friend condition two slips of paper (A1 and O1) were first placed into

the can. After one friendship pair had drawn these slips of paper, the other two slips of paper (A2 and 02) were inserted into the can for drawing by the other friendship pair. This variation was designed to ensure that each friendship pair remained an actor-observer unit.

A pre-interaction booklet of rating scales was also prepared for each subject to complete in the waiting room. Three pages contained identical, 9-point rating scales asking the subject to report the degree of acquaintance between himself and another person from "I do not know this person at all." to "I am well acquainted with this person." Space was also provided above this scale for the subject to fill in his own initials and the initials of the person he was rating.

Interaction

A message-modified, non-zero sum Prisoner's Dilemma Game (PDG) was used for the competitive interaction in this experiment. In this particular PDG, players could either press a button for "Choice 1" or for "Choice 2" each time a green "GO" light lit on his unit. The potential payoffs for choice combinations included: 1) +4 points for both players, if both made Choice 1; 2 & 3) +5 points for the player who made Choice 2 and -5 points for the player who made Choice 1, if one player made Choice 1 and the other player made Choice 2; and 4) -4 points for both players, if both players made Choice 2.

Each PDG unit included four messages which each player could send to the other. These messages read: 1) I will make Choice 1; 2) You make Choice 1; 3) Let's both make Choice 1; and 4) I do not wish to disclose my intentions. Players could send any message by pressing a button next to it. A light would then be lit on the other player's unit, showing to him the message which was sent.

The messages did not have any direct bearing on the outcome of a session, but simply allowed actors to attempt to influence each other's choices. These messages made it appear to subjects that strategy and skill was a part of the game, thus enabling subjects to attribute personal responsibility for outcomes. The interaction was not influenced by the experimenter, and outcomes were entirely a product of the interaction.

A record of this interaction was kept by the experimenter. Entries for messages sent, points obtained, and total score were kept for each trial.

Post-interaction

Two rating booklets for the outcome of the interaction were prepared for each subject. On one booklet the subject was to rate one of the players in the PDG interaction on all scales; on the other booklet he was to rate the other player. As a check on the manipulation of the Outcome variable, subjects were asked to assess on 9-point rating scales the "Very Unsuccessful" to "Very Successful" outcome of the

interaction for the player being rated. Next, they assessed "The Circumstances" to "The Person" responsibility for the outcome of that player. Finally, subjects rated their "Very Good" to "Very Bad" feelings about the outcome of the player being rated.

The booklets were blocked so that half of the subjects rated the within-dyad actor's outcome before the opponent's outcome; the other half of the subjects rated the opponent before the within-dyad actor. These scales have been used by Whiteside (Note 3) and by Finney, Helm, and Fromme (Note 1), and have proved to be adequate measures of responsibility and emotion attributions.

Procedure

After the subjects had arrived in the waiting room, they were given a brief description of the experiment. Then each subject was handed a Pre-interaction booklet. On each of the three pages each subject rated how well he knew one of the other three participants in the experiment. If two subjects in the Stranger condition rated their acquaintance at "5" or above on this 9-point scale, they were automatically assigned to observer roles. Hence, they neither observed nor rated each other's behavior. The other two subjects were then assigned to player roles. Observers then randomly drew for the unit at which they would be observing, and players drew for the unit at which they would be playing. (Roles were assigned in this manner in only two sessions).

Otherwise, the four subjects next randomly drew for their roles from the four potential roles.

If a subject indicated an acquaintance at "5" or above in the Friendship condition for one of the participants other than the friend who accompanied him to the lab, the session was stopped (without the subjects' knowledge), and an alternative experiment was presented to them. (This event occurred only once). Otherwise, within each friendship pair the observer and player roles were randomly drawn.

Subjects were then taken to the PDG room and given full instructions about the play of the game (Appendix A). Following these instructions the players participated in four practive trials. The players' choices during these trials were directed by the experimenter so that each of the four possible matrix outcomes was demonstrated. Next, the subjects were shown how messages were sent and received. Following any questions, the game began and proceeded for twenty trials. In case of a tied score after twenty trials, the game continued until one player had obtained the lead. (This event occurred in two sessions).

Opportunities to send messages were given to each player before each game trial. The player to send the first message was alternated after each trial. Thus, each player sent the first message ten times, and he sent the second message ten times.

At the conclusion of the PDG interaction the experimenter announced the winner and the loser of the interaction.

Then each player was handed the Post-interaction rating booklets, upon which he rated responsibility for, and feelings about, the outcome of the interaction. Each subject had two such booklets--one for rating the winning player, and the other for rating the losing player. With the exception of slight wording changes in the questions appropriate for the viewpoint of the subject making the rating (e.g., "What was the outcome of the player you observed in the strategy game?" versus "What was your outcome in the strategy game?"), all booklets were identical.

Upon completion of these ratings, subjects were debriefed. They were told the purpose of the experiment and some of the predictions which had been made. After questions were answered, the subjects were sworn to silence and dismissed.

CHAPTER VII

RESULTS

A Note on Statistics

All hypotheses were tested by *a priori* *t*-tests (1-tailed). Since the use of *a priori* comparisons obviates the necessity for an overall analysis of variance (ANOVA; Kirk, 1968), the summary ANOVAs for responsibility and emotion attributions will not be discussed in this section. However, these ANOVAs may be found in Appendices B and C, respectively. It should be mentioned that the significance levels of the terms in these analyses are not indicative of the significance in the data, because within these ANOVAs a particular actor or observer rated both his own outcome (or the outcome of the player he observed) and the opposite outcome of the opponent. Both of these outcomes were classified under the outcome of the actor making the attribution, or--in the case of the observer--the actor being observed. That is (for example), an actor who was successful would be placed into the Outcome category, A_1, and his self-attributions would be categorized, $A_1(B_{1 \text{ or } 2})C_1D_1$. His attribution about his opponent's outcome would be categorized, $A_1(B_{1 \text{ or } 2})\ C_1D_2$. Notice, however, that the opponent

has an unsuccessful outcome, but this outcome is still classified under A_1, the successful outcome, because that was the outcome of the actor making the attributions. That both successful and unsuccessful outcomes are included in the successful and unsuccessful levels of the Outcome variable makes the responsibility and emotion ANOVAs meaningless as tests for main effects and interactions across the Ratee variable. These ANOVAs are still important, however, as the within and between-subjects error variances which are computed in them are accurate, and can be used in the tests of specific hypotheses for this experiment. The tests of hypotheses were not hindered by this problem, as all tests were at either one level or the other of the Ratee variable, thus dealing with one player in a competing pair at a time.

All cell means for emotion and responsibility attributions may be found in Appendices D and E, respectively. Means relevant to each Hypothesis Set will also be presented in the text as appropriate. Within these tables, larger numbers for responsibility attributions represent greater attributed personal responsibility for an outcome, and larger numbers for emotion attributions represent better feelings about an outcome.

Each of the following hypothesis sets involve two or three orthogonal comparisons between means in both the emotion and responsibility attributions, rather than a single comparison. Comparisons between hypothesis sets, however, are sometimes not orthogonal. Because multiple com-

parisons were made and some comparisons were not orthogonal, an attempt to preserve the error rate per hypothesis set was made by using conservative degrees of freedom. For hypotheses predicting significant differences between means, rather than using the degrees of freedom for error terms in the summary analyses of variance, as is th standard procedure (Kirk, 1968), the actual degrees of freedom involved in individual comparisons were used to evaluate t-ratios. In most cases this reduced the degrees of freedom from 72 to 18, as each cell in the design included the data from ten subjects. This procedure decreased the likelihood of Type I errors, and increased the likelihood of Type II errors, and therefore is conservative.

For hypotheses predicting no significant differences between means, conservatism involved the use of "liberal" statistical tests. Therefore, for "no difference" hypotheses the degrees of freedom from the error terms for the primary emotion and responsibility attribution ANOVAs were used. Thic procedure increased the likelihood of a Type I error, and therefore is conservative for hypotheses predicting no significant difference between means.

Finally, the MS_{error} values used to create the error terms used in the t-ratios were derived by pooling the between-subjects error term and the within-subjects error term of the summary ANOVAs for responsibility and emotion attributions (Kirk, 1968). Pooling of these terms was done because each of the interactions on which all comparisons

are based (either ACD or ABCD) involved a repeated measure factor (D), but all comparisons involved only factorial variables at one level of D or the other. Thus, pooling of the ANOVA error terms for comparison error terms was appropriate.

