PISANO, Samuel Frank, 1934-
THE MODELING OF DEFENSIVE BEHAVIOR UNDER SYMPATHETIC, NEUTRAL AND INTERPRETIVE CONDITIONS.

The Ohio State University, Ph.D., 1966
Psychology, clinical

University Microfilms, Inc., Ann Arbor, Michigan
THE MODELING OF DEFENSIVE BEHAVIOR UNDER SYMPATHETIC, NEUTRAL AND INTERPRETIVE CONDITIONS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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1966

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ACKNOWLEDGMENTS

I would like to thank my adviser, Professor Donald L. Mosher, for his guidance with and belief in this study.

My sincere thanks also go to the officers of the ROTC program at Ohio State University for providing me with, as one major put it, "two volunteers who will act and will enjoy it." They did, indeed, do both.

To the Columbus Public School System for providing subjects and facilities; to the office of Alfred B. Garrett, Vice-president of Research, for the grant which partially supported this research; to Norm King for helping with the scoring; and to Dick Lanese for listening -- go my thanks.

Finally, to Tom Karst for believing in me and struggling with this problem as though it were his own, I offer my friendship.
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CHAPTER I

INTRODUCTION

The many ways in which man comes to defend himself psychologically from painful experiences has been the cornerstone of considerable speculation and theorizing in psychology. Traditionally, it has been left to psychoanalytic theory to describe the manner in which such defensive patterns evolve and become established patterns of character.

Social learning theorists, on the other hand, while recognizing the clinical utility of defensive procedures, have offered little to explain their emergence or even the manner in which a given defense is elicited. The primary purpose of this study is to explore, from a social learning point of view, one way in which defensive reactions can be elicited in children. Several lines of theoretical and empirical work converge here in an attempt to open this area to empirical inquiry.

The general approach of the study draws upon recent leads provided by Bandura and his associates who have shown that large units of social behavior can be acquired and shaped through simple imitation of a model. The importance of models as promising tools
for behavioral modification has rapidly been extended to a variety of behavioral classes. In general, it has been shown in this work that models can influence the behavior of others in three significant ways. First, new responses can be acquired through simple imitation of a model. Second, models can serve as disinhibitory releasers of a given class of socially-disapproved behavior, as in the case of aggression or moral transgression. And, finally, models can serve to elicit a class of behavior also previously learned but not potentially punishable, as in the case of food preferences.

It is largely in the latter two senses—elicitation and disinhibition— that the present study employs models. Broadly stated, it asks the question: Can defensive reactions be elicited through the observation of other's defensive behavior? And, further, can the form of defense be shaped through simple imitation of another's behavior?

The second major aim of this study is to employ Bandura's modeling paradigm as an experimental technique in the testing and extension of Rotter's Social Learning Theory (SLT; 1954). SLT was selected because it provides us with an established theoretical framework which, like Bandura, focuses upon molar behavior within social contexts. It is, in addition, a systematically elaborated theory, capable of embracing present empirical concerns. More importantly, however, the study itself constitutes an extension of Rotter's theory which has been in need of clarification.
The focus of interest within SLT is upon the construct of freedom of movement (FM). Briefly, Rotter describes FM as a set of related expectancies for obtaining need satisfaction and, in turn, relates these loosely to the probable occurrence of defensive or nonconstructive patterns. His general position is that high FM leads to goal-directed behavior while low FM eventuates in defensive and nonconstructive behavior. There is, however, a notable lack of specificity concerning what defensive pattern or patterns will be employed in a given situation. The present study attempts in an exploratory way to fill this gap. It introduces models, already shown to be powerful behavioral elicitors, with the general expectation that they will serve to shape the form of elicited defense. In this respect, Bandura's imitation paradigm now serves as an experimental technique for extending Rotter's theory.

The third major aim of the study is implicit in earlier goals; that is, an attempt to extend the usual modeling paradigm into the area of differential prediction based on personality variables. The personality variables, which derive from Rotter's theory, are high and low FM. Thus far, the conventional Bandura imitation situation has generated surprisingly few studies specifically examining the effects of individual differences upon extent of modeling (Karst, 1966). This doubtlessly reflects Bandura's preoccupation with imitation as an acquisitional learning
device. Nonetheless, other related empirical areas (e.g., social influence and matched dependent behavior) provide a body of favorable evidence which logically anticipates the importance of this direction of research.

Summary of purposes

This study, therefore, can be seen as having three purposes: (1) the extension of modeling behavior into a new class of behaviors -- defensive behavior; (2) the employment of a personality measure (FM) derived from an established theoretical position as a differential predictor of extent of imitation, and (3) the elaboration of Rotter's SLT into the area of differential defensive prediction, based on the hypothesis that the form of elicited defense can be shaped through the introduction of appropriate models.
CHAPTER II
OVERVIEW OF IMITATIVE LITERATURE

Psychoanalytic theory

The psychoanalytic conception of identification has assuredly provided the major impetus to the study of imitation. Freud discusses two quite different sets of antecedent conditions which result in the identification of a child with his parents. The first, anaclitic identification, occurs early in infancy over threats of loss of narcissistic supplies. The child, Freud hypothesizes, introjects qualities of the nurturant figure, usually the mother, as she comes over time to withhold supplies that formerly were freely given. The process of introjection (or taking on the qualities of the nurturant figure) occurs, therefore, out of a sense of threat over the possible loss of this important person.

The second process of identification is known as defensive identification and occurs with the resolution of the Oedipal complex. According to this theory, the boy child assumes his masculine identity as a way of resolving an intensely conflictual rivalry for the mother's affection. Faced with fantasied threats of retaliation from a powerful father, the boy abandons the conflict
and defensively joins the father through the introjection of his characteristics.

An extension of Freud's conception of identification has been provided by Mowrer (1960) but his conceptualization is largely within learning theory terms and will, therefore, be dealt with in that section.

Within more traditional psychoanalytic lines, Anna Freud (1946) has discussed the concept of identification with the aggressor as a significant source of imitative learning. According to this theory, an individual by adopting the threatening aspects of an aggressive, frightening figure in his life, transforms himself from object to agent of the aggression. Anna Freud (1946) supports this position largely through her clinical case materials.

More recently, Sears (1957) has offered an explanation of identification which places primary emphasis upon the anaclitic period as originally described by Freud. Sears' position, while similar to Freud's, abandons the concept of introjection and introduces imitativeness as an acquired drive. Again, frustration of dependency needs is critical, according to Sears. Faced with mounting frustration and insecurity over parental approval, the child adopts the method of role enactment as a means of reinstating the parents' once more-freely given nurturant responses. This serves both the ends of vicariously obtaining rewards and often, by virtue of the parents' pleasure at being imitated, tends to
bring more direct reinforcement from the parent himself. According to Sears, the continual association of either vicarious self-administered reward or more direct reward with the imitative responses eventuates ultimately in an acquired drive for identification with significant, nurturant others.

In an extension of Freud's original notions of defensive identification, Whiting (1959) has advanced the status envy theory of identification. Again, rivalry is the basis for such identification, but rather than limiting it to competition with the father for the mother's affection, Whiting considers all forms of reward as potentially the basis for such rivalry. The recipient of the rewards becomes the child's model for role-enactment in fantasy. In brief, the child envies the consumer adult and tends, in fantasy, to identify with him.

**General learning theories**

While some interest in imitativeness was shown as early as 1896 (Morgan, 1896), the concept of imitation was not fully integrated into a behavioral learning theory framework until it received treatment by Miller and Dollard in 1941. Briefly, their theory of imitative learning follows the traditional principles of a response which is cue-elicited and then reinforced. The cue in this instance, however, is the behavior of another person.

According to this theory, imitative learning occurs when a subject
is positively reinforced for accidentally reproducing the responses of a model. As Mowrer (1960) has pointed out, however, this leads one into the "horse before the cart" position of having to conclude that the subject performs the response or a close approximation before it has been learned.

They further postulate that a drive to imitate can be acquired through secondary reinforcement and generalization. An initial series of studies which demonstrated that Albino rats can be taught to imitate a leader's choice in a T-maze served as the basis for testing the applicability of these principles with children. They showed that children, when directly rewarded, could be taught to imitate a leader's choice and, subsequently, to imitate, in the absence of direct reinforcement, the choice of a rewarded leader. The prestige of the leader or model (e.g., age, intelligence, social status, technical skills) were also explored and received theoretical consideration. Henker (1963) has cogently argued, however, that these demonstrations "follow the discrimination-training model so prevalent in behavioral research with animals" (p. 18).

More recently, Mowrer (1960) has provided two alternative explanations of imitative learning. The first assumes that the imitated response acquires secondary reward value for the imitator through association with positive reinforcement. In other words, the model makes a response which is rewarding to the observer (e.g., the nurturant caring of the child by the mother). The
response, itself, assumes secondary reward value and is then reproduced by the child in the absence of the mother.

The second of Mowrer's explanations of imitative learning has been referred to as "empathic" learning. In this case, the imitator puts himself in the role of model by both observing his responses and whatever reinforcements occur. Through a process of "intuition", he establishes for himself satisfaction or dissatisfaction with these consequences. Thus, behavior is imitated or not in the expectation that it will bring equivalent consequences.

Imitative responses, according to Mowrer, may begin to resemble habits once they become repeatedly associated with external reinforcement. Within Mowrer's formulations, all learning can be said to involve, initially, the association of pleasurable or unpleasurable consequences with response-correlated stimuli. In the case of imitation, however, the stimuli are produced by the acts of another; while in habit formation, the learner produces his own model of action.

Intuitively, Mowrer's formulations are themselves satisfying, though difficult to validate. There is, however, some support found in imitative studies which show that models who have been rewarded tend to be more readily imitated by others (Walters, Leat & Mezei, 1963). Mowrer's own empirical treatment of his theoretical formulations include his now-famous talking birds.
More important, however, than the extent of research which has been generated by Mowrer's theoretical statements is the fact that he has advanced a theoretical paradigm which avoids the artificial reduction of all learning to classical successive-approximation explanations.

Bandura and imitation

The problem of learning through imitation has recently been revived through the work of Bandura. He has argued cogently that a theory of social learning should focus upon and attempt to explain more complex molar behaviors. While this position is not especially unique (c.f., Rotter, 1954), Bandura has most fully embodied it in recent years.

His own theoretical formulations of imitative learning have loosely derived from his empirical work. At this point, they tend to be rudimentary and without sufficient elaboration to be regarded as a sophisticated end product. According to Bandura, acquisition of imitative responses results primarily from contiguity of sensory events. Reinforcement, or response consequences to the model or observer, is only important in its effects upon performance of that response. He cites in support a study (Bandura, 1965a) of model aggression under conditions of reinforcement, non-reinforcement and punishment. Under punishing conditions for the model, children, as expected, showed significantly less reproduction of the aggressive responses. When, subsequently, an enticing
reward was offered for reproducing all of the model's behavior, performance differences between the groups washed out, revealing an equivalent amount of learning among the children in the model-rewarded, model-punished and no-response-consequences condition, according to Bandura.

While observation or simple contiguity of sensory image is sufficient for the acquisition of behavior, Bandura (1965b) does note that other factors are also influential, such as attentional and motivational variables. Obviously, people do not act like blotters absorbing every bit of behavior to which they are exposed. Bandura has, in fact, studied the enhancing attributes of models, observers and physical situations in the acquisition of novel responses but, as yet, has not elaborated a theoretical position which would tie together these personal-situational factors.

He has, nonetheless, adequately supported his contention that imitation is a worthwhile path to pursue in the study of social behavior. Early studies have shown that models readily induce aggressive responses (Bandura & Huston, 1961), and that filmed models induce as much aggression as live models (Bandura, Ross & Ross, 1963b). More recently, the trend has been towards showing the important effects of models across a range of behavioral classes: moral judgments (Bandura & McDonald, 1963); identification (Bandura, Ross & Ross, 1963a); delay of gratification (Bandura & Mischel, 1965), and so forth.
As yet, no work has been done with the modeling of defensive reactions -- the focus of the present research. The closest study thus far reported (Bandura, Hatton and Revelle, as cited in Bandura, 1962) involved the shaping of frustration reactions by appropriate models into aggressive, dependent and withdrawing patterns. The results of this study, however, remain unpublished.

**Modeling as an experimental technique**

The present study employs the Bandura paradigm as an experimental technique in an attempt to elaborate Rotter's Social Learning Theory. The use of models in this manner -- as a technique for testing other theoretical views -- has some precedent in other research.

Bandura, Ross and Ross (1963a), by using imitation as the operational referent of identification, compared several competing theories of identification: the status-envy theory of Whiting (1959); the social power theory (Mussen & Distler, 1959; Maccoby, 1959) and secondary reinforcement concepts of Mowrer (1960). The experimental design employed triads (two adult models and a child-subject) as a prototype of the nuclear family. In the first condition, one model served as the controller of resources, the second as consumer, while the child was largely ignored. In a second treatment, a controlling model was again present but the child became the consumer while the adult-model was now ignored.
Subsequent measures of imitation supported, in both cases, the power theory which holds that the powerful controller of resources will serve as the major figure of identification. No support for the other positions was obtained.

In another study (Bandura & McDonald, 1963), models were used to test Piaget’s developmental theory of age-specific moral stages.

The present study follows in this tradition through the introduction of models to test and elaborate Rotter’s SLT. Briefly, three groups of children (one HF and two LF) were selected on the basis of teacher’s nominations. They were then exposed to a model who, in the face of failure, resorted to a given defensive mode. The general overriding hypothesis was that the model would serve to differentially disinhibit and elicit defensive behavior -- both imitative and non-imitative -- from the three groups.
CHAPTER III
THEORY AND HYPOTHESES

While imitation is the vehicle employed, for a host of reasons the study itself is conceptualized within Rotter's Social Learning Theory (SLT; 1954). SLT was selected because it is a more sophisticated and clearly elaborated theory than that employed by Bandura, stressing the importance of both personalogical and situational variables in prediction. As such, it represents a distinct departure from the simple contiguity position espoused by Bandura and provides a convenient framework for handling present concerns centering about the relationship of individual differences to extent of modeling. In addition, SLT is a molar theory, capable of embracing meaningful units of social behavior in the tradition of Bandura. Further, its focus is upon performance rather than acquisition of behavior and it is, therefore, more in keeping with present interests in response elicitation rather than response acquisition. Finally, and most importantly, the study itself constitutes an extension of SLT which is in need of empirical clarification.

Social Learning Theory

In general terms, SLT stresses the importance of two sets of
variables, personalogical and situational in predicting goal-
directed behavior. Personality characteristics are further
divided into two major classes: motivational variables or needs,
which are inferred from functionally related reinforcements valued
by the individual, and expectancies, or subjectively held
probabilities that a given behavior will indeed lead to valued
reinforcement.

Rotter introduces these concepts in the formula:

\[ BP = f(E \& RV) \]

This formula can be read as follows: The potential for a given
behavior to occur is a function of the expectancy that a given
reinforcement will follow that behavior and of the value of
that reinforcement in a given situation.

Such a formula, as Rotter points out, is extremely limited
in application for it deals only with the potential for a given
behavior to occur in relationship to a single specific reinforcement.
Practical clinical and research application necessitates a more
general statement and Rotter introduces these broader concepts
in the formula given below:

\[ N.P. = f(F.M. \& N.V.) \]

This formula may be read: Need potential is a function of
freedom of movement and need value. In general terms, NP refers
to a group of functionally-related behaviors directed towards
a common goal; FM refers to a series of functionally-related
expectancies concerning attainment of that goal, while NV is analogous to the concept of need in other systems and is inferred from the extent to which an individual prefers and selects that goal or set of reinforcements over another. The fourth concept, that of the psychological situation, is implicit in the formula.

Focus of the present research

The focus of the present research is upon this general formula and especially the construct freedom of movement (FM) which is most closely related to variables that in other systems deal with the adjustment-maladjustment continuum. The concept FM refers to a series of related expectancies that need satisfaction will occur and is defined by Rotter as follows:

The mean expectancy of obtaining positive satisfaction is a result of a set of related behaviors directed toward the accomplishment of a group of functionally related reinforcements (1954; p. 194).

A person's FM is low if he has a high expectancy for failure or punishment in his attempts to obtain the reinforcements that constitute a particular need; and conversely, FM is high when the person has a high expectancy for success. In other words, within SLT freedom of movement refers to a generalized expectancy for success and satisfaction whether it be for a single need area or across need areas. It is, therefore, SLT's analogue to such concepts as anxiety, self-esteem, feelings of inadequacy, etc., within other systems.
While high freedom of movement leads towards goal-directed behavior, two general hypotheses have been formulated by Rotter concerning the individual with low FM who places high value on some particular class of reinforcements: (1) The individual may either engage in avoidant responses so as to prevent punishment or failure, or (2) the individual may resort to "irreal" behavior in his attempts to achieve these goals. Under the headings of avoidant and irreal behavior, Rotter lumps together all the usual behaviors which have been traditionally referred to as defense mechanisms--projection, rationalization, denial and so forth.

The conditions, both historical (personological) or situational, which denote what nonconstructive or defensive behaviors will be employed are never fully specified within SLT and it is, perhaps, this state of nonspecificity which is most in need of empirical and theoretical clarification within Rotter's system.

The present study introduces models, already shown to be powerful behavioral influencers, as significant situational factors in both the elicitation and "shaping" of defensive modes. Its major assumption that choice of defense is a function of situational as well as historically-developed personality characteristics is well within the SLT tradition of prediction based on personality and situational variables. It represents, however, a significant departure from other traditional empirical lines which study defensiveness as solely a function of personality makeup.
The fruitfulness of considering situational determinants of defensiveness has received some recent suggestive support. Perhaps the most important of these studies is that of Spiesman et al. (1964), who exposed Ss to a fear-inducing film which was punctuated by defensive statements provided by presumed authorities. The Ss, as anticipated, tended to adopt the specific mode of defense to which they were exposed in dealing with their own reactions to the film. Restated within modeling terms, it appears that Ss will indeed imitate a given defensive mode provided by a "symbolic" model. Or restated within SLT terms, it appears indeed true that situational variables have an important influence on choice of defense. Other recent studies (Conn & Crowne, 1964; Schachter & Singer, 1962), while less concerned with the adoption of specific defense, can also be reconceptualized in terms of the present discussion.

A significant departure point in a consideration of ways to conceptualize the situation as a significant variable in the study of defense is provided by Rotter in his discussion of the categorization of the psychological situation. Rotter's position holds that psychological situations can be described "by their cultural meanings in terms of the characteristic reinforcements that are likely to occur in those situations" (1954, p. 202). The fact, however, that the goals of defensive behavior have received only incidental treatment in SLT muddies the waters and accounts,
perhaps, for the birth of theoretical statement about the psychological situation surrounding defensive behavior. The present study takes the position that the psychological situation can also be ordered or categorized in terms of the most culturally prominent rewards available, but the focus in the case of defensive behavior is on substitute rewards available in the situation; e.g., sympathy, comfort, dependency gratification and so forth. It assumes, as Rotter does, that the disposition to engage in defensive behavior is primarily a function of anticipated punishment for more direct goal-striving behavior. In other words, the major goal of defensive behavior is indeed the avoidance of punishment, whether it be loss of self-esteem, loss of the affection of others and so forth. The point remains, nonetheless, that other substitute rewards—whether they be situationally prominent or built up through historical association—represent a second major class of variables to be considered in the study of defensive behavior.

Inasmuch as the potentially punishing aspects of a situation can also be characterized culturally in terms of the most prominent negative reinforcements which are likely to occur (e.g., failure situations, rejection situations, rejection by peers and so forth), it seems likely that the concepts of substitute reward and nature of punishment might well represent departure points for the
reformulation and extension of theory about defense within SLT. At some future time, a further distinction between failure situations and more-directly punitive situations ("non-reward" versus negative reward situations) should serve as a convenient division for more precise treatment of the negative aspects of defensive-arousing situations. For purposes of the present exploratory formulations, however, the two are considered jointly under the rubric, punishing aspects of the situation.

The proposed extension of defense within SLT takes as its starting point Rotter's original formulation that a state of high need and low freedom of movement leads to general defensive behavior. This is presented in the formula below:

(1) \[ BP_{def} = f(FM_{low} \& NV_{high}) \]

The complex interaction of substitute reward and punishment, on the other hand, serves as the basis for more differential prediction as shown in the formula below:

(2) \[ BP_{def A} = f(FM_{low} \& NV_{high}) + f_{s_{def A}} + f_{p_{def A}} \]

This formula may be read: Given a state of low freedom of movement and high need, an individual will select that defense with the highest probability of leading to most valued substitute reward while avoiding most negatively-valued punishments. The
choice, therefore, becomes a complex interaction of situational cues which suggest the availability of substitute reward and punishments, the relative values of such rewards and punishments, plus the historical effectiveness of achieving the same or other equally valued substitute rewards while avoiding punishments associated with all other defensive behaviors. In other words, formula 2 represents a general dispositional statement concerning the potentiality to engage in defensive behaviors; formula 2a specifies the situational determinants of defense selection, while formula 2b specifies the personalogical determinants of defense selection as built up through past experience.

While this statement may appear cumbersome, it does provide a useful framework for dealing more inclusively with defensive behavior within SLT. As with the prediction of other behaviors, theoretically it should be possible to group functionally related defensive behaviors on the basis of substitute rewards they are directed towards and the nature of the punishment they attempt to avoid. This approach appears to be conceptually consistent with SLT theorizing and may well provide a useful and needed approach to the categorization of defensive styles within SLT. In other words, a major advantage of this formula, in addition to its differential predictive utility, is as a framework for the possible development of a new nosological scheme for ordering defensive behavior which is both consistent with the theory and by-passes
present vaguely-defined attempts to incorporate in toto categories derived from and more appropriately anchored in other systems.

The present research, however, focuses on the differential predictive aspects of the formula and serves as an initial attempt to study more systematically the effects of substitute rewards and potential punishments on defensiveness through the implied proffering of positive or negative treatment of defensive behavior. This end is established through the manner in which the experimenter responds to the modeled defensive behavior. In one condition, he sympathizes with the model's defensive statements; in the second, he remains neutral, while in the third, he interprets the model's defensive maneuvers. Children are differentially exposed to these conditions and then placed in a situation where the "pull" for defensive behavior is high.

In summary, it has not been my point to argue that situational variables override the importance of personalogical characteristics in the elicitation of defensiveness. But, rather, as with all behavior, defensive maneuvers must be viewed as a function of both personality and situational variables if maximum predictability is to be attained. The importance of substitute reward -- both available in a situation or built-up through previous experience -- has also been stressed as a significant parameter in the study of defensiveness. A formula employing this concept plus a punishment term was introduced with a view towards extending SLT into the area
of differential prediction of defensive behavior. A major advantage of this approach is that it offers, in addition, a framework for categorizing defensive styles within SLT.

The purpose of the next several pages is to indicate the manner in which models, from an SLT position, fit into this scheme. This discussion is preparatory to a consideration of how the above theoretical rationale is translated into firm empirical terms in the present study.

Effects of models

Mosher (1965) has pointed out that within SLT, models can be conceptualized in terms of their potential for altering expectancies. For example, models rewarded for aggressive behavior provide cues which apparently change the observer's expectancy that aggression will be rewarded (Bandura, Ross & Ross, 1963b). Punishing consequences to the model, on the other hand, serve to lower expectancies for reward, increase expectancies for punishment and result in inhibition of the aggressive behavior (Bandura, 1965a).