The Results

Manipulation Check

The check on the success-failure manipulation found that wins (M = 8.90) were perceived as more successful than were losses (M = 2.70), t, (70) = 24.80, $p < .001$. These ratings were only analyzed for the outcome of the within-dyad actor, and not for the outcomes of the opponents. Also, no difference was found between actors and observers on perceptions of the success of an outcome.

Hypothesis Set 1

Emotion Hypothesis 1, which predicted that actors who had successful outcomes would feel better about their outcomes (M = 9.10) than would actors who had unsuccessful outcomes (M = 4.85), was supported, t (38) = 10.37, $p < .01$. Responsibility Hypothesis 1, which predicted that more personal responsibility would be attributed by actors who had successful outcomes (M = 7.15) than by actors who had unsuccessful outcomes (M = 5.20), was also supported, t (38) = 3.05, $p < .01$.

Emotion Hypothesis 1a, which predicted that successful actors who were observed by friends would feel better about

their outcomes ($\underline{M}$ = 9.50) than would actors who were observed by strangers ($\underline{M}$ = 8.70), was not significantly supported, $\underline{t}$ (18) = 1.38. However, Responsibility Hypothesis 1a, which predicted that more personal responsibility would be attributed by successful actors who were observed by friends ($\underline{M}$ = 8.10) than by successful actors who were observed by strangers ($\underline{M}$ = 6.20), was supported, $\underline{t}$ (18) = 2.11, $\underline{p} < .05$.

TABLE II

MEANS FOR ACTOR ATTRIBUTIONS ABOUT THEIR OWN OUTCOMES (HYPOTHESIS SET 1)

Attribution	Dyad	Outcome	
		Successful	Unsuccessful
Emotion	Friendship	9.50	4.60
	Stranger	8.70	5.10
	$\underline{M}$	9.10	4.95
Responsibility	Friendship	8.10	5.70
	Stranger	6.20	4.70
	$\underline{M}$	7.15	5.20

Finally, Emotion Hypothesis 1b, which predicted that unsuccessful actors who were observed by friends would feel worse about their outcomes ($\underline{M}$ = 4.60) than would unsuccessful actors who were observed by strangers ($\underline{M}$ = 5.10), was not supported, $\underline{t}$ (18) = .86. Responsibility Hypothesis 1b, which predicted that unsuccessful actors who were observed by friends would attribute less personal responsibility ($\underline{M}$ = 5.70) than would unsuccessful actors who were observed by strangers ($\underline{M}$ = 4.70), was not supported, $\underline{t}$ (18) = 1.11.

TABLE III

COMPARISONS FOR ACTOR ATTRIBUTIONS ABOUT THEIR OWN OUTCOMES (HYPOTHESIS SET 1)

Hypothesis		df	error	t	p
Emotion	Hypothesis 1	38	.41	10.37	.01
	Hypothesis 1a	18	.58	1.38	
	Hypothesis 1b	18	.58	.86	
Responsibility	Hypothesis 1	38	.64	3.05	.01
	Hypothesis 1a	18	.90	2.11	.05
	Hypothesis 1b	18	.90	1.11	

A statistical summary of the means and comparisons in Hypothesis Set 1 can be found in Tables II and III, respectively. To summarize these results, successful actors, in general, both attributed more responsibility about their outcomes to themselves, and felt better about their outcomes, than did unsuccessful actors. These results supported the general self system theory proposed for actors. However, the modifications suggested by social facilitation theory were not so strongly supported. Successful actors who were observed by friends attributed more responsibility for their outcomes to themselves, but felt little better about those outcomes than did successful actors who were observed by strangers. Finally, no difference was found between unsuccessful actors who were observed by friends or strangers in responsibility or emotion attributions about their outcomes.

Hypothesis Set 2

Emotion Hypothesis 2a, which predicted that friends of actors who had successful outcomes would feel better about those outcomes (M = 9.30) than would strangers who observed successful outcomes (M = 8.20), was supported, t (18) = 1.90, $p < .05$. Responsibility Hypothesis 2a, which predicted that friends of actors who had successful outcomes would attribute more personal responsibility for those outcomes (M = 7.10) than would strangers who observed actors with successful outcomes (M = 5.50), was also supported, t (18) = 1.77, $p < .05$.

TABLE IV

MEANS FOR OBSERVER ATTRIBUTIONS FOR OUTCOMES OF ACTORS THEY OBSERVED (HYPOTHESIS SET 2)

Attribution	Outcome	Dyad	
		Friendship	Stranger
Emotion	Successful	9.30	8.20
	Unsuccessful	4.50	5.50
Responsibility	Successful	7.10	5.50
	Unsuccessful	5.20	8.60

Emotion Hypothesis 2b, which predicted that friends of actors who had unsuccessful outcomes would feel worse about those outcomes ($\underline{M}$ = 4.50) than would strangers who observed unsuccessful outcomes ($\underline{M}$ = 5.50), was supported, $\underline{t}$ (18) = 1.73, $\underline{p} < .05$. Responsibility Hypothesis 2b, which predicted that friends of actors who had unsuccessful outcomes would attribute less personal responsibility for those outcomes ($\underline{M}$ = 5.20) than would strangers who observed actors with unsuccessful outcomes ($\underline{M}$ = 8.60), was also supported, $\underline{t}$ (18) = 3.78, $\underline{p} < .01$.

A statistical summary of means and comparisons in Hypothesis Set 2 can be found in Tables IV and V. Within Hypothesis Set 2 predictions concerning responsibility and .

emotion attributions of friends versus strangers in observer roles were strongly supported. It was found that friends of successful actors attributed more responsibility to the actors for their outcomes, and felt better about their outcomes, than did strangers. Also, friends of unsuccessful actors attributed less responsibility to the actors for their outcomes, and felt worse about their outcomes, than did strangers.

TABLE V

COMPARISONS FOR OBSERVER ATTRIBUTIONS FOR OUTCOMES OF ACTORS THEY OBSERVED (HYPOTHESIS SET 2)

Hypothesis		df	error	t	p
Emotion	Hypothesis 2a	18	.58	1.90	.05
	Hypothesis 2b	18	.58	1.73	.05
Responsibility	Hypothesis 2a	18	.90	1.77	.05
	Hypothesis 2b	18	.90	3.78	.01

Hypothesis Set 3

Emotion Hypothesis 3a, which predicted that no significant difference in emotions would be attributed for a suc-

cessful outcome between actors (M = 9.50) and observers (M = 9.30) in friendship dyads was supported, t (72) = .35. Responsibility Hypothesis 3a, which predicted that no significant difference in responsibility would be attributed for a successful outcome between actors (M = 8.10) and observers (M = 7.10) in friendship dyads, was also supported, t (72) = 1.11.

TABLE VI

MEANS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR ACTOR'S SUCCESSFUL OUTCOMES (HYPOTHESIS SET 3)

		Viewpoint		
Attribution	Dyad	Actor	Observer	M
Emotion	Friendship	9.50	9.30	9.40
	Stranger	8.70	8.20	8.45
Responsibility	Friendship	8.10	7.10	7.60
	Stranger	6.20	5.50	5.85

Emotion Hypothesis 3b, which predicted that no significant difference in emotions would be attributed for a suc-

cessful outcome between actors ($\underline{M}$ = 8.70) and observers ($\underline{M}$ = 8.20) in stranger dyads, was supported, $\underline{t}$ (72) = .86. Responsibility Hypothesis 3b, which predicted that no significant difference in responsibility would be attributed for a successful outcome between actors ($\underline{M}$ = 6.20) and observers ($\underline{M}$ = 5.50) in successful stranger dyads, was also supported, $\underline{t}$ (72) = .78.

TABLE VII

COMPARISONS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR ACTOR'S SUCCESSFUL OUTCOMES (HYPOTHESIS SET 3)

Hypothesis		df	error	t	p
Emotion	Hypothesis 3a*	72	.58	.35	
	Hypothesis 3b*	72	.58	.86	
	Corollary 1	38	.41	2.63	.05
Responsibility	Hypothesis 3a*	72	.90	1.11	
	Hypothesis 3b*	72	.90	.78	
	Corollary 1	38	.63	2.78	.01

* Denotes hypotheses which predicted nonsignificant differences.