While these conclusions seem warranted in the case of clear-cut consequences to the modeled behavior, the problem of no-response consequences tends to be somewhat less firm. It can be argued, nonetheless, that when a model is engaged in socially-disapproved behavior without punishing consequences the effect is to increase the expectancy that the observer too can repeat such
acts without incurring disapproval or punishment. Thus, the disinhibitory effects of models can also be cast in terms of their potentiality for altering expectancies.

The present study, it will be recalled, employs models essentially in the role of disinhibitory agents, though, as Bandura points out, there is usually an element of elicitation implied. Inasmuch as defensive behavior, however, is frequently met with punishment or disapproval in our culture, the model can be viewed as serving a disinhibiting end to the extent he modifies the observer's expectancies for punishment of that class of behavior. In situations where the pull for defensive behavior is high, as in the present instance where failure is artificially induced, it is expected that defensive elicitation and imitation will also be high.

Within this framework, any consequences to the modeled defensive behavior (whether positive or negative) should more clearly establish expectancy guidelines for the observer which will serve to govern the extent to which he engages in that class of behavior. Thus, in the present study, sympathy and interpretation should serve, respectively, to facilitate or inhibit defensive expression.

An extension of Social Learning Theory

Rotter (1954) argues, it will be recalled, that a condition
of low freedom of movement (FM) and a state of high need (NV) leads to defensive or nonconstructive patterns of behavior. This is represented in the following statement:

\[ BP_{\text{def}} = f(\text{FM}_{\text{low}} \& \text{NV}_{\text{high}}) \]

The present study attempts to extend this general position to more differential prediction, as shown in the following formula:

\[ BP_{\text{def}} A = f(\text{FM}_{\text{low}} \& \text{NV}_{\text{high}}) + (2a) f(\text{sr}_{\text{def}} A \& \text{NV}_{\text{sr}_{\text{def}} A}) + f(\text{pun}_{\text{def}} A \& \text{NV}_{\text{pun}_{\text{def}} A}) + (2b) f(\text{GE}_{\text{def}}). \]

This formula can be read: Given a state of low freedom of movement and high need value, the probability for a given defense occurring is a function of substitute rewards and their value, plus potential punishments and their negative value, associated with that defense, both in the situation and historically built-up through past experience. In other words, a general predispositional statement concerning the potentiality to engage in defensive behaviors is presented in formula 2, while formula 2a and 2b, specify the situational and personalogical determinants of defense selection. Selection of a defense becomes, therefore, a complex interaction of these variables.

With this brief introduction, it seems relevant to illustrate at this point the manner in which the present study translates the terms of the above formula. Briefly, the design called for the exposure of high and low freedom of movement children to a model,
who in the face of failure while playing a game for a prize, consistently enacted the defense of excuse-making, or rationalization in its more colloquial usage (Fenichel, 1945). Three conditions of consequences to the modeled defensive behavior were provided: positive (or sympathy); neutral (or no comments) and negative (or interpretation). The children, following exposure to the modeled defense and its related consequences, were then placed in a similar situation in which a comparable prize was offered, and they too were failed.

The initial measure employed in this study, which divided subjects into HFM and LFM groups, relates to Formula 2. Briefly stated, this term establishes in SLT a disposition, as it were, to engage in defensive or nonconstructive maneuvers. While a measure of NV would have added to the precision of the study, it was assumed that the prize which was offered represented a fairly consistent reinforcing agent for all subjects and that need, therefore, could be assumed to be reasonably constant and high. The BP term in Formula 2 is the first dependent variable measured: i.e., total defensiveness, imitative or not, which was elicited in the situation. Defensive expression should, in turn, be differentially affected by the positive, neutral and negative conditions.

The second dependent variable refers to imitative defensive statements. It was assumed that the model and subsequent response
consequences would loosely serve to establish the conditions specified above for more precise prediction. Formula 2a states that the probable occurrence of a given defense is a function of substitute rewards (e.g., sympathy, saving face, etc.) and potential punishments (e.g., disapproval, rejection, etc.) expected for the use of that defense in that given situation. In this case, substitute rewards were directly manipulated by the experimenter in the form of sympathy, consequent to the model's defensive statements, or punishment, in the form of interpretation consequent to the model's defensive statements. In other words, the effect of the model and subsequent response consequences was to differentially establish clear-cut expectancies concerning substitute rewards for reproducing the defense (sympathy) as well as subsequent punishments for reproducing the defensive statements (interpretation).

Only in the no-comment or no response-consequence condition were expectancies for substitute reward and punishment less clearly established by the experimenter. The major substitute reward -- protection of one's self esteem in the face of failure -- was nonetheless assumed to be operative. Further, the condition parallels previous arguments concerning the disinhibitory effects of models as changing expectancies. In brief, the fact that the model is not punished for his defensive statements tends to reduce the observer's expectancy of punishment for defensive statements, in
general, and excuse-making, in particular, thereby making them "safe" to employ as substitute measures of saving face.

Table 1 breaks these conditions down in terms of the expectancies generated for substitute rewards and potential punishments. This break-down serves roughly as the basis for hypotheses related to this experimental phase.

**TABLE 1. Situationally-generated expectancies for substitute reward and punishment in the experimental conditions**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Substitute Rewards:</th>
<th>Punishments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sympathy</td>
<td>Protecting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Esteem</td>
</tr>
<tr>
<td>Sympathy</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>No Comment</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Interpretation</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

While the primary focus of this research is upon situational factors affecting defensiveness, an attempt was made to consider the effects of different personality styles upon the imitation of defensiveness as well, in accordance with Formula 2b. Three personality patterns (one HFM and two LFM) were selected which represent different historically-developed defensive styles, and, therefore, different basal levels of excuse-making ($\varepsilon_{\text{excuses}}$) in general. Discussion of the selection of these FM groups and inferences concerning the manner in which they should affect present results are presented in the following section.
Measuring freedom of movement

Rotter (1954) describes several measures, direct and indirect, for assessing FM. One method, relied upon extensively by most clinicians, is to assess the extent to which a person employs defensive measures when seeking a potential goal. Such defensive maneuvers can be viewed as indirect measures of the construct. Unstructured techniques such as projective tests and interviews are typically employed to this end.

Perhaps the most widely used behavioral techniques have derived from the concept of Level of Aspiration (LOA). Stated in general terms, LOA refers to the goals a person sets for himself when confronted with the possibilities of success or failure. As Lewin et al. (1944) have pointed out, "... goal-setting behavior is not only determined by past experiences and 'realistic' considerations but also by wishes and fears" (p. 367).

Initial theoretical and empirical statements on success and failure were provided through the early clinical descriptions of Adler (1930) and Horney (1939) and the studies of frustration of Rosenzweig (1933) and Doob and Sears (1939). According to Rotter (1954), current investigations of LOA, however, can be traced back to the work of Hoppe, a student of Lewin interested in formulating laws concerning goal responses. It was Hoppe's incidental observation that the technique offered a promising method of assessing individual differences which has captured
present-day interests. Hoppe noted that certain personality traits such as inhibition, cautiousness, fears of inferiority and so forth were reflected in LOA statements. Subsequent investigations (Hausman, 1933; Frank, 1935; Lewin, et al., 1944; Rotter, 1943) have revealed the efficacy of Hoppe's original observation, and have elaborated more systematically the relationship between personality characteristics and goal-setting behavior.

While assumptions and theoretical underpinnings have changed throughout the years concerning LOA procedures, this body of work is unified by the common assumption that individual differences expressed in goal-setting behavior are "at least in part accounted for by differences in self-evaluations or self expectations of a rather general nature" (Rotter, 1954; p. 316). They are also commonly linked by a unifying procedural method, which asks for repeated statements concerning how well a subject thinks he can perform on a task following success and failure.

Rotter (1954) has reasoned that goal setting behavior as represented in the LOA paradigm can be directly translated into terms of expectancy, a key concept in his theory of social learning. His argument holds that goal-setting statements in novel situations should represent overall level of expectancy responses (i.e., generalized expectancy) for related problems or tasks. The difference between such statements of GE and actual
performance provides a short-cut method of assessing FM in that it is possible to identify certain patterns as characteristic of avoidance or of symbolic failure. This hypothesis that level of aspiration behavior provides an indication of the kinds of defenses commonly employed in dealing with the possibility of failure has also been stressed by Sears (1940) and Holt (1945).

The Level of Aspiration Board (LOAB) was devised by Rotter (1942) to test these formulations. This task requires subjects to estimate their expected score prior to hitting a ball down a grooved board over a series of trials. Several patterns of goal-setting behavior emerge, based upon such behavioral indices as shifts in stated expectancies following success or failure, the algebraic sum value of these shifts and so on. Rotter describes these patterns as characteristic individual styles of goal setting and divides them roughly into defensive (LFM) and realistic reactions (HFM) to success or failure. Previous research with these patterns has revealed good predictive utility in such diverse areas as emotional stability (Klugman, 1948); differential personality factors among prison inmates (Rotter, 1943); psychosomatic disorders (Cohen, 1950); California F-Scale Scores (Neems & Scodel, 1954) and behavioral correlates of social desirability (Barthel, 1963; Rosenfeld, 1963).

The present study employs three of these patterns — one HFM and two LFM — in the initial selection of subjects. Brief
personality descriptions were written about these patterns with a view towards elucidating them into concrete, behavioral terms, familiar to teachers. In some respects, it can be argued that this technique with its focus upon behavioral ratings is more representative of a measure of behavior potential than freedom of movement within SLT. In other words, it is upon the basis of previous defensive behavior rather than freedom of movement that the division of subjects has been made. The difficulties, however, of obtaining pure measures of expectancy as represented in the FM construct are inherent within the theory itself, for all operational procedures must ultimately reduce to the indirect measurement of FM through observed behavior. Nonetheless, the fact that behavioral ratings and not simply expectancy statements were employed in the FM descriptions makes the argument more cogent for the present study.

The three patterns employed here include an HFM group; an LFM_A (Avoidant Pattern) group; and an LFM_F (Fantasy-Achievement) group, as originally described by Rotter (1954; p. 319-321). (For a detailed presentation of the manner in which these patterns were translated into personality descriptions, see the Method Chapter or Appendix C). Briefly, the HFM group is characterized by a general disposition to engage in goal-directed behavior; while the LFM_A group is characterized by tendencies to engage in defensive behaviors of an avoidant nature, and the LFM_F group by tendencies to engage in defensive behaviors at a symbolic.
fantasy level, as, for example, day dreaming or making grand but unrealistic plans.

It seems clear that the three patterns selected, therefore, represent different basal levels of excuse-making in general. At a commonsense level, one would expect the HFM group to show in everyday situations the least amount of excuse-making behavior; the LFM\textsubscript{A} (Avodiant Pattern) to show a moderate level by virtue of the fact that their total defensiveness should be higher; and the LFM\textsubscript{P} (Fantasy-Achievement Pattern) to show the highest rate of excuse-making by virtue of the fact that their defensiveness is, in general, high and excuse-making appears to be more consistent with their pervasive style. (Stated in terms of Formula 2b, presented earlier, the HFM Ss should represent the lowest GE\textsubscript{excuses}; the LFM\textsubscript{A} Ss, a moderate level of GE\textsubscript{excuses}; with the LFM\textsubscript{P} Ss having the highest GE\textsubscript{excuses}). These inferences concerning differential levels of excuse usage constitute the final theoretical thread needed in weaving together the logic and rationale which underpins the hypotheses of this study.

In summary, the independent variable of the present research, freedom of movement, has commonly been measured by students of SLT through LOA techniques, and especially the LOAB. Goal-setting behavior on this device has been shown to reflect nine basic patterns, several of which are defensive (LFM) and the remaining realistic reactions (HFM) to success and failure. Three of these
patterns were selected and translated into brief personality descriptions with a view towards their use as a nominations' technique. It was assumed that the descriptions accurately communicate the essence of these patterns, without straying beyond their meaning, and that predictive utility, therefore, should be virtually unaffected. At a commonsense level, the three patterns can be roughly ordered along a dimension of excuse-making usage with LFM Ss showing the highest level; LFM A Ss, an intermediate level, and HFM Ss, the lowest level.

**HYPOTHESES**

The hypotheses for the study derive from the above theoretical position and can be stated in terms of the two dependent variables measured (total defensiveness and imitative defensiveness) as follows:

**Dependent variable #1: Total defensiveness**

Hypothesis 1: Ss -- both HFM & LFM -- will show more overall defensive behavior under neutral conditions than their controls who have not been exposed to the filmed model.

The rationale for this hypothesis centers upon the disinhibitory effects of the model for this general class of behavior or, in SLT terms, the reduction of the observer's expectancies for punishment as a result of employing defensive maneuvers. The purpose of this hypothesis is to show that models alone, uncontaminated by other
response consequences, can serve to elicit defensive behavior; therefore, only the neutral condition is compared with controls.

Hypothesis 2: LFM Ss will show more overall defensiveness across all conditions than HFM Ss. This hypothesis derives from Rotter's position concerning the relative use of defensive behavior by HFM and LFM persons.

Hypothesis 3: HFM Ss will show the least amount of elicited defensiveness, with LFM A Ss occupying an intermediate position and LFM F Ss the highest position.

The rationale for this prediction centers upon the common-sense observation concerning the differential use of defensiveness, in general, represented by the three groups.

Hypothesis 4: There will be a decreasing amount of total defensive statements for all Ss under response-consequent conditions of sympathy, no comment and interpretation.

The theoretical rationale for this hypothesis is presented in abbreviated form in Table 1, elsewhere. Briefly, it has been argued that the model and whatever response consequences ensue serve as meaningful cues to an observer in establishing his expectancies for what is acceptable or unacceptable behavior within that situation. Table 1 indicates that the sympathy condition should arouse the greatest expectancy for substitute rewards while reducing expectancies for punishment. The neutral condition should arouse a moderate level of expectancy for substitute rewards.
rewards, while the interpretive condition should arouse only expectancies for punishment.

Dependent variable #2: 
Imitative defensive statements

Hypothesis 5: Ss -- both HFM & LFM -- will show more imitative defensive excuse-making than their controls who have not been exposed to the filmed model.

The rationale for this prediction is based upon Formula 2a above, which specifies the situational variables governing the use of specific defenses. It is assumed that the model will serve to reduce expectancies that excuse-making behavior in this situation will be met with disapproval, and should, therefore, serve to "shape" the use of this defense.

Hypothesis 6: LFM Ss will show more imitative defensiveness across all conditions than HFM Ss. This hypothesis loosely derives from Rotter's position that freedom of movement establishes a dispositional statement for engaging in defensive behavior. Again, based on Formula 2a, the model should serve to "shape" the form of these defensive statements through the reduction of expectancies for punishment of these defensive statements.

Hypothesis 7: HFM Ss will show the least amount of imitative defensiveness, with LFM\textsubscript{A} Ss occupying an intermediate position and LFM\textsubscript{F} Ss the highest position.

The rationale for this prediction centers upon the common-sense
observation concerning the differential use of excuse-making, in
general, represented by the three groups. It is related, therefore,
to Formula 2b which focuses upon characteristic patterns of defense.

Hypothesis 8: There will be a decreasing amount of imitative
defensive statements for all Ss under response-consequent conditions
of sympathy, no comment and interpretation.

As with its counterpart concerning total defensiveness
elicited, the theoretical rational for this hypothesis is presented
in abbreviated form in Table 1 elsewhere. This table breaks down
the common substitute rewards and punishments assumed to be
operative in the three conditions based upon their cultural
meanings, and taken in combination with Formula 2a above serves
as the basis for this prediction.
CHAPTER IV
METHOD

Subjects

The subjects were 120 first and second grade boys from five schools of the Columbus Elementary School system. Their ages ranged from six years, six months to nine years, nine months with a mean age of seven years, two months. This age range was settled upon following a pilot study with both older and younger children. The Ss were nominated by their teachers according to HFM and LFM personality descriptions.

Socio-economically, they appeared to represent the upper-lower and lower-middle income brackets. This observation was confirmed by the principals of the schools.

Personality measures

Personality descriptions were written about three patterns of goal-setting derived from the Level of Aspiration Board (LOAB; Rotter, 1954). The LOAB is a behavioral task which requires Ss to state their expectancies of future performance based upon past success and failure. Rotter has shown that nine basic patterns of goal-setting emerge, which can be roughly divided into
defensive and realistic approaches to the task. Three patterns were selected (one HF and two LFM) and personality descriptions were written about these formulations, as follows:

**LFMA (Avoidant Pattern):** This student seems uncertain about how well he will do and gives the impression he would rather not try and possibly fail. He impresses others as lacking in confidence. This might be reflected in a hesitancy to speak up in class even if he thinks he knows the answer. It might also be reflected in a hesitancy to try new tasks or to play new games. In short, he simply doesn't seem willing to take a chance. On the playground he shyly away from new games. In the classroom, doing well seems to be a matter of life or death. If he fails, he gets very upset. If he succeeds, it doesn't seem to add to his confidence. (Based on Rotter's Pattern No. 7; 1954, p. 321).

This LFM description was written from the following Avoidant Pattern as originally laid down by Rotter (1954, p. 321; Pattern No. 7):

**LFMA (Avoidant Pattern):** High Negative D-Score Pattern. This response is characterized by an average number of shifts and frequent shifts down after success. D-scores are generally below -2.0.

Predominant in the subject's behavior is the desire not to take a chance, to avoid failure at all cost. This is the extreme of the low negative pattern.

The remaining two personality descriptions were presented as follows. (For a detailed presentation of the original patterns as set down initially by Rotter, see Appendix C).

**LFMg (Fantasy Achieving Pattern):** This student tries to be among the best students even though his work is only average or perhaps below. If he fails, it doesn't seem to diminish his confidence. He likes to talk or brag about what he plans to do, but never gets around to doing it. He seems to gain satisfaction in this way, whether he succeeds or even follows through. In short,
he would like to be noticed, but in the absence of success, resorts to big plans and bragging. (Based on Rotter's Pattern No. 6; 1954, p. 321).

**HFM (Realistic Pattern):** This student usually expects to do well in everything he tries and does do well. He might be characterized by others as confident. In the classroom he sets goals within his reach and manages to successfully complete them. He is not fearful of new tasks. In fact, he seems to welcome them. If he doesn't understand something, he will ask about it. If he thinks he knows the answer, he is not hesitant to speak up. On the playground he actively participates with the other children. He doesn't seem to shy away from new games, but, in fact, enjoys them. If he does fail, he doesn't get extremely upset or make a lot of excuses. Failure, whether in the classroom or on the playground, isn't a matter of life or death. He takes it in stride and frequently ends up trying harder or attempting a different way to succeed. (Based on Rotter's Pattern No. 1; 1954, p. 319).

Teachers were asked to nominate two boys from their classes who most closely fit the descriptions. In addition, two non-experimental boys from the remainder of the class were chosen at random by teachers. The purpose for this was to have a pool of boys available who would "win" at the task.

In all, a total of 20 classes from the five schools were used from which to draw the experimental Ss with six Ss nominated from each class. This resulted in a pool of 40 HFM Ss, 40 LFM Ss, and 40 LFM Ss, all of whom were randomly assigned to one of the three experimental conditions plus control groups.

**Basic design**

Briefly, HFM and LFM Ss were exposed to a filmed model who
was playing a game for a prize. The model failed and in the face of his failure consistently enacted the defense of excuse-making. Three conditions of response-consequences to the modeled defensive statements were provided: positive (or sympathy); neutral (or no comments) and negative (or interpretation). The children were then placed in a similar task and they, too, were failed. This $3 \times 4$ design generated the following distribution of Ss (Table 2).

<table>
<thead>
<tr>
<th>Response Consequences</th>
<th>Positive</th>
<th>Neutral</th>
<th>Negative</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modeled</td>
<td>10 HFM</td>
<td>10 HFM</td>
<td>10 HFM</td>
<td>10 HFM</td>
</tr>
<tr>
<td>Defense</td>
<td>10 LFMA</td>
<td>10 LFMA</td>
<td>10 LFMA</td>
<td>10 LFMA</td>
</tr>
<tr>
<td></td>
<td>10 LFMP</td>
<td>10 LFMP</td>
<td>10 LFMP</td>
<td>10 LFMP</td>
</tr>
</tbody>
</table>

In an attempt to control biasing effects, the Ss were assigned to the various experimental conditions by someone other than the experimenter. It was not known, therefore, whether a given S represented high or low FM.

**Experimental procedure**

The individual Ss were picked up from each of the 20 classes according to a schedule drawn up by someone other than the experimenter. The teachers, who were coached beforehand,
announced to each S, "This is Mr. __________. He has a game which he would like you to play."

Upon entering the experimental room, the E commented upon the gun game which was to be played and asked the S to take a seat in front of the game. A scoring sheet (See Appendix D for example) was filled out in which the S was asked his name, age and what grade he was in. So as to establish an atmosphere conductive to verbalization, each S was asked two general questions:

1. Do you have any brothers or sisters? (If yes), how old are they? (If no), do you have a close friend and how old is he?

2. Have you ever shot a gun before? (If yes), tell me about it. (If no), what do you like to do for fun?

Following this interaction, the S was told the ostensible purpose for being asked into the experimental room:

I have asked you to come down because I am interested to see how well boys about your age can do at shooting a gun. You will have a chance to shoot this gun (indicates) at that target (indicates). If you do well at it, you could win one of these prizes for good shooting. (E picks up display poster with ribbons attached). I will tell you more about the prizes later. First of all, I'd like to show you how the game works. (E switches on the game and moves to the target end). In order to get a bullseye on this game, you must hit one of the rockets (indicates) as it comes around through the holes (indicates). If you hit a rocket, these four blue lights will light up (indicates). If you miss the rocket, only the white light will light up (indicates). Again, if you get a bullseye, these lights will light up (indicates). If you miss, only the white light will light up (indicates). Are there any questions?

It was unusual for a S to ask a question at this point. All questions were answered, however, unless they related to other parts of the experiment which would be explained later. In that case the S was told, "I'll tell you about that later."
Now I would like you to take five practice shots, five practice shots, just to get the feel of the gun and to see how well you can do at a game like this. I will keep score (indicates score sheet which E and S had filled out upon entering the room).

The subject then fired his five practice shots, which were programmed to give him a score of four misses and one hit. The purpose for this "warm-up" series was to establish a situational expectancy for failure, thereby decreasing a S's freedom of movement in that situation and heightening the possibility of eliciting defensive behavior (Rotter, 1954). Following the five shots, the S was informed of his score and then told:

You're going to have to do better than that if you expect to win one of the prizes.

With this comment, the E turned to the movie screen which was set up about five feet away off to the side of the game and announced:

Now I would like you to watch a movie with me. The movie shows a soldier who is trying to win his first medal for good shooting in the Army.

Except for the obvious similarities between the S and the soldier's situations, no further rationale was presented for the movie.

The S was seated in front of the screen with the E taking a chair, also within view of the screen, but off to the side. The movie was shown and depending upon the experimental condition, the E responded in a sympathetic, neutral or interpretive manner, according to the script presented in Appendix B.
Following exposure to the movie, the £ indicated the chair near the gun and asked the S to take a seat there.

Now you're going to have a chance to win a ribbon for good shooting. You will have 12 shots with the gun. (Displays poster with prizes). If you get five bullseyes, you will win this ribbon (indicates white, third prize ribbon). If you get six bullseyes, you will win this ribbon (indicates red, second-prize ribbon). If you get seven or more bullseyes, you will win this ribbon (indicates blue, first-prize ribbon). This is the highest ribbon we give for good shooting on this game. Remember, you will have 12 shots. You will need five bullseyes to win this ribbon (white); six bullseyes to win this ribbon (red); and seven or more bullseyes to win this ribbon (blue). Are there any questions?