Finally, Emotion Corollary 1, which predicted better feelings about successful outcomes in friendship dyads (M = 9.40) than in successful stranger dyads (M = 8.45), was supported, t (38) = 2.63, $p < .01$. Responsibility Corollary 1, which predicted that more personal responsibility would be attributed in successful friendship dyads (M = 7.60) than in successful stranger dyads (M = 5.85), was also supported, t (38) = 2.78, $p < .01$.

A statistical summary of means and comparisons in Hypothesis Set 3 can be found in Tables VI and VII. All results within Hypothesis Set 3 are consistent with predictions based on consideration of self system and social facilitation influences over attributions. It was found that friendship dyads attribute more personal responsibility to the dyad's actor for a successful outcome, and feel better about the outcome, than do stranger dyads. Within friendship and stranger dyads, no difference was found between the dyad's actor and observer in attributions of responsibility or emotion about the actor's outcome.

Hypothesis Set 4

The prediction that unsuccessful actors (M = 4.60) and their friends (M = 4.50) would not have significantly different bad feelings about the actor's outcome (Emotion Hypothesis 4a) was supported, t (72) = .17. Responsibility Hypothesis 4a, which predicted that no significant difference in responsibility would be attributed between unsuccess-

ful actors (M = 5.70) and their observers (M = 5.20) in friendship dyads, was also supported, t (72) = .56.

TABLE VIII

MEANS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR ACTOR'S UNSUCCESSFUL OUTCOMES (HYPOTHESIS SET 4)

		Viewpoint	
Attribution	Dyad	Actor	Observer
Emotion	Friendship	4.60	4.50
	Stranger	5.10	5.50
Responsibility	Friendship	5.70	5.20
	Stranger	4.70	8.60

The prediction that actors in unsuccessful stranger dyads would feel worse about their outcomes (M = 5.10) than would their stranger observers (M = 5.50), was not supported (Emotion Hypothesis 4b), t (18) = .69. Responsibility Hypothesis 4b, which predicted that unsuccessful actors in stranger dyads would attribute less personal responsibility for their outcomes (M = 4.70) than would their stranger observers (M = 8.60), was supported, t (18) = 4.33, $p < .01$.

TABLE IX

COMPARISONS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR ACTOR'S UNSUCCESSFUL OUTCOMES (HYPOTHESIS SET 4)

Hypothesis		df	error	t	p
Emotion	Hypothesis 4a*	72	.58	.17	
	Hypothesis 4b	18	.58	.69	
Responsibility	Hypothesis 4a*	72	.90	.56	
	Hypothesis 4b	18	.90	4.33	.01

* Denotes hypotheses predicting nonsignificant differences.

The statistical summary of means and comparisons in Hypothesis Set 4 can be found in Tables VIII and IX. With the exception of emotion attributions of actors and observers in stranger dyads, Hypothesis Set 4 supported predictions derived form self system considerations. It was found that unsuccessful actors in stranger dyads would attribute less responsibility to themselves for their outcomes than would their observers, yet the actors did not feel worse about these outcomes than did their observers. On the other hand, unsuccessful actors and observers who are friends attributed equal responsibility to, and felt equally bad about, the actor's outcome.

Hypothesis Set 5

Emotion Hypothesis 5, which predicted that actors would feel better about their opponent's unsuccessful outcome (M = 6.35) than about his successful outcome (M = 6.35), was not supported, t (38) = .00. However, Responsibility Hypothesis 5, which predicted that actors would attribute more responsibility to the opponent for the opponent's failure (M = 6.95) than for his success (M = 4.95), was supported, t (38) = 3.13, $p < .01$.

TABLE X

MEANS FOR ACTOR ATTRIBUTIONS FOR OPPONENTS' OUTCOMES (HYPOTHESIS SET 5)

Attribution	Outcome*	Dyad		M
		Friendship	Stranger	
Emotion	Successful	7.20	5.50	6.35
	Unsuccessful	6.10	6.60	6.35
Responsibility	Successful	8.10	5.80	6.95
	Unsuccessful	5.00	4.90	4.95

* In the Outcome column is listed the "Successful" or "Unsuccessful" outcome of the actor making the attribution. The outcome he is rating, the opponent's, is opposite his own.

Emotion Hypothesis 5a, which predicted that actors in successful friendship dyads would feel better (M = 7.20) about the other player's unsuccessful outcome than would actors in stranger dyads (M = 5.50), was supported, t (18) = 2.93, $p < .01$. Responsibility Hypothesis 5a, which predicted that actors in friendship dyads would attribute more personal responsibility to their opponents for the opponent's unsuccessful outcomes (M = 8.10) than would actors in stranger dyads (M = 5.80), was also supported, t (18) = 2.56, $p < .01$.

TABLE XI

COMPARISONS FOR ACTOR ATTRIBUTIONS FOR OPPONENTS' OUTCOMES (HYPOTHESIS SET 5)

Hypothesis		df	error	t	p
Emotion	Hypothesis 5	38	.41	.00	
	Hypothesis 5a	18	.58	2.93	.01
	Hypothesis 5b	18	.58	.86	
Responsibility	Hypothesis 5	38	.64	3.13	.01
	Hypothesis 5a	18	.90	2.56	.01
	Hypothesis 5b	18	.90	.11	

Emotion Hypothesis 5b, which predicted that actors in unsuccessful friendship dyads would feel worse ($\underline{M}$ = 6.10) about their opponent's successful outcomes than would unsuccessful actors in stranger dyads ($\underline{M}$ = 6.60), was not supported, $\underline{t}$ (18) = .86. Responsibility Hypothesis 5b, which predicted that actors in friendship dyads would attribute less responsibility to their opponents for the opponent's successful outcomes ($\underline{M}$ = 5.00) than would actors in stranger dyads ($\underline{M}$ = 4.90), was not supported, $\underline{t}$ (18) = .11.

The statistical summary of means and comparisons for Hypothesis Set 5 can be found in Tables X and XI. General predictions derived from consideration of self system motivation were only partially supported. Within Hypothesis Set 5 it was seen that actors, in general, feel that an opponent's unsuccessful outcome is more a result of the opponent's personal responsibility than is the opponent's successful outcome. Yet, actors do not, in general, feel worse about the opponent's success than they feel about the opponent's failure.

Actors in friendship dyads felt significantly better, and attributed more personal responsibility to the opponent, for an opponent's loss than did successful actors in stranger dyads. Support for the social facilitation implications for self systems and these attributions was not complete, however, as no differences were found in attributions of responsibility about an opponent's success, or feelings about an opponent's success, between the ratings of actors in friendship and stranger dyads.

Hypothesis Set 6

Emotion Hypothesis 6a, which predicted that friends would feel better about an unsuccessful outcome for an actor's opponent (M = 7.00) than would strangers (M = 5.50), was supported, t (18) = 2.59, $p < .01$. Responsibility Hypothesis 6a, which predicted that observers who were friends of the actors they observed would attribute more personal responsibility to the actors' opponents (M = 7.20) for the opponents' unsuccessful outcomes (actors' successful outcomes) than strangers would (M = 6.90), was not supported, t (18) = .33.

TABLE XII

MEANS FOR OBSERVER ATTRIBUTIONS FOR OPPONENTS' OUTCOMES (HYPOTHESIS SET 6)

		Dyad	
Attribution	Outcome*	Friendship	Stranger
Emotion	Successful	7.00	5.50
	Unsuccessful	5.70	5.70
Responsibility	Successful	7.20	6.90
	Unsuccessful	4.50	7.90

* In the Outcome column is listed the "Successful" or "Unsuccessful outcome of the actor making the attribution. The outcome he is rating, the opponent's, is opposite his own.

Emotion Hypothesis 6b, which predicted that friends would feel worse about the opponent's successful outcomes (M = 5.70) than would strangers (M = 5.70), was not supported, t (18) = .00. However, Responsibility Hypothesis 6b, which predicted that friends would attribute less personal responsibility to the actors' opponents (M = 4.50) for a successful outcome than would strangers (M = 7.90), was supported, t (18) = 3.78, $p < .01$.