With that, the S fired his next 12 shots which were programmed to give him a score of one hit and 11 misses.

Following each shot, the £ announced "Hit" or "Miss" and recorded it on the S's score sheet.

**Response consequences to the modeled defensive statements**

Three conditions as response consequences to the defensive statements were provided: positive (or sympathy); neutral (or no comments); and negative (or interpretation). These statements were made by the £ as an aside, while he and the S viewed the film together. The response consequent conditions consisted of three sympathetic or interpretive statements and each was presented following the enactment by the model of a defensive theme, as exemplified below. A brief sympathetic or interpretive summary statement was also made at the end of the
film, as also exemplified below. (See Appendix B for complete response-consequent script).

SYMPATHY CONDITION

1. (Model): Aw, my finger slipped.
2. (Model): Aw, something down there made me jiggle it.
3. (Model): Oh, it slipped again.
E: It's too bad that keeps happening.

Summary Statement by E: Well, the soldier didn't seem to do too well. But he had so many troubles. I'm sure he could have done much better otherwise.

INTERPRETATION CONDITION

1. (Model): Aw, my finger slipped.
2. (Model): Aw, something down there made me jiggle it.
3. (Model): Oh, it slipped again.
E: I wonder if he isn't making excuses.

Summary statement by E: Well, the soldier didn't seem to do too well. He seemed to be making a lot of excuses over his poor shooting.

Rather than film both the model and E responses, this procedure was adopted because it obviated the need for three films and because it was expected that the response-consequent effect should prove most powerful under live conditions.

Sympathetic and interpretive conditions were decided upon
because they represent clear-cut substitute rewards and punishments which bear a close resemblance to real-life situations. Frequently, the defensive statements of a child are responded to by important model figures in his life with either sympathy or interpretation of one form or another. Additionally, the effects of interpretation upon defense have been a cornerstone of accepted theorizing about the psychotherapeutic process and is, therefore, an important area of empirical inquiry in and of its own right.

Eliciting verbalizations

During the firing sequence, all spontaneous verbalizations were recorded by the E on the S's score form. In addition, each S was asked four times during the course of the game, "What's happening?" This cue came at standard times during the firing sequence, though upon occasion there were some departures from this scheme due to rapid firing.

Following each cueing, all verbalizations were recorded on the individual score sheet for future scoring. Occasionally, an S would remain mute, and the question was repeated. Any verbal response, including "I don't know," "Nothing," "Can't say," etc., was accepted. No further probes were made until the next cue came up. A response was considered complete when the S stopped talking. These statements usually ran 3-10 words.
This procedure was adopted following a pilot study in which it became clear that the gun game was simply too reinforcing and the task too preoccupying to obtain spontaneous verbalizations from all Ss. The question, "What's happening?" served as the only cue throughout the study. It was decided upon as an effective means of eliciting verbalizations without, at the same time, being too directing.

Following the game, the S was told his score and then asked if he enjoyed the game. This was followed by one further scored cue, as follows:

How well do you think you did? (And irrespective of the answer), what happened?

Again, all verbalizations were recorded for future scoring. The response was again assumed to be complete when the S stopped talking. No further probes were made.

In addition to the verbal statements, three behaviors enacted by the model to dramatize the defensive themes were also noted. However, only one of the behaviors was reproduced by any of the Ss and this, too, was infrequent.

Eliciting verbalizations:

Summarized

In summary, Table 3 below shows the programmed series of twelve shots for each S. In order to facilitate verbalization, four cues ("What's happening?"") were made during the sequence. No other probes, except to repeat the question, with a silent S,
were employed. The asterisk indicates the point at which the cues were made.

TABLE 3. Program of success and failure for each S and pattern of cueing

<table>
<thead>
<tr>
<th>Shots:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>M</td>
<td>M*</td>
<td>H</td>
<td>M</td>
<td>M*</td>
<td>M</td>
<td>M</td>
<td>M*</td>
<td>M</td>
<td>M*</td>
<td>M</td>
</tr>
</tbody>
</table>

*Indicates point at which cue came.
(The shots above actually represent shots 9-20 in the programmed sequence).

All verbalizations were recorded. Following the series of shots, each S was cued one additional time. Thus, a total of five cues in all were made. Verbalizations were recorded in each instance until the S stopped talking. No further probes were made. In addition, three behaviors enacted by the model to dramatize the defensive themes were also noted if imitated. Only one of the behaviors, however, was reproduced by any S.

Control groups

Three control groups, comprised of 10 HFM Ss, 10 LFM A Ss and 10 LFM P Ss, were also run through the same procedure with the only exception being that they were not exposed to the film. Thus, a control S went immediately from the "practice" shooting to the task.

Non-experimental "winners"

In addition to the HFM and LFM Ss, teachers were asked to
select two boys from the remainder of their class. These boys constituted a pool from which to draw winners. The purpose for this was to prevent the possibility that Ss, in discussing the task, might conclude that it was either rigged or impossible to succeed at. In all cases, a non-experimental winner was selected as the first boy to be run from each class. Thus, all experimental Ss had witnessed another boy return to their classroom, displaying one of the prize ribbons, before they were themselves run in the task. This was done to standardize the point at which this operation occurred and to heighten the reinforcement value (RV) of the prize for the experimental Ss.

Debriefing the subjects

Inasmuch as an explanation of the actual purpose of the study would have served to confront many Ss with their excuse-making behavior in the situation, an alternative "debriefing" procedure was employed which attempted to reduce the sting of failure at the task. All Ss were given a second turn at the game, following the actual experiment. They were told that success was simply a matter of practice and knowing how to shoot that particular gun. With this, the E offered a few "pointers" and allowed the S to try once more. By controlling their performance through a re-set button, each S was provided then with a successful experience. No prizes were given on the second try, however, because this would have affected results of future Ss.
Equipment

1. **Imitation film**: A 16 mm sound movie was made depicting a soldier shooting a .22 pistol at the Ohio State rifle range. The soldier, actually an ROTC student, was selected so as to tie in with the children's task of firing a gun. It was expected that the ROTC student, in addition, should serve as a prestigious figure for emulation among young boys. The advantages of employing a prestigious model are stressed by Bandura and Walters. (1963), Asch (1948) and Lefkowitz et al. (1955).

The film opens with a brief prologue by a colonel who is bedecked with ribbons and surrounded by trophies. He describes the situation as an official U.S. Army qualification test, emphasizes what the viewer is about to see and, in general, sets the stage for the remainder of the film. The soldier, who is referred to as G.I. Joe, enters the scene, dramatically takes aim and begins to fire. As he shoots, a second soldier keeps track of his score through a high-powered scope, reporting his successes and failures loudly. With increasing failure, the model begins to make excuses for his poor performance, according to a prearranged script.

**Film script**: The script for the modeled defense was written from a pool of statements judged by a group of psychology graduate students as representative of rationalization in its colloquial sense of excuse-making (Fenichel, 1945). The script consisted of nine statements which were written about three excuse-making
themes, as exemplified below. (See Appendix A for complete script).

DEFENSIVE THEMES EMPLOYED BY MODEL

Theme 1: Model makes excuses for failure on the basis that his finger slipped (e.g., "Aw, my finger slipped.")

Theme 2: Model makes excuses for his failure on the basis that he is better with a different gun. (e.g., "I wish this was a rifle.")

Theme 3: Model pretends he doesn't really care about winning. (e.g., "I haven't really been trying.")

In addition, three distinct behaviors were enacted by the model to dramatize the three defensive themes, as follows:

DEFENSIVE BEHAVIORS EMPLOYED BY MODEL

Theme 1: Wipes hands on pants. (To dramatize the theme: "Aw, my finger slipped.")

Theme 2: Assumes rifle stance. (To dramatize the theme: "I wish this was a rifle.")

Theme 3: Fires without aiming. (To dramatize the theme: "I'm glad I don't care about this.")

Models: The model was selected from a group of ROTC students based on his clean-cut, "all-American" appearance and the fact that he had had previous acting experience. The colonel's role, which was designed to set the stage and add importance to the film, was enacted by a graduate student. The second soldier in the film, who ostensibly was there to record and announce the
model's score, was introduced more as a vehicle for the model's excuse-making statements. This role was enacted by an ROTC student, who also had had previous acting experience.

2. **Projector and screen**: A conventional 16 mm sound projector was used to show the film on an 8x10 inch portable screen, manufactured by Hudson Photographic Industries.

3. **Gun game**: A programmed gun game, constructed along the lines of Grinder (1961), was employed as the experimental task. This game is approximately 12 feet long and consists of a revolver affixed at one end of a baseboard and a target at the other. The revolver cannot be removed from the board though it is moveable. The movement, however, is limited by a metal circle which houses the muzzle of the gun. This allows for sufficient freedom to presumably "hit" any part of the target without, however, allowing an inquisitive or perceptive S a chance to shoot the gun while it's obviously pointed away.

The target consists of two lighted rockets, housed in a rectangular box, which move in a clock-wise direction through a series of holes. A S is required on the task to "hit" one of the rockets as it comes into view in any hole. A series of lights overhead presumably record "hits" and "misses."

Unknown to the S, the gun is programmed to signal bullseyes and misses, and performance, therefore, has nothing to do with the accuracy of one's firing. The present study employed the following programmed scheme, as shown in Table 4.
TABLE 4. Success-failure programming of task

<table>
<thead>
<tr>
<th>Practice</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shot</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Outcome</td>
<td>H</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>H</td>
<td>M</td>
<td>M</td>
</tr>
</tbody>
</table>

| Task Shooting    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Shot             | 9 | 10| 11| 12| 13| 14| 15| 16| 17| 18| 19| 20|   |   |   |   |   |   |   |   |
| Outcome          | _ | M | M | M | H | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |

Experimental Ss were all started with shot #4. They were initially given five practice trials which resulted in a score of one hit and four misses. This was followed by 12 shots (11 misses and one hit) which counted.

A reset button located in the rear of the target allowed the experimenter to return to the beginning of the sequence at any point. The button as well as the bunching of hits near the beginning of the program provided a way of controlling scores and thus a way to have non-experimental children "win".

4. Prizes: Three gaily-colored ribbons, emblazoned with First, Second or Third Prize, were offered for successful performance on the gun game. The prizes were chosen to parallel the three classes of qualification medals which the model was attempting to win. Examples of the prizes were mounted on a large white poster.
which also indicated the respective number of bullseyes needed to win them. The poster was designed after the one used in the film to display the various medals which the soldier was attempting to win.

**Physical Facilities**

By virtue of the fact that rooms are at a premium in the Columbus Elementary School system, the experiment was conducted in a variety of physical settings, ranging from a nurse's office to a teacher's lounge. While this represents a much less than ideal state of affairs, it would have been impossible to control the physical set-up. There were certain minimal standards which had to meet, however. All rooms had to be at least 10' by 15' in order to house the equipment. They also had to be reasonably private and cut off from interruption or possible intrusion. It should be noted that a roughly equivalent number of HFM and LFM Ss were run under the various conditions in each school setting so that differential effects as a result of uncontrolled physical set-up should be minimal.

**Dependent variables:**

**Total and imitative defensiveness**

A scoring manual for both imitative and non-imitative defensive responses was drawn up, employing illustrative examples from the S's records (See Appendix E). The manual orders responses into three categories: non-imitative, partially imitative and directly imitative statements. Non-imitative responses were
defined as those responses in which the clear-cut intent was to protect self-esteem in a failure situation. Partial imitation was defined as responses which captured the essence of the model's defensive themes, without word-for-word reproduction, or statements which included some of the model's verbalizations. Direct imitation was defined as word-for-word reproduction of the modeled statements. A weighted scoring system was employed as follows: non-imitative defensive response, 1; partially-imitative, 2; directly-imitative, 3. An example is presented below:

DEFENSIVE CATEGORIES

Non-Imitative

1. Unusual physical or emotional states which affect performance.

Example: My eyes keep changing.
My leg was scratching a little bit that time.

Imitative

1. Unusual movement which affects performance.

Directly imitative: Aw, my finger slipped.

Partially imitative: It's just slipping in my hand.
My foot keeps slipping.

In addition, responses which were repeated were scored each time they occurred. Elaborations of a response were not scored, however.
CHAPTER V

RESULTS

Overview

The purpose of this chapter is to consider the effects of the three personality measures plus the four experimental conditions on two classes of dependent variables. The classes, as outlined in the preceding chapter, include (1) total defensiveness and (2) imitative defensiveness. Separate treatment of these variables serves as the organizational format of the chapter with total defensiveness considered first and imitative defensiveness next.

The dependent variables were scored according to a manual (See Appendix E) which ordered Ss' responses into imitative and non-imitative categories. A weighted scoring approach was employed with non-imitative defensive statements scored, 1; partially imitative, 2; and directly imitative, 3.

Inter-judge reliability

To determine the reliability of the major dependent variables, a psychology graduate student in addition to the author, was asked to score two response sheets chosen randomly from each of the three personality groups and four experimental conditions.
Table 5 summarizes the Pearson product-moment correlation coefficients obtained for both total and imitative defensiveness.

**Table 5.** Inter-judge reliability of the two dependent measures

<table>
<thead>
<tr>
<th>FM GROUP</th>
<th>TOTAL DEFENSIVENESS</th>
<th>IMITATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFM</td>
<td>.905</td>
<td>.912</td>
</tr>
<tr>
<td>LFM_A</td>
<td>.995</td>
<td>.967</td>
</tr>
<tr>
<td>LFM_F</td>
<td>.959</td>
<td>.938</td>
</tr>
</tbody>
</table>

Note. - Correlations computed on 8 Ss chosen randomly from each group.

The above correlations indicate that the measures are reliable.

**Preliminary analyses**

Preliminary analyses of these data are shown in Tables 6 and 7.
### TABLE 6. Means and standard deviations of total defensive scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Condition</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF M</td>
<td>Sympathy</td>
<td>0 - 6</td>
<td>1.6</td>
<td>1.95</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>0 - 13</td>
<td>2.9</td>
<td>4.25</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>0 - 4</td>
<td>2.1</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0 - 5</td>
<td>1.4</td>
<td>1.95</td>
</tr>
<tr>
<td>LF M</td>
<td>Sympathy</td>
<td>0 - 13</td>
<td>5.4</td>
<td>3.65</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>0 - 22</td>
<td>3.8</td>
<td>6.65</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>0 - 7</td>
<td>1.6</td>
<td>2.22</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0 - 6</td>
<td>1.1</td>
<td>1.85</td>
</tr>
<tr>
<td>LF M</td>
<td>Sympathy</td>
<td>0 - 20</td>
<td>7.9</td>
<td>6.85</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>0 - 16</td>
<td>7.2</td>
<td>5.49</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>0 - 4</td>
<td>1.1</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0 - 6</td>
<td>2.6</td>
<td>2.27</td>
</tr>
</tbody>
</table>

Note. - N = 10 for all conditions.

In general, the data on total defensive elicitation represents a positively-skewed distribution with approximately 30% of the subjects showing no defensive elicitation.

### TABLE 7. Means and standard deviations of imitative defensiveness

<table>
<thead>
<tr>
<th>Group</th>
<th>Condition</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF M</td>
<td>Sympathy</td>
<td>0 - 6</td>
<td>.8</td>
<td>1.93</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>0 - 2</td>
<td>.4</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>0 - 4</td>
<td>.8</td>
<td>1.39</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0 - 2</td>
<td>.2</td>
<td>.63</td>
</tr>
<tr>
<td>LF M</td>
<td>Sympathy</td>
<td>0 - 12</td>
<td>3.5</td>
<td>4.37</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>0 - 22</td>
<td>2.6</td>
<td>6.87</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>0 - 4</td>
<td>.6</td>
<td>1.35</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0 - 0</td>
<td>0.0</td>
<td>0.00</td>
</tr>
<tr>
<td>LF M</td>
<td>Sympathy</td>
<td>0 - 13</td>
<td>4.1</td>
<td>5.19</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>0 - 12</td>
<td>4.7</td>
<td>4.72</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>0 - 4</td>
<td>.4</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0 - 6</td>
<td>1.3</td>
<td>2.31</td>
</tr>
</tbody>
</table>

Note. - N = 10 for each condition.

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Again the data for defensive imitation appears to represent a positively skewed distribution with approximately 70% of the Ss showing no modeling effects under all conditions and approximately 60% showing no modeling effects under the facilitative conditions taken alone. These figures are attenuated, however, by the fact that HFM Ss, show, as expected, considerably less imitative behavior (approximately 40% less) than the LFM groups.

Dependent variable #1: Total defensiveness elicited

Figure 1 below demonstrates the overall main effects with total defensiveness serving as the major dependent variable. The results of an analysis of variance run on this data are summarized in Table 8.

TABLE 8. Overall analysis of personality and treatment effects on total defensiveness

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Personality Variables)</td>
<td>2</td>
<td>74.78</td>
<td>5.028**</td>
</tr>
<tr>
<td>B (Treatments)</td>
<td>3</td>
<td>99.83</td>
<td>6.713***</td>
</tr>
<tr>
<td>AB</td>
<td>6</td>
<td>28.70</td>
<td>1.930*</td>
</tr>
<tr>
<td>Error Within</td>
<td>108</td>
<td>14.87</td>
<td></td>
</tr>
</tbody>
</table>

* p < .10
** p < .01
*** p < .001

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FIGURE 1. Total Defensive Scores for the FM Groups Under Four Treatment Conditions
The overall $F$ ratios indicate that both the personality characteristics and experimental treatments served as significant predictor variables and that a breakdown of these effects can be safely undertaken. The interaction term between these sets of variables, while approaching significance, does not reach the $F < .05$ probability level; therefore, any further interaction effects which emerge in subsequent statistical tests must be interpreted with this caution in mind.

$F$ tests were employed to consider the differential effects of the various treatments upon defensive elicitation. Justification for the use of this statistic in breaking down main effects into contributory components is provided by Winer (1962), who argues for the use of the more powerful statistic in testing a priori formulations and also when overall significance is obtained.

Before turning to the breakdown, it should be noted that the dependent variable in this analysis represents arbitrarily weighted totals. A second analysis of variance to rule out the possibility that obtained overall significance is an artifact of the weights employed was also run but with frequency serving as the major dependent variable. This data is summarized in Table 9 below.
TABLE 9. Overall analysis of personality and treatment effects on frequency of defensive elicitation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (personality)</td>
<td>2</td>
<td>21.41</td>
<td>3.120**</td>
</tr>
<tr>
<td>B (treatments)</td>
<td>3</td>
<td>34.52</td>
<td>5.032***</td>
</tr>
<tr>
<td>AB</td>
<td>6</td>
<td>13.89</td>
<td>2.025*</td>
</tr>
<tr>
<td>Error Within</td>
<td>108</td>
<td>6.86</td>
<td></td>
</tr>
</tbody>
</table>

* p < .10  
** p < .05  
*** p < .005

The results parallel those obtained with weighted defensive scores and it can be safely assumed, therefore, that overall significant findings are not an artifact of the weighted scoring system.

A breakdown of results with weighted scores is, therefore, permissible.

Exposed vs. non-exposed (control) Ss

Initial interested, as represented by Hypothesis 1, focuses upon the question: Do Ss exposed to a defensive model show more elicited defensiveness than their unexposed controls? A 2 X 3 factorial analysis of variance comparing exposed versus unexposed (control) Ss yielded a significant F-ratio (F = 7.383; p < .005, df = 1/54) and indicated that Hypothesis 1 has been supported.

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Effects of sympathy vs. neutrality vs. interpretation

Analyses of variance were run comparing each of the response consequent conditions, one against the other, to test the decreasing effects of positive, neutral and negative response consequences as predicted in Hypothesis 4. This resulted in three 2 X 3 analyses in which primary interest was upon the effects of the treatment operations. Comment will be made, however, on any interaction term which reaches significance.

Sympathy vs. no comment conditions

An insignificant F-ratio (F<1; n.s., df = 1/54) suggests that sympathy as a response-consequent condition did not serve to increase defensiveness over exposure to a model alone.

Sympathy vs. interpretation

A highly significant F-ratio (F=13.867, p <.0005; df=1/54) reveals that response consequent conditions of sympathy and interpretation have differentially affected defensive elicitation in the expected direction. In addition, a significant interaction effect (personality x treatments) is noted (F=5.490; p< .01; df=2/54). While interpretation should be made with caution, observation of Figure 1 suggests that the interaction effect may largely be due to the extreme drop of the LFM Ss under interpretive conditions and the virtual failure of HFM Ss to respond to interpretation as expected.
No comment vs. interpretation

A significant F-ratio ($F=8.133; p < .01, df=1/54$) shows that interpretation has operated, according to prediction, as a suppressing variable upon defensive elicitation.

These comparative effects of sympathy, neutrality and interpretation upon defensive elicitation are presented in summary form in Table 10.

TABLE 10. A comparison of the three response consequences upon defensive elicitation

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sympathy</td>
<td>Neutrality</td>
</tr>
<tr>
<td>Sympathy</td>
<td>x</td>
</tr>
<tr>
<td>Neutrality</td>
<td>x</td>
</tr>
<tr>
<td>Interpretation</td>
<td>x</td>
</tr>
</tbody>
</table>

* $p < .01$
** $p < .0005$

The results indicate that interpretation, as predicted, acts as a suppressor of defensive elicitation, but that sympathy does not significantly increase defensiveness over simple exposure to a model alone. Thus Hypothesis 4 is partially supported.

Personality measures and elicited defensiveness

Figure 1 indicates that the groups occupied the relative
predicted positions with HFM showing the lowest elicited
defensiveness; LFM_A, a moderate level, and LFM_p, the highest level.
Hypothesis 4 is thus tentatively supported. Analysis of variance
was employed to compare these trends. This resulted in three
2 X 4 factor analyses in which primary interest was upon the
personality measures across all conditions.

HFM vs. LFM_A

A test of the predicted difference between the HFM and LFM_A
Ss yielded an F-ratio ($F=1.623$, n.s., $df=1/72$) which does not
reach the appropriate probability level for significance. Because
of the exploratory nature of this study, a second analysis was
run, excluding the interpretive and control conditions, in an
attempt to probe further the question of possible differences
between HFM Ss and LFM_A Ss under only the facilitative conditions
of neutrality and sympathy. An F-ratio approaching significance
($F=2.829$, $.05 < p < .10$, $df=1/36$) was obtained and suggests a
strong trend in the predicted direction.

HFM vs. LFM_p

A highly significant F-ratio ($F=10.370$, $p < .005$, $df=1/72$)
clearly supports the predicted difference between HFM and LFM_p
Ss. In addition, a significant interaction term ($F=3.729$, $p < .01$, $df=3/72$) which has emerged in this analysis seems related to the
fact that HFM Ss show little variation under the treatment conditions.
To explore the possibility that HFM Ss do not respond to the imitation conditions at all, a single-classification analysis was run, yielding insignificant results ($F = 1$, n.s., $df=3/36$). It appears, therefore, that the variance associated with this effect is due to differences in only the LFM Ss, and a modification of Hypothesis 1 is indicated. This finding apparently accounts for an initial overall interaction term which approached significance ($F=1.930, .05 < p < 10, df=6/108$), but was nonetheless masked as a result of the small overall scores achieved by HFM Ss relative to the LFM Ss.

**LFM<sub>A</sub> vs. LFM<sub>P</sub>**

Results of an analysis of variance clearly support the predicted difference between LFM<sub>A</sub> and LFM<sub>P</sub> Ss on the criterion variable ($F=5.075, p < .05, df=1/72$).