TABLE XIII

COMPARISONS FOR OBSERVER ATTRIBUTIONS FOR OPPONENTS' OUTCOMES (HYPOTHESIS SET 6)

Hypothesis		df	error	t	p
Emotion	Hypothesis 6a	18	.58	2.59	.01
	Hypothesis 6b	18	.58	.00	
Responsibility	Hypothesis 6a	18	.90	.33	
	Hypothesis 6b	18	.90	3.78	.01

The statistical summary of means and comparisons for Hypothesis Set 6 can be found in Tables XII and XIII. In an unusual pattern of results, self system predictions for

observers were not fully supported. Within Hypothesis Set 6, it was found that friends and strangers attribute equal responsibility to the actor's opponent for the opponent's unsuccessful outcome, but friends feel better about those outcomes than do strangers. On the other hand, friends attribute less responsibility to an opponent for the opponent's success than strangers attribute, but friends and strangers feel the same about those outcomes.

Hypothesis Set 7

Emotion Hypothesis 7a, which predicted that no significant difference in emotion would be expressed by actors (M = 6.10) and observers (M = 5.70) in friendship dyads about an opponent's successful outcome, was supported, t (72) = .69. Responsibility Hypothesis 7a, which predicted that actors (M = 5.00) and observers (M = 4.50) in friendship dyads would not significantly differ in personal responsibility attributed to an opponent who had a successful outcome, was supported, t (72) = .56.

Emotion Hypothesis 7b, which predicted that actors in stranger dyads would feel worse about an opponent's successful outcome (M = 6.60) than would observers in stranger dyads (M = 5.70), was not supported, t (18) = 1.55. Responsibility Hypothesis 7b, which predicted that actors in stranger dyads would attribute less personal responsibility to an opponent for the opponent's successful outcome (M = 4.90) than would observers in stranger dyads (M = 7.90), was supported, t (18) = 3.33, $p < .01$.

TABLE XIV

MEANS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR OPPONENT'S SUCCESSFUL OUTCOMES (HYPOTHESIS SET 7)

Attribution	Dyad	Viewpoint	
		Actor	Observer
Emotion	Friendship	6.10	5.70
	Stranger	6.60	5.70
Responsibility	Friendship	5.00	4.50
	Stranger	4.90	7.90

The statistical summary of means and comparisons in Hypothesis Set 7 can be found in Tables XIV and XV. Within Hypothesis Set 7 predictions derived from self system considerations were largely supported. It was found that actors and observers in friendship dyads do not differ in responsibility attributed to, or feelings about, a successful opponent. Actors in stranger dyads attributed significantly less responsibility to, but did not feel significantly worse about, the outcome of a successful opponent than do observers in stranger dyads.

TABLE XV

COMPARISONS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR OPPONENTS' SUCCESSFUL OUTCOMES (HYPOTHESIS SET 7)

Hypothesis		df	error	t	p
Emotion	Hypothesis 7a*	72	.58	.69	
	Hypothesis 7b	18	.58	1.55	
Responsibility	Hypothesis 7a*	72	.90	.56	
	Hypothesis 7b	18	.90	3.33	.01

* Denotes hypotheses predicted to have nonsignificant differences.

Hypothesis Set 8

Emotion Hypothesis 8a, which predicted that no significant difference in emotion would be felt between actors (M = 7.20) and observers (M = 7.00) in friendship dyads, was supported, t (72) = .34. Responsibility Hypothesis 8a, which predicted that no significant difference would occur in personal responsibility attributed to an opponent for the opponent's unsuccessful outcome between actors (M = 8.10) and observers (M = 7.20) in friendship dyads, was supported, t (72) = 1.00.

TABLE XVI

MEANS FOR ACTOR VERSUS OBSERVER ATTRIBUTIONS FOR OPPONENTS' UNSUCCESSFUL OUTCOMES (HYPOTHESIS SET 8)

Attribution	Dyad	Viewpoint		M
		Actor	Observer	
Emotion	Friendship	7.20	7.00	7.10
	Stranger	5.50	5.50	5.50
Responsibility	Friendship	8.10	7.20	7.65
	Stranger	5.80	6.90	6.35

Emotion Hypothesis 8b, which predicted that no significant difference in emotion would be felt between actors (M = 5.50) and observers (M = 5.50) in stranger dyads, was supported, t (72) = .00. Also, Responsibility Hypothesis 8b, which predicted that no significant difference would occur in personal responsibility attributed to an opponent for the opponent's unsuccessful outcome between actors (M = 5.80) and observers (M = 6.90) in stranger dyads, was supported, t (72) = 1.33.

Finally Emotion Corollary 2, which predicted better feelings about an opponent's unsuccessful outcome in friendship (M = 7.10) than in stranger (M = 5.50) dyads, was sup-

ported, t (38) = 3.90, $p < .01$. Responsibility Corollary 2, which predicted that more personal responsibility would be attributed to an opponent for his unsuccessful outcome in friendship (M = 7.65) than in stranger (M = 6.35) dyads, was supported, t (38) = 2.06, $p < .05$.

TABLE XVII

COMPARISONS FOR ACTOR VERSUS OBSERVER ATTRIBUTION FOR OPPONENTS' UNSUCCESSFUL OUTCOMES (HYPOTHESIS SET 8)

Hypothesis		df	error	t	p
Emotion	Hypothesis 8a	72	.58	.34	
	Hypothesis 8b	72	.58	.00	
	Corollary 2	38	.41	3.90	.01
Responsibility	Hypothesis 8a	72	.90	1.00	
	Hypothesis 8b	72	.90	1.33	
	Corollary 2	38	.63	2.06	.05

The statistical summary of means and comparisons for Hypothesis Set 8 can be found in Tables XVI and XVII. Within Hypothesis Set 8 all predictions derived from self system and social facilitation considerations were supported. It

was found that actors and observers within both friendship and stranger dyads do not significantly differ in responsibility attributed to an opponent for the opponent's unsuccessful outcome. However, members of friendship dyads attribute more personal responsibility to the opponent for his unsuccessful outcome, and feel better about that outcome, than do members of stranger dyads.

Reflections: The Results Versus the Hypotheses

No single hypothesis within this collection was a crucial test of the self system model. Rather, the strength of the model was reflected in its ability to deal with relations between several different aspects of acting or observing (e.g., observing--or acting--as a stranger versus observing--or acting--as a friend) across several hypotheses. To summarize these results into a coherent, overall picture of the model's successes and failures, the Hypothesis Sets were divided into three groups, and results within each group were explored separately. These groups were: (1) attributions of actors (Hypothesis Sets 1 and 5); (2) attributions of observers (Hypothesis Sets 2 and 6); and 3) comparisons of actors' and observers' attributions (Hypothesis Sets 3, 4. 7, and 8).

Attributions of Actors

A descriptive survey of predictions concerning actor attributions reveals that, in all, four responsibility hypo-

theses and two emotion hypotheses were supported; two responsibility hypotheses and four emotion hypotheses were not supported. Looking at these results from another perspective, twice an emotion hypothesis and its corresponding responsibility hypothesis was supported; twice neither an emotion hypothesis nor its corresponding responsibility hypothesis was supported; and twice either a responsibility hypothesis or an emotion hypothesis was supported, while the corresponding emotion hypothesis or responsibility hypothesis was not supported (Table XVIII).

TABLE XVIII

FREQUENCY OF SUPPORT AND NONSUPPORT FOR PREDICTIONS WITHIN ACTOR HYPOTHESES (1 and 5)

	Supported		
	Set 1 Within Dyad	Set 5 Other Dyad	Total
Emotion Hypotheses	1	5a	2
Responsibility Hypotheses	1, 1a	5, 5a	4
	Nonsupported		
Emotion Hypotheses	1a, 1b	5, 5b	4
Responsibility Hypotheses	1b	5b	2

General Hypotheses. Obviously, the support for predictions within this group was far from complete. Most important, however, was the fact that Responsibility Hypothesis 1 and Emotion Hypothesis 1 were each supported. Successful actors felt better about their outcomes, and attributed more personal responsibility to themselves, than did unsuccessful actors. These results correspond to previous evidence (Beckman, 1970; Gilmor & Minton, 1974) suggesting that actors accept more personal responsibility for success than for failure. The results also show that more positive emotions correspond to personal responsibility attributions of actors. Thus, there is support for the interpretation that good outcomes which produce pleasant emotions and favorable reflections upon the self are associated with personal responsibility attributions, while outcomes which produce unpleasant emotions and unfavorable reflections upon the self are associated with impersonal responsibility attributions.