**Summary of defensive elicitation results**

With the exception of HFM Ss, the results, in general support the hypotheses of this study concerning total defensive elicitation. It appears, however, that HFM Ss show no modeling effects or differences under the various response-consequent conditions. LFM Ss, on the other hand do show more elicited defensiveness when viewing an appropriate model, and, as predicted, tend to suppress this under interpretive response-consequent conditions. However, sympathy as a response-consequent operation failed to
act as a facilitative elicitor of defensive behavior. Finally, the groups did occupy the predicted relative positions with HFM Ss showing the least defensive elicitation; LFM_A Ss, a moderate level, and LFM_P Ss, the highest level.

Dependent variable 2:
Imitative defensiveness

The second major dependent variable measured was imitative defensiveness. Hypotheses concerning this class of behavior parallel those for total defensiveness. Thus the following presentation will be organized along similar lines.

Figure 2 below demonstrates the overall main effects with imitative defensiveness serving as the dependent variable. An analysis of variance on this data is summarized in Table 11 below.

TABLE 11. Overall effects of personality measures and treatment conditions on imitation

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Personality Measures)</td>
<td>2</td>
<td>43.16</td>
<td>4.110*</td>
</tr>
<tr>
<td>B (Treatments)</td>
<td>3</td>
<td>45.83</td>
<td>4.364**</td>
</tr>
<tr>
<td>AB</td>
<td>6</td>
<td>13.08</td>
<td>1.246</td>
</tr>
<tr>
<td>Error Within</td>
<td>108</td>
<td>10.50</td>
<td></td>
</tr>
</tbody>
</table>

* p < .025
** p < .01
Figure 2.--Imitative Defensive Scores for the FM Groups
Under the Experimental Condition
The overall F ratios indicate that both the personality measures and experimental treatments served as significant predictor variables. The interaction term, however, is not significant and future considerations of interaction must bear this caution in mind.

Analyses of variance, again following Winer's arguments (1962), were employed to compare the various treatment effects. Before turning to these, it should be noted that an additional overall analysis was run employing frequency of imitative defensiveness as opposed to weighted imitation scores so as to rule out the possibility of artifactual conclusions based on the scoring system. This yielded significant main effect F-ratios, as follows: personality variables (F=3.617, p.<.05, df=2/108) and treatment effects (F=8.807, p.<0.0005, df=3/108). As with total defensiveness, presented elsewhere, the results of this overall analysis closely parallel the above results and provide a firm groundwork for additional statistical comparison of weighted-score results.

Exposed vs. unexposed (control) Ss

Initial interest focuses upon the main issue concerning the predicted effects of models in shaping defensive behavior through imitation. A significant F-ratio (F=5.068, p.<.05, df=1/54) indicates that exposure to a defensive model does result in imitation of that defense.
Effects of sympathy, no comment and interpretation upon imitation

Analyses to test the predicted differences between sympathetic, neutral (no comment) and interpretive response-consequent conditions were run, and will be considered in that order. This resulted in three 2 X 3 analyses of variance in which primary concern was upon the treatment effects.

Sympathy vs. no comment

Results \((F < 1, n.s., df=1/54)\) fail to support the predicted facilitative effect of sympathy as a response consequence upon defensive imitation. This finding parallels the non-significant effect of sympathy upon total defensive elicitation, reported elsewhere.

Sympathy vs. interpretation

A highly-significant \(F\)-ratio \((F=8.684, p.< .005, df=1/54)\) clearly supports the predicted difference between sympathy and interpretation upon defensive imitation. This finding, again, parallels results with total defensiveness as the dependent variable.

No comment vs. interpretation

The predicted effects of interpretation as a suppressor variable are demonstrated in this significant \(F\)-ratio \((F=4.666, p.< .05, df=1/54)\).

The results of this breakdown of treatment effects are summarized in Table 12.
TABLE 12. A comparison of imitative defensiveness under three experimental conditions

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sympathy</td>
<td>Neutrality</td>
</tr>
<tr>
<td>Sympathy</td>
<td>x</td>
</tr>
<tr>
<td>Neutrality</td>
<td>x</td>
</tr>
<tr>
<td>Interpretation</td>
<td>x</td>
</tr>
</tbody>
</table>

* p < .05
** p < .005

The results closely parallel previous findings concerning total defensive elicitation. Negative response consequences in the form of interpretation do serve to significantly inhibit imitative defensiveness. The predicted facilitative effect of sympathy, however, has failed again to be demonstrated.

**Personality measures and imitative defensiveness**

Figure II indicates that the groups occupied the relative predicted positions with LFM_Ss showing the highest imitation; LFA_Ss, the next highest and HFM_Ss, the least. Separate analyses, employing a 2 X 4 design, were run to statistically compare these groups.

**HFM vs. LFM_A Ss**

A strong trend in the predicted direction (F=2.864, .05 < p.

71
< .10, df=1/72) is noted when HFM Ss are compared to LFMp Ss.

HFM vs. LFMp Ss

A highly significant F-ratio (F=11.098, p < .005, df=1/72) clearly supports the predicted differences between HFM Ss and LFMp Ss. In addition, a significant interaction term (F=2.905, p < .05, df=3/72) parallels that found earlier with total defensiveness and again seems related to the fact that HFM Ss show little responsiveness to the various treatment conditions while LFMp Ss respond strongly in the predicted fashion. A single-classification analysis to pursue the possibility that HFM Ss show no significant modeling effect under any of the conditions yielded an insignificant F-ratio (F< 1, n.s., df=3/36). It appears, therefore, that differences under the various treatments are attributable to LFM Ss alone, and a modification of Hypothesis 5 is in order.

The fact that this finding did not emerge as a significant interaction term in the original overall analysis (F=1.246, n.s., df=6/108) is apparently related to the smallness of scores of HFM Ss relative to LFM Ss.

LFMv vs. LFMp

An insignificant F-ratio (F=1.211, n.s., df=1/72) fails to support the predicted differences between LFMv and LFMp Ss on the criterion variable.
Summary of imitative
defensive results

The results, employing imitative defensiveness as the
dependent variable, virtually mirror findings associated with
total defensiveness. The one exception is that, while the three
personality groups occupied the predicted positions, LFM_A Ss
are not significantly different from LFM_P Ss on imitative
defensiveness, and thus Hypothesis 7 is only partially supported.

In summary, with the exception of HFM Ss, the results on
imitative defensiveness generally support the predictions of
this study. A model does serve to "shape" imitative defensiveness
and, as predicted, this effect is suppressed under response-
consequent conditions of interpretation. The facilitative
effects of sympathy, on the other hand, have failed to be
demonstrated.
CHAPTER VI
DISCUSSION

This research has been divided among three general purposes:
(1) the extension of modeling effects to a new class of behavior,
(2) a consideration of the effects of individual differences upon extent of imitation, and (3) the elaboration of Rotter's SLT into the area of differential defensive prediction. These purposes -- treated in the above order -- serve as the organizational format for the present discussion.

Effects of models upon defensiveness

In general, the important effects of models in both the elicitation and "shaping" of defensive responses have been demonstrated. It seems clear that predisposed children will imitate a defensive pattern, at least in the case of excuse-making, enacted by a significant adult model. This finding parallels results of earlier studies (Spiesman et al., 1964; Conn & Crowne, 1964) which loosely can be translated as also demonstrating this effect. In the Spiesman et al. study, several modes of defense were, in effect, modeled and found to serve as the basis for shaping subsequent defensive reactions.
The importance of these demonstrations is, at this point, more heuristic than definitive. They provide a promising new approach for opening the area of defensiveness to empirical inquiry. The present study, with its direct manipulation of models, seems especially fruitful as a laboratory analogue for investigating this class of behaviors. Questions concerning other defensive styles, the patterning of defensive behavior, the possible acquisition of defense through imitation -- all serve as logical extensions of the present work.

**Freedom of movement and extent of modeling**

**Individual Measures**

Rotter's Social Learning Theory (SLT) was employed as the conceptual framework for this study and a theoretically-derived personality measure (FM) was used as the basis for individual difference predictions to extent of modeling. These predictions derive from the following general statement:

\[ BP_{\text{def}} = f(FM_{\text{low}} \ & \ NV_{\text{high}}) \]

This may be read: The potential to engage in defensive or nonconstructive patterns is a function of low freedom of movement and high need value. In other words, this formula represents a general predispositional statement for engaging in defensive behavior.

For the most part, results of this study support Rotter's conceptualization of FM and, therefore, the expected differential
elicitation of defensiveness as a function of that personality measure. Briefly, LFM Ss show more total defensive responses than HFM Ss when exposed to an appropriate model in a failure situation, and, similarly, LFM Ss show significantly more imitative defensiveness in that same situation. The one major discrepancy noted, contrary to prediction, is that HFM Ss appear to show no significant modeling effects whatsoever. This finding, however, is not entirely out of keeping with Rotter's original formulations of freedom of movement. A HFM S is characterized by a predisposition to engage in constructive, goal-directed behaviors and not defensive behavior. It was assumed, however, that the present situation would be powerful enough to reduce expectancies for success (that is, reduce FM) even in the case of HFM Ss so that defensive modeling would result.

In general, the use of personality measures to predict extent of modeling has been a relatively untapped area in imitation research which employs the Bandura paradigm. This rather obvious omission reflects, of course, Bandura's preoccupation with the acquisitional aspects of imitative learning and his commitment to a simple contiguity explanation. Recently, however, several investigators have attempted to relate personality differences to a variety of imitative categories; e.g., social desirability (Henker, 1963); delay of gratification (Bandura & Mischel, 1965), affiliative and aggressive needs (Karst, 1966).
The importance of this approach lies in its attempts to define personality parameters which facilitate or impede this important learning and performance process. As such, the approach serves to complement the more established focus upon situationally-facilitative variables which has captured Bandura's interest. Commonsense suggests that there is a great deal of sifting which goes on in the process of imitation -- sifting which is not only a function of situational factors but strongly influenced by personality styles and preferences as well. One does not model, like a mirror, every bit of behavior one is exposed to even if that behavior has been reinforced dozens of times.

Present results, in fact, raise the possibility that the unusual pattern of HFM scores represents, for whatever reasons, an active rejection of both the model and the related experimental manipulations. This tentative hypothesis is loosely supported by impressions gained from a pilot test run earlier with older boys (ages 10 to 12). Modeling effects with these boys -- both elicitory and directly imitative -- were notably absent and subsequent interviews revealed that the older boys were actively rejecting the model as unsuitable for emulation. One $S$, expressing this sentiment, put it this way: "Would you want to go into battle with a guy who acts like a baby?" Thus, the ability to evaluate a model as a potential object for emulation may well be reflected in the differences noted between HFM and LFM $S$s.
Further, Anna Freud (1946) has pointed up the possible pathological aspects of indiscriminate imitation. Inasmuch as FM is an indirect measure of adjustment in SLT, it may be that present results have some bearing on her position. Other studies have shown, in addition, that modeling and its counterpart, matched-dependent behavior, are positively related to decreased self-esteem (Gelfand, 1962); a history of failure (Lasser & Abelson, 1959); experimentally-induced stress (Walters et al., 1960) -- all of which can be seen as indicants of reduced adjustive functioning. While purely speculative, it may be that continued reliance upon indiscriminate imitation, especially with advanced age, is negatively related to overall adjustment. Clinically, it seems sound that the ability to refrain from imitating unacceptable models—as might well have been the case with HFM Ss—reflects a level of independence and maturity not attained by less discriminating imitators.

Group differences

Predictions concerning the relative positioning of the three personality groups on the dependent measures were also offered. It was assumed that HFM Ss (Reality Pattern) would show the least amount of total and imitative defensiveness; LFM A Ss (Avoidant Pattern), a moderate level and LFM F Ss (Fantasy-Achievement Pattern), the highest level. These predictions derive from Rotter’s descriptions of their characteristic defense styles (1954; p.319-24). HFM Ss are
characterized by varied and persistent goal-directed behaviors. LFM\(_A\) Ss are characterized by a tendency to engage in defensive behaviors but of an avoidant rather than excuse-making nature, while LFM\(_F\) Ss are described as given both to defensive behavior, in general, and excuse-making, in particular.