Responsibility Hypothesis 5 found that actors attributed less responsibility to an opponent for the opponent's success than for his failure, but no difference in emotions expressed about an opponent's successful or unsuccessful outcome was found (Emotion Hypothesis 5). These results do not entirely support predictions, as it was proposed that actors would feel better when the opponent's outcome was unsuccessful than when it was successful. Yet, it seems that the fact that there were no differences in emotions, while differences in responsibility attributions occurred,

reflects a problem inherent in utilizing expressed emotions about outcomes, rather than a problem in the self system model. Because of the need to maintain a favorable self image to others, it is possible that expressed emotions may not always correspond to actual emotions. This problem will be discussed in regard to Emotion Hypothesis 5, but the discussion is also significant to other subsequent emotion hypotheses which were not fully supported.

Heider (1958) defined a feeling of contentment or happiness about the bad fortunes of another individual as "malicious joy." To openly express contentment about another individual's bad outcome is not often considered socially acceptable and, as termed by Heider (1958), is a "discordant reaction." Impression management theory (Goffman, 1959) predicts that individuals wish to comvey the best impression of themselves to others, and Rosenberg's (1965) evaluation apprehension postulate indicates that impression management operates within a subject-experimenter situation. That is, subjects in experiments wish to have the experimenter see them in the most favorable light possible. Within the present experiment, to express joy about another's failure might be interpreted by a subject as causing the experimenter to look badly upon him. The experimenter might see him as a malicious person. Also, within the context of the self system model, bad impressions and evaluations of others upon the self may be debilitating to the self system, and therefore outcomes to be avoided. Thus, to not express good

feelings about an opponent's misfortune, even though the feelings may be actually felt, is an impression managing attribution. Therefore, the failure of Emotion Hypothesis 5 may have resulted from subjects' impression managing tactics, and not from a failure of the self system model.

Diller's (1954) results seem to confirm this analysis. Recall that Diller found that subjects who failed in a task did not overtly report falls in their self esteems after the failure, but covert measures seemed to indicate that there was a self esteem depression. For overt reports of the self, it would be impression managing to not reveal that one had been hurt by an experimental outcome, even though one's actual feelings about the outcome are bad. Assuming the validity of the current conception of the self system, reports of emotions may be seen as overt reports of self system relevance of outcomes, while responsibility attributions might be seen as a more covert report of self system relevance. Thus, the more covert in the present experiment reflected true feelings, while the more overt measure reflected impression managing feelings.

Social Facilitation Hypotheses. All predictions from the social facilitation modifications concerning attributions of successful actors were supported, while no predictions concerning attributions of unsuccessful actors were supported. These results indicate that the social facilitation effect is real, but is masked in the unsuccessful

actor situation. Perhaps a "basement effect" occurred for unsuccessful actors, whereby they felt so bad about their outcomes (hence, a strong motivation to attribute impersonal responsibility) that it made little difference to them whether they were observed by friends or strangers. Indeed, Shaw and Sulzer (1964) have found that, all other factors controlled, observers assign more personal responsibility to an actor for bad outcomes than for good outcomes. Moreover, dispositional (trait) attributions follow from strong personal responsibility inferences (Jones & Davis, 1965). Therefore, others are likely to hold an actor highly responsible for his bad outcomes, and infer undesirable traits because of the outcomes. Assuming that actors are aware of these consequences (as they spend much of their lives observing, as well as acting, the assumption seems valid), whether the observer is a friend or a stranger would make little difference. In either case, actors would be motivated to dissociate bad outcomes from themselves. It would, then, probably require an instrument more sensitive than the present self-report method to measure differences in responsibility attributions between unsuccessful actors who were observed by friends or by strangers. The difference is still theoretically important for the self system model, as if it did not exist, the concept of self system relevance of friend observers to actors would be diminished.

Attributions of Observers

A descriptive survey of predictions (Responsibility Corollaries and Emotion Corollaries will be grouped with Responsibility Hypotheses and Emotion Hypotheses in this section.) about observer attributions reveals that, in all, three responsibility hypotheses and three emotion hypotheses were supported; one emotion hypothesis and one responsibility hypothesis was not supported. From another perspective, twice both a responsibility hypothesis and its corresponding emotion hypothesis was supported; and twice either a responsibility hypothesis or emotion hypothesis was supported, while the corresponding emotion hypothesis or responsibility hypothesis was not supported (Table XIX).

Predictions about observers' emotion and responsibility attributions were largely supported. Most importantly, all predictions concerning observers' attributions about the actors they observed (friend or stranger) were supported. This evidence strongly supports the present contention that outcomes of friends are relevant to the self systems of observers.

Attributions about the outcomes of opponents were not so clearly supportive of the self system model. Neither responsibility hypothesis-emotion hypothesis pair within Hypothesis Set 6 found differences in responsibility attribution and expressed emotion to coincide.

TABLE XIX

FREQUENCY OF SUPPORT AND NONSUPPORT FOR PREDICTIONS WITHIN OBSERVER HYPOTHESIS SETS (2 AND 6)

	Set 2 Within Dyad	Set 6 Other dyad	Total
Supported			
Emotion Hypothesis	2a, 2b	6a	3
Responsibility Hypothesis	2a, 2b	6b	3
Nonsupported			
Emotion Hypothesis		6b	1
Responsibility Hypothesis		6a	1

The fact that all predictions about observations of actors were supported, while predictions about observations of opponents were less clearly supported, suggests the reasons for the anomalies in the observations of opponents. For an observer who is a friend of an actor he viewed, the outcome of the actor friend is more important than is the outcome of the opponent. After all, the friend is more socially important than is the opponent who is a stranger. However, the outcome of an opponent of the friend is more important to an observer's self system than is the outcome of an opponent of a stranger. This idea was dealt with

earlier in the presentation of the self system model:

> The more a particular negative outcome is relevant to and threatens one's self system, or the more a positive outcome is relevant to and enhances one's self system, the greater the effect of the self system on attributions (p. 21).

Since attribution regarding an opponent's outcome is more removed from a friend observer's self system than is attribution regarding the outcome of a friend, differences between friends and strangers in emotions and responsibility attributions about outcomes of opponents become less than differences in emotions and responsibility attributions about the outcomes of the friends or strangers being observed.

For example, if I am an observer of a successful friend, I probably feel very good about his success and moderately good about the opponent's failure. A stranger observer might feel neutral about either outcome. The difference between my emotions and his emotions, then, is greater for the actors we observed (friend or stranger) than for the opponents. It, statistically, becomes more difficult to find significance between our emotions for the opponent than for the actors we observed. At the same time, differences between our responsibility attributions are harder to obtain for ratings of opponents, also.

As the differences between responsibility and emotion attributions for an opponent might be comparatively small, they become more open to influence from factors other than outcomes themselves. One such factor is statistical error.

Another factor (which concerns the self system) is the impression management and evaluation apprehension mechanism. It is plausible, then, that impression managing considerations interacted with direct outcome considerations on the friend observers' self systems, thereby producing the pattern of results found for observers' attributions for opponents outcomes.

Attributions of friends and strangers for the outcomes of actors whom they observed provided more direct evidence regarding the self system model than did attributions of friends and strangers for opponents' outcomes. These attributions were more directly related to friend observers' self systems, did not appear to be confused by extraneous factors, and supported the model completely.

Actors Versus Observers

Hypotheses comparing actor and observer attributions are not orthogonal to hypotheses considering attributions of actors and observers, respectively. Therefore, they might be influenced by the same factors which were found to influence hypotheses which looked at actors and observers, separately. Yet, comparisons of actors and observers are a second way to look at the data, and should also be predictable within the self system model. Indeed, a survey of predictions comparing actor and observer responsibility attributions and expressed emotions reveals that all ten responsibility hypotheses and responsibility corollaries were sup-

ported; eight emotion hypotheses and emotion corollaries were supported, and two emotion hypotheses were not supported (Table XX). Looking at responsibility-emotion hypothesis pairs, both the emotion hypothesis and corresponding responsibility hypothesis (or emotion corollary and responsibility corollary) were supported eight times, and the responsibility hypothesis was supported, while the corresponding emotion hypothesis was not supported, twice. The strength of these results strongly indicates the importance of actor versus observer comparisons in the investigation of the self system model.

Obviously, support for the self system model from the actor versus observer comparison perspective is considerable. A note of some caution about these results must be raised, however, as several of the predictions of no significant difference between groups were confirmed. Interpretation of causes of nonsignificant differences are generally termed "equivocal" or "indeterminant," although post hoc hypotheses may be applied to unexpected nonsignificant differences (as has been done with previous unsupported hypotheses in this discussion). It may also be argued that confirmation of "no difference" hypotheses provide equivocal and indeterminant information in this experiment. Yet, within this experiment these "no difference" predictions were in conjunction with "significant difference" predictions which were largely confirmed. Also, these predictions were tested liberally, so that assurance about "no difference" could be increased.

In a system where a network of nonsignificant difference predictions and significant difference predictions were each confirmed, it appears that the nonsignificant differences were, in fact, representative of nonsignificant differences, and not of significant differences which were lost to Type II errors. This conclusion seems especially appealing in light of the fact that all nonsignificant difference predictions were supported.

TABLE XX

FREQUENCY OF SUPPORT AND NONSUPPORT FOR PREDICTIONS WITHIN ACTOR VERSUS OBSERVER HYPOTHESIS SETS (3, 4, 7, AND 8)

	Supported		
	Sets 3 & 4 Within Dyad	Sets 7 & 8 Other Dyad	Total
Emotion Hypotheses	3a, 3b, 4a	7a, 8a, 8b	6
Responsibility Hypotheses	3a, 3b, 4a, 4b	7a, 7b, 8a, 8b	8
Emotion Corollary	1	2	2
Responsibility Corollary	1	2	2
	Nonsupported		
Emotion Hypotheses	4b	7b	2
Responsibility Hypotheses			0
Emotion Corollary			0
Responsibility Corollary			0

Successful Actors and Their Observers. Actors and observers in both friendship and stranger dyads attributed essentially the same emotions and responsibility for the successful outcomes of the actors. Yet, subjects in friendship dyads felt better about successful outcomes, and attributed more personal responsibility for those outcomes, than did subjects in stranger dyads. These results support the self system and social facilitation argument that either observing or being observed by a friend during a successful outcome interaction creates a stronger connection between that outcome and the self system, thereby increasing positive emotions and subsequent personal responsibility attributions.

The same pattern was found for attributions concerning opponents' outcomes. Actors and observers within friendship or stranger dyads did not differ in responsibility or emotions attributed to the unsuccessful opponents, but subjects within friendship dyads felt better about an unsuccessful outcome, and attributed more personal responsibility to the opponent for it, than did those in stranger dyads. These results verify two self system predictions. First, observers who are friends share bonds with actors and feel as actors do about outcomes and responsibility. Second, the attributions of personal responsibility are greater and there are more intense emotions (motivation) in friendship than in stranger dyads.

Unsuccessful Actors and Their Observers. Unsuccessful actors and friends who observed them did not significantly

differ in attributions of responsibility or in expressions of emotions. These results support the self system interpretation, derived from Shaver's (1970) and Fromme's (Note 7) propositions. An actor's outcome is associated with a friend's self system, an association which causes the friend to feel emotionally the same as the actor and to attribute responsibility as he does.

When there was an unsuccessful outcome in stranger dyads, actors attributed less personal responsibility than did the strangers who observed them, but did not express worse feelings than the observers. The attribution of less personal responsibility conformed to predictions derived from the self system model (and the information processing model as well), but the emotion attributions did not support Emotion Hypothesis 8b. Again, impression management based on evaluation apprehension is a likely explanation for this failure. Expressing bad feelings about losses might be seen by subjects as showing weakness. Unsuccessful subjects might perceive that the experimenter would see them as strong individuals (e.g., good sports), in spite of their losses, if they did not express unhappy feelings about their outcomes. Showing strength by denying bad feelings about an outcome in an experiment would then be a self system maintaining attribution.

Attributions of responsibility and emotions to successful opponents by unsuccessful actors and their friends did not differ, thereby supporting self system predictions.

Attributions within stranger dyads also substantially supported predictions. Actors within stranger dyads attributed less personal responsibility to opponents for opponents' successful outcomes, and felt marginally worse about those outcomes, than did observers in stranger dyads. Again, a likely reason for the marginality of the significance of the emotion attribution is an impression management--evaluation apprehension explanation. For the actor to express bad feelings about an opponent's success would not be an impression managing outcome, as it shows resentment for that outcome on the part of the subject, and to display resentment is a negative characteristic.

CHAPTER VIII

DISCUSSION

The Results and the Self System

The results of this experiment, for the most part, directly supported predictions derived from the proposed self system motivation model. Twenty-nine of the forty hypotheses were supported. The self system, as expressed by emotions about outcomes, was shown to influence the responsibility attributions of actors and of observers who were friends of actors. Positive emotions and personal responsibility attributions were generally expressed for good outcomes; negative emotions and impersonal responsibility attributions were often expressed for bad outcomes.

Predictive failures may have occurred because of a relationship between the self system of subjects and characteristics of the experiment itself, predominantly from: (1) the fact that the experimenter was a knowledgeable observer himself (impression management--evaluation apprehension), possibly causing the subjects to not report good feelings about opponents' losses (be a good sport) or bad feelings about opponents' successes; and (2) the fact that attributions differences between groups in impact upon

the self were more difficult to find as outcomes become farther removed from the self. Overall, the results indicate that the relationship of an outcome to an individual's self system is a strong determinant of the responsibility attributions he finally makes about the outcome.

Within earlier chapters where the self system model was developed (Chapters I through IV), considerable attention was given to the information-processing approach to attributions. It was found that this approach, which deals only with the action and outcome information available to actors and observers and the ways in which the information is processed, did not adequately account for responsibility attributions and emotions of successful actors and "biased" observers. The self system interpretation was offered as an explanation which could account for these attributions. Several results of this experiment (e.g., an actor's acceptance of responsibility for good outcomes, and a friend observer's attributions similar to the actor's for good and bad outcomes) cannot be explained by the information-processing model, but are entirely consistent with the self system model. The self system approach is strongly supported by such results.

Implications of the Model: Depression and Delinquency

While laboratory evidence suggesting that responsibility attributions following outcomes are a means of self

system protection or enhancement is in itself an exciting outcome, the value of laboratory research is enhanced when it can be applied to "real world" problems and phenomena. At this point, the self system model has been developed, and the results have been shown to give it considerable support. Therefore, this treatise concludes with a section describing the contributions this research may provide in regard to the clinical and behavioral problems of depression and delinquency.

Depression

Wylie's (1961) review of self concept evidence led to the conclusion that "protective attributions" serve to stabalize the self concept (in present terms, the self esteem portion of the self system). The term protective attribution corresponds to the present concept of an impersonal or environmental responsibility attribution. The present data support this idea as, in fact, protective attributions were made by subjects whose self systems seemed endangered by a bad outcome. But, do protective attributions actually protect the self system? If not always, under what conditions might they fail to do so, and with what consequences? These questions can be used to illustrate the full implications of the present self system model.

An initial answer to the questions can be found in research dealing with neurotics and depressives. Several studies (e.g., Sarbin & Rosenberg, 1955; Friedman, 1955;

Leary, 1957) have demonstrated that neurotics are less "self accepting" and more self-critical than are normals. Bills (1954) has found that large discrepancies between the self image and self ideal (low self esteem) were related to signals of depression found on the Thematic Apperception Test. Also, Beck (1967a) noted that low self evaluation is characteristic of depression:

> Self-devaluation is apparently part of the depressed patient's pattern of viewing himself as deficient in those attributes that are specifically important to him: ability, performance.... (p. 24).

Eighty-one percent of a sample of severely depressed patients Beck studied reported this complaint. Apparently, a self system which has not been maintained in a favorable image appears to be associated with maladaptive behavior.

Additionally, Scott and Senay (1970) found that failure in several categories of activities (such as employment, health, family, and marriage) effectively separated depressed from normal individuals. Important failures or losses in an individual's life are antecedent to depression. Depressed patients were more likely than normals to have experienced unemployment, dismissal from a job, demotion, illness, a stillbirth, marital separation or divorce, death of a loved one, etc.

Wylie (1961) also reviewed several studies testing the effects of success and failure on self esteem, concluding that failures in important life situations lead to lowering of the self concept. Thus, the work of Beck (1967a), Scott

and Senay (1970), and Wylie's (1961) review together indicate a sequence whereby failure leads to low self esteem and subsequent depression.

The present self system model proposes that between the failure and the lowered self system and depression is a personal responsibility attribution. Evidence from the present experiment supports that proposition, as does a survey of studies of depressed patients. A classic example of a neurotically depressed individual is one who incorrectly blames himself for the death of a close friend or relative. The relationship between the self and the death is often tenuous (e.g., "My father died because ten years ago I told him to go to Hell."). Beck (1967a & 1967b) has also noted that this self-blame for outcomes is a common characteristic in depressed patients. Concerning the depressed patient, Beck (1967a) asserts that:

> The depressive patient's perseverating self-blame and self-criticism appear to be related to his egocentric notions of causality and his penchant for criticizing himself for his alleged deficiencies. He is particularly prone to ascribe adverse occurrances to some deficiency in himself, and then to rebuke himself for having this alleged defect (p. 24).

Beck (1967a) notes that 87% of the severely depressed patients he studied reported this symptom. Additionally, Valins and Nisbett (1972) have noted that several outpatients have problems which are based on misattributed personal responsibility (e.g., self-blame), and depression and anxiety are the result of the misattribution. Apparently, people

who are depressed often (at least in 87% of the cases reported by Beck) attribute personal responsibility for bad outcomes. They do not show self protective responses, through which bad personal outcomes are attributed away from the self.

This evidence leads to a theory on the development of reactive-type depression. Depression occurs when an individual suffers an important (to the self system) failure or loss, or a series of important failures or losses, to which he attributes personal responsibility. This attribution gives rise to lowered self esteem. The individual becomes depressed when his self esteem falls. Beck (1967a) shares this belief that the affect (emotional) aspect of depression follows from the cognition of self-blame. Other symptoms of depression (e.g., crying, dejection, negative expectation, indecisiveness, etc.) are secondary manifestations of the lowered self esteem.

To answer the questions posed above, self protective attributions, when made, do seem to adequately shelter the self system. Yet, in circumstances where individuals cannot, or do not, make self protective attributions for bad outcomes (e.g., important personal losses) and accept personal responsibility for these outcomes, they can experience psychological consequences, such as neuroticism and depression.

Therapy. Attribution therapy (Valins & Nisbett, 1972) is a means by which attributions of individuals can be

changed, and already has seen limited use in treatment. Attribution therapy, however, has been based on the information-processing approach, and the self system has not been considered a part of the process. The purpose of attribution therapy has been to simply alter personal attributions for events which an individual has been unhappy or anxious about to less hurtful, impersonal responsibility attributions. The present self system model indicates that attribution therapy is successful because, or when, attributions damaging to the self are changed to attributions more protective or enhancive of the self.

An example of attribution therapy came from the Viet Nam war. New soldiers in combat units often found themselves alone and scorned by older soldiers in the units. The resulting isolation often produced severe consequences, when the new soldiers became depressed, and felt that they were personally responsible for this treatment from others and were personally hated by them. It was shown, though, that this behavior on the part of veterans in the units was directed to any new soldier in a unit, as new soldiers were more likely than older veterans to behave in a manner which might get the unit into greater combat problems than the soldiers wished. This treatment by the veterans even had a name, the "F___ing New Guy" treatment.

Upon learning of the behavior, its roots, and consequences, the Army instructed all soldiers entering into new combat units to be prepared for the "F___ing New Guy"

treatment. Subsequently, depression in soldiers who entered new combat units was greatly reduced; they were able to attribute responsibility for their treatment away from themselves.

It is apparent that the Army's warning to new recruits served to change their attributions for the behavior directed toward them from "They hate me." to "They hate the F___ing New Guy." A personal responsibility attribution, which was damaging to the recruits' self systems, was replaced by a less damaging impersonal responsibility attribution, and subsequent depression was avoided. More than just changing how the information (the treatment from others in the unit) was processed by recruits, the warnings changed the way the information affected the recruits' self systems.

The Army example is encouraging in a regard other than the simple fact that it shows how personal responsibility attributions for bad or negative personal outcomes may be damaging to self systems. The fact that the Army could recognize the harm in this misattribution, and subsequently provide information to recruits to prevent its occurrance is quite exciting. Preventative therapy indicates a stronger continuity in life than does therapy after an individual has broken down. The use of self system information in this approach seems invaluable.

Delinquency

Not only might a personal responsibility attribution for bad outcomes lead to psychological problems, but beha-

vior, too, might be affected. For example, Fitts and Hamner (1969) looked at the relationship between the self system and delinquency. They found delinquency to be associated with low self concepts, and delinquents were less defensive of their self concepts than were nondelinquents. That is, delinquents were more likely than normals to allow material damaging to the self into the self system. A circular situation was proposed for delinquents, in which the delinquent first commits a "bad" action, then assigns personal responsibility for the action, with a consequent lowering of self esteem. The new self system is then verified by more antisocial acts, more personal responsibility, and an even lower self system. Thus:

> Delinquent behavior...serves as inescapable, concrete evidence of 'what kind of person I am'.... An individual sees himself as 'bad,' inadequate, different, etc, and acts accordingly (Fitts & Hamner, 1969, p. 82).

Supporting this conceptualization, Koeske (1975) has found that deviance by individuals is assigned a stronger self-attribution (personal responsibility) than is nondeviance.

As explained by the self system model, this sequence is set off by some important bad outcome or situation, or by a series of bad outcomes or situations, for which the delinquent may not have been personally responsible, yet for which he always assumed personal responsibility. Notice that self system views of depression and delinquency suggest that these abnormalities share a common base, a personal responsibility attribution for important, bad outcomes, and subsequent

lowered self esteem. Depressions occur as strong emotional responses to the fall in self esteem; delinquency (and probably in a broader sense, sociopathic behavior) occurs as a behavioral response to the fall in self esteem.

Therapy. The way to prevent this downward chain of events leading to delinquency is to prevent the self system from being initially debilitated by preventing personal responsibility attributions for the initial bad outcome. The responsibility of the attribution therapist, after the sequence had begun, would be to locate the event which set off the sequence, and then redirect attributions for that incident. For example, if rich, social-climbing parents spend more time in social pursuits than with their child, the child might assume that he is personally responsible for the fact that his parents spend little time with him. As the self esteem of a child is only in its developing stage, his fragile self esteem might well be shattered by such an attribution, and he might then see himself as "bad," deserving little attention from his parents. Subsequent delinquency involving the child might be little more than a behavior verification of this self image.

Therapy for the child should be aimed at showing him that he was not responsible for being ignored by his parents; the parents through their social pursuits were themselves responsible (an impersonal responsibility attribution for the child). Attribution intervention for events subsequent

to this initial self system damaging attribution would be less successful, and possibly harmful, as the intervention would not deal with the underlying problem, and would not establish the original high self esteem. For example, if the boy were to steal a car, telling him that he was not responsible for the theft would not work; he did actually steal the car. Sympathetic responses to car stealing might signal to the boy apparent approval of the low self image and stealing act, thereby making the act's recurrance more likely in the future.

Obviously, the therapist must center on the actual first important event for which the child was not responsible, but for which he erroneously and damagingly attributed personal responsibility. After this reattribution is established, guiding the child through a series of successful outcomes, whereby the self system is enhanced, should be the goal of long-term counseling and therapy.

Last Words

The previous clinical and behavioral examples of how the self system model applies to mental and behavioral problems is currently more hypothesis than fact, more anecdotal than empirical. However, the model makes intuitive sense, and the present experiment supports it. Therapy for more minor, reactive personal problems (psychological or behavioral) might be based on self system concepts, and its effectiveness could be recorded. This therapy might seem

similar to Carl Rogers' client-centered supportive therapy. However, it would be different form Rogers' nondirective approach in that self system therapy would focus on responsibility attributions and direct itself toward obtaining high self esteem through the elimination of responsibility attributions which damage the self. In the area of deviant behavior, the study of the backgrounds of delinquents could be conducted, to see if such individuals have frequently misattributed personal responsibility for some important failure, or impersonal responsibility for success. This and other data will help determine the usefulness of the self system model.

CHAPTER IX

SUMMARY

Current theories consider the responsibility attributions individuals make for their own and others' outcomes to be a product of information-processing. Actors are said to be most attentive to information regarding environmental forces (e.g., luck, other individuals), and thereby assign environmental responsibility for their actions and outcomes. The information most salient to observers is the behavior of actors, and consequently observers are said to assign personal responsibility to actors for any actions. However, this information-processing approach does not fit all responsibility attribution data. Actors often assign personal responsibility rather than environmental responsibility, especially for actions which produce good outcomes. Observers are sometimes defensive, and attribute environmental rather than personal responsibility for actions which produce bad outcomes.

When consideration is given to self systems of individuals, attributions which do not fit the information-processing model can be understood. According to the self system model, personal responsibility is assigned for actions whose outcomes are relevant to the self and provide

the opportunity for self-enhancement (e.g., successful outcomes); environmental responsibility is assigned for actions whose outcomes are relevant to the self but which might lead to self-deprecation (e.g., failure outcomes). Therefore, actors assign personal responsibility for self-enhancing outcomes, and environmental responsibility for self-deprecating outcomes. Observers who are strangers to actors, or who are associated with actors (e.g., friendship) who have self-enhancing outcomes, assign personal responsibility for outcomes. Observers who are associated with actors who have self-deprecating outcomes assign environmental responsibility for outcomes.

To test the self system predictions, two actors competed for twenty trials in a message-modified, non-zero sum Prisoner's Dilemma Game. Each actor was observed by either a friend or a stranger. At the conclusion of the game, game points were summed, and one actor was named the winner, while the other was named the loser. Using 9-point rating scales, all actors and observers attributed responsibility (personal versus environmental) and expressed emotion (good versus bad) for each actor's outcome. Following William James' theory of self, emotion attributions were expected to reflect relevance of outcomes upon an attributor's self system.

Several hypotheses were tested for the responsibility and emotion attributions. The results indicate that self systems influence the responsibility attributions of both actors and observers. Given an action and its outcome, an

emotional reaction occurs; this establishes the relevance of the outcome to the self system of the actor or observer, and responsibility for the action is assigned in a manner which will either enhance or protect the self system.

Hypotheses which compared actor attributions to those of observers were strongly supported. Although hypotheses dealing solely with actors or observers were largely supported, an impression management-evaluation apprehension mechanism, by which subjects seemed to be presenting their best self-images to the experimenter, seemed to operate against some hypotheses. However, an impression management interpretation of the failures is consistent with self system concepts.

The results have implications for such clinical and behavioral problems as depression and delinquency. Depression frequently results from self-blame for failure and loss. Apparently, this self-blame results from an absence of the self-protective tendency to attribute impersonal responsibility for self-deprecating outcomes. Appropriate therapy would be to restore (or establish) more self-protective and enhancive responsibility attributions. A similar interpretation applies to delinquents, who might initially incorrectly assume personal responsibility for self-deprecating outcomes. The lowered self system resulting from this attribution is then validated, and lowered further, by subsequent delinquent actions. Appropriate counseling would involve a reattribution for the initial misattribution, then proceed to a program designed to enhance the self system.

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APPENDIX A

INSTRUCTIONS FOR PRISONER'S DILEMMA GAME

Your job in this competitive skill-strategy game is to have a higher point total than the other player after 20 joint-choice trials. Your points are determined by your interaction with the other player. The competition centers around the Choice 1 or Choice 2 selections made by each of you on the choice trials. You make a selection or choice each time the green "go" light comes on by pushing the Choice 1 or Choice 2 pushbuttons in the bottom center of your panel. After both of you have made a choice, a light will come on in one of the four green-and-red cells of the decision matrix at the top of the panel. The light which comes on depends on the choices each of you makes. Notice that you will either gain or lose points on each trial. For both players, the number of points you gain or lose is shown in green in the lighted cell of the choice matrix, and what the other player gains or loses for each trial is shown in the red. I will be keeping score throughout the game. After each trial I will tell how many points each person gained or lost on that trial. Then I will announce the total score up through that trial. After twenty trials I will give the final score, and announce the winner and the loser.

In addition to making your Choice 1 or Choice 2 selections on each trial, immediately preceeding the trial you will have an opportunity to send a message to the other player and to receive a message from him. On half of the trials you will send a message to the other player, then receive one from him. On the other trials you will receive a message from the other player, then send one to him. You will know whether you are to send or receive a message by the appropriate light which will light on your panel. If you are to receive a message from the other player, the "Option to Receive a Message" light on the left side of the panel will come on. You will then wait to see which message light in the middle of your panel comes on. The message beside it is the one sent by the other player.

If you are to send a message, the "Option to Send a Message" light on the right side of the panel will come on. You will have to chose which message you want to send, then you will press the button beside that message.

After you have both sent and received messages, the green go light will come on, and each of the players will then make their Choice 1 or Choice 2 selections.

There is one important thing to remember about these messages. After you send or receive a message, you are still free to make either Choice 1 or Choice 2. You do not have to make the choice you said that you will make, or the choice the other player suggested you make. This is where the skill strategy comes into the game. The player who

develops the best strategy, the one who makes the best use of his messages and choices, will in all likelihood be the winner. As the game proceeds, you should develop an idea of the best choices and messages to make on each trial, and whether or not to go along with the messages. This, then, becomes your strategy.

Let me emphasize that the game is not rigged. The points you get on each trial depends entirely upon the choices and messages you make and send, in relation to the choices and messages the other player makes and sends.

Remember, your goal for the 20 joint-choice trials is to have a higher point total by either gaining more points or losing fewer points than the other player.

After the game, please remain seated. I will hand out some booklets for each of you containing questions I would like you to answer about the game. This is why it is important that both players and the observers pay close attention to the game.

Before we begin the actual game, we'll take a few practice trials, so you can get acquainted with the messages and choices.

APPENDIX B

ANALYSIS OF VARIANCE FOR THE RESPONSIBILITY ATTRIBUTIONS

Source	df	MS	F	p
Outcome (A)	1	44.10	3.63	.06
Dyad (B)	1	.10	.01	
A X B	1	87.02	7.18	.01
Viewpoint (C)	1	12.10	1.00	
A X C	1	34.22	2.82	.09
B X C	1	65.02	5.36	.02
A X B X C	1	19.60	1.62	
SS_{wg}	72	12.12		
Ratee (D)	1	.40	.10	
A X D	1	5.62	1.41	
B X C	1	2.02	.51	
C X D	1	.62	.16	
A X B X D	1	.00	.00	
A X C X D	1	4.90	1.23	
B X C X D	1	.40	.10	
A X B X C X D	1	4.22	1.06	
$DxSS_{wg}$	72	3.98		

APPENDIX C

ANALYSIS OF VARIANCE FOR THE EMOTION ATTRIBUTIONS

Source	df	MS	F	p
Outcome (A)	1	182.76	48.62	.01
Dyad (B)	1	6.01	1.60	
A X B	1	31.51	8.38	.01
Viewpoint (C)	1	2.26	.60	
A X C	1	.01	.00	
B X C	1	.01	.00	
A X B X C	1	.01	.00	
SS_{wg}	72	3.76		
Ratee (D)	1	23.26	7.75	.01
A X D	1	138.75	46.24	.01
B X D	1	3.31	1.10	
C X D	1	.76	.25	
A X B X D	1	.06	.02	
A X C X D	1	2.76	.92	
B X C X D	1	.06	.05	
A X B X C X D	1	1.41	.47	
$DxSS_{wg}$	72	3.00		

APPENDIX D

CELL MEANS FOR THE AxBxCxD INTERACTION

OF THE RESPONSIBILITY ATTRIBUTION

Outcome	Dyad	Viewpoint	Ratee	
			Ingroup	Othergroup
Successful	Friend	Actor	8.10	8.10
		Observer	7.10	7.20
	Stranger	Actor	6.20	5.80
		Observer	5.50	6.90
Unsuccessful	Friend	Actor	5.70	5.00
		Observer	5.20	4.50
	Stranger	Actor	4.70	4.90
		Observer	8.60	7.90

N = 10 per cell.

Note: Larger numbers represent greater personal responsibility attributions.

APPENDIX E

CELL MEANS FOR THE AxBxCxD INTERACTION OF THE EMOTION ATTRIBUTION

Outcome	Dyad	Viewpoint	Ratee	
			Ingroup	Othergroup
Successful	Friend	Actor	9.50	7.20
		Observer	9.30	7.00
	Stranger	Actor	8.70	5.50
		Observer	8.20	5.50
Unsuccessful	Friend	Actor	4.60	6.10
		Observer	4.50	5.70
	Stranger	Actor	5.10	6.60
		Observer	5.50	5.70

N = 10 per cell.

Note: Larger numbers reflect better feelings.

VITA

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