Results tend to support the predicted positions occupied by the three groups. With total defensiveness as the dependent measure, HFM Ss show the least amount of imitation, with LFM\(_A\) and LFM\(_F\) Ss revealing moderate and high levels, respectively. The difference between HFM Ss and LFM\(_A\) Ss however, show only a trend in the predicted direction. With imitative defensiveness as the dependent measure, differences between the two LFM groups wash out and they appear to operate more alike, both significantly different from HFM Ss. The fact that the two LFM groups tend to respond differently under total defensiveness and not under imitative defensiveness invites explanation. It seems likely that this difference is largely due to the generally cautious nature of LFM\(_A\) Ss. They apparently will imitate freely defensive statements for which guidelines concerning expected consequences have clearly been established, but are reluctant to generalize these expectancies to other defensive responses. Thus, they show as much imitative defensiveness as the other LFM group but significantly less non-imitative defensiveness.
The fact that LFMA Ss do imitate a given defense, which apparently is out of keeping with their usual style, points up even further the effectiveness of models in "shaping" defensive behavior. It suggests, for example, that established defensive response hierarchies might well be changed through exposure to appropriate models. This hypothesis is readily amenable to future research, and the present imitation paradigm should serve as an adequate means of testing it.

**Modeling as an experimental technique for extending SLT**

This study has briefly outlined a theoretical basis for extending SLT into the area of differential defensive prediction. A formula, encompassing this rationale, was presented as follows:

Formula (2) \[ BP_{\text{def}_A} = F(F_{\text{low}} & \text{NV}_{\text{high}}) + \]

\[ (2a) \ f(E_{\text{sr}_{\text{def}_A}} & \text{RV}_{\text{sr}_{\text{def}_A}}) + f(E_{\text{pun}_{\text{def}_A}} & \text{RV}_{\text{pun}_{\text{def}_A}}) + \]

\[ (2b) \ f(G_{\text{Ed}_{\text{def}}}) \]

This may be read: Given a state of low freedom of movement and high need value, the probability of a given defense occurring is a function of expectations for valued substitute reward plus expectations for negatively valued consequences associated with that defense, both in the situation and derived through past experience. The focus of this formula is, therefore, upon a complex interaction of situational expectancies as well as historically-based expectancies for substitute reward and
punishments associated with available defensive behaviors.

The present study attempted to systematically vary situational expectancies through the introduction of a model and clearly-defined response consequences to that model in the form of sympathy, neutrality and interpretation. It was assumed that these experimental treatments would serve as guidelines for altering an observer's expectancies for what is potentially rewardable or punishable behavior in that situation. More specifically, it was assumed that (1) exposure to a defensive model should reduce expectancies for punishment of that behavior; (2) the promise of sympathy as a substitute reward should serve to increase defensive elicitation and imitation over simple exposure to a model, and (3) that the response-consequence of interpretation should serve to suppress defensive behavior by increasing expectancies for punishment.

In general, present results have supported the expected disinhibitory effects of models in eliciting both total and imitative defensiveness in a failing situation. These effects, however, are largely accounted for by LFM subjects. As predicted, interpretation has served to significantly decrease the expression of this behavior, but the expected facilitative effects of sympathy have failed to be demonstrated. Thus, only partial evidence in support of the revised formula for specific defensive elicitation has been provided. It remains to be answered at this point whether present operations constitute an adequate test of
Formula 2a or whether a reformulation of that statement is in order. Most salient in attempts to operationalize Formula 2a is the absence of a measure of subject's need for sympathy as a substitute reward and the failure to clearly identify, except in very rough terms, the characteristic defense styles represented by the three groups, as called for in Formula 2b. Thus, the study cannot be taken as a fully adequate test of present formulations. At a commonsense level, however, it seems reasonable to assume that of the three groups represented, LFMp Ss should show the highest need for substitute rewards in general by virtue of their characteristic attempts to extort attention from others through bragging, resorting to big plans and so forth. Differences for this group alone under sympathetic and neutral conditions, however, are insignificant. In fact, none of the three groups show any differences under the two conditions. This finding parallels the results of other studies which have shown that performance by a model of socially-disapproved responses without aversive consequences produces disinhibitory effects analogous to a positive reinforcement operation (Bandura, 1965a; Crandall et al., 1964). At the same time, the effects of interpretation as a suppressing agent have been demonstrated in the present data and, similarly, parallel previous findings concerning the inhibiting effects of negative response consequences upon deviant response elicitation (Walters, et al., 1963; Bandura, 1965a).
The regularity of this pair of findings and their importance for the present theoretical statement necessitates some attempts at explanation. Taken as a unit, the two findings might well point up the importance of attentional variables in a disinhibitory situation. Commonsense suggests that an observer attends in a disinhibitory situation not to the potential rewards available but to the more overriding threat of punishment, as a result of historically-derived expectancies for negative and not positive consequences in similar situations. In other words, attention is initially drawn to the possible punitive aspects of deviant response expression because this is what one comes to expect based upon previous experience. Thus, the relative power of negative versus positive consequences upon disinhibition may simply reflect differential levels of attending.

While tenable, this explanation does not fully explain the present data. Some subjects, though not a significant number, do show increased imitation under sympathetic conditions. It seems likely, therefore, that alternative or additional factors must be operative. Focusing simply upon the apparently non-facilitative aspects of sympathy, two hypotheses occur in an attempt at explanation: (1) While sympathy is indeed a reinforcing substitute reward, it is valued only in the context of an established relationship. In other words, sympathy from a total stranger, such as an experimenter, does not provide much solace
or comfort when one is failing at an important task. Punishment, on the other hand, can be as effective from a stranger -- in some ways, more effective -- as from a friend or parent. This is, perhaps, the most parsimonious explanation in dealing with present results. In terms of Formula 2a above, it suggests that the $N_{sr}$ term was, contrary to expectation, unaffected by present experimental manipulations, and that this data cannot, therefore, be taken as disconfirmatory of the proposed formulae. Empirically, it is possible to test this hypothesis by simply varying the extent to which the subject and experimenter have established a relationship prior to the introduction of the sympathetic operation.

(2) An alternative explanation, which seems less parsimonious, but does nonetheless account more inclusively for the replicated finding that a reinforcement operation in a disinhibitory situation functions no better than non-reward might be stated as follows: Rewards, when inconsistent with culturally derived expectations of consequences, result in conflict which is resolved through dissonance-reducing procedures or simply "tuning out" the proffered reward. While it will be up to future research to disentangle these issues, there is some minimal support, based primarily on observation and post-hoc analysis, for this position. In general, many subjects appeared to respond to the experimenter's efforts at sympathy with vague signs of discomfort and disbelief. This did not appear to the case under interpretive consequences where negative reward is consistent with culturally-derived
expectations. Resolution of this conflict, if indeed it does occur, appears to follow a dissonance-reduction model. This hypothesis is based on the rationale that variances under sympathetic conditions should be consistently higher than under neutral conditions as a function of a dissonance-reduction solution. While such consistency is not apparent initially, inspection of the data indicates that one LFM_A subject under neutral conditions obtained an inordinately high score and accounts, therefore, for most of the variance under that condition. By eliminating him for purposes of the present argument, corrected variances for both the LFM groups under sympathetic and neutral conditions, respectively, reveal the expected pattern (LFM_A $s^2$: 13.37; 2.00. LFM_P $s^2$: 46.98; 30.17). Following Edward's suggestion (1960, p. 104), an F-test for comparing variances was computed which resulted in a significant difference for LFM_A Ss ($F=6.69, p.<.01, df=9/8$) and a suggestive trend in the expected direction for LFM_P Ss ($F=1.58, p.=.25, df=9/9$). Thus, it tentatively can be argued that LFM Ss appear to respond to positive reward in a disinhibitory situation with conflict which is ultimately resolved through conventional dissonance-reduction procedures. The argument is further heightened by the fact that LFM_A Ss show the greatest disparity of variances under the two conditions, and, therefore, based upon present reasoning, the highest conflict under sympathetic conditions. At a clinical level, this data
is in keeping with the usual description of LFM $S$s as being more inhibited, internally-conflicted, and therefore, more responsive to conflict-arousing situations. Inspection of HFM $S$s, on the other hand, indicates that there is a slight but insignificant tendency for decreased defensive elicitation under sympathetic conditions. It may be that just as they appear to reject the model himself, offers of reward for engaging in deviant responses may similarly be rejected.

In summary, it has been tentatively argued that the failure of sympathy to serve as a facilitative elicitor of defensiveness might be related to two factors: (1) Sympathy takes its reinforcement value largely in the context of an established relationship, a condition unmet in the present study or (2) rewards, in general, in an essentially disinhibitory situation, result in conflict which is resolved through conventional dissonance-reduction procedures or simply rejecting the reward possibilities.

The validity of these formulations is, of course, a matter for future research but the economy of the former explanation makes it most tenable and amenable to study. Logically, however, neither explanation appears to negate Formulae 2a and 2b which were advanced initially in an attempt to extend Rotter's Social Learning Theory into the area of differential prediction of defensive behavior. Rather a more sophisticated treatment of the expectancy ($E_{Sr}$) and need value ($NV_{Sr}$) operations seems
indicated in future studies which explore these formulae. It cannot be assumed, as in the present research, that the simple operation of "promising" reward is equivalent to increasing expectancy for such reward, nor that the reinforcing properties of sympathy are equivalent from all sources.

The modeling situation

It has justifiably been argued that the artificiality of the modeling paradigm makes untenable the conclusion that all modeled behavior is equivalent to behavior enacted in real life. Kaufmann (1965) points out for example, that aggression directed towards a Bozo doll is by no means the same as aggression which is designed to hurt another person. These criticisms, coupled with the unaccounted for powerful demand characteristics (Orne, 1962) of the modeling situation, unite to cast some question upon the generalizability of this body of results to any real-life situations. Perhaps, more than other imitation studies, however, the present research circumvents some of these difficulties by providing a meaningful social context -- a "smokescreen", as it were, in the form of an engaging game of skill -- for the introduction of models and the subsequent experimental manipulations. It is, in this respect, more plausibly tied to life-like situations than the typical imitation study which, artificially and unimaginatively, introduces a model, a Bozo and a set to "aggress."

Behavior which has emerged in this situation seems, at face,
therefore, more representative of that class of behavior at a real-life level. Examination of the defensive responses themselves (e.g., "My eyes keep changing." "I never could shoot cause I got heart trouble." "I can't shoot since that fat guy sat on my head.") does, in fact, suggest that the present situation was seen by subjects as meaningful, important and quite real.

By the same token, the second problem -- demand characteristics inherent in the modeling situation -- also seems to pose less of a problem for the present study than for Bandura's work. It could be argued, according to this point of view, that the introduction of a model with no apparent rationale leaves open the possibility that subjects emulate models simply because they wish to be pleasant in a rather awkward situation. It is, after all, difficult to let down an adult who has so sincerely given of his time and so obviously gone through a great deal of difficulty in setting up all this expensive apparatus. Thus, in the present study, the conclusion that subjects verbalized defensive statements because this appears to be, in some vague way, what is demanded of them, might be advanced. Clearly, a measure of anxiety-reduction as a function of defensive elicitation would have most effectively established their validity as self-protective measures and reduced, thereby, the argument of "hollow" verbalizations offered out of a desire to please. Again, however,
the life-like impact of the present situation, as reflected in defensive responses noted above, strongly underscores the atmosphere of desperation and failure out of which these comments have sprung. In other words, responses such as "My eyes keep changing" and "I never could shoot cause I got heart trouble," hardly sound like the stuff of which an approval motive is made.

**Future research**

Suggestions for future research have been advanced in the body of this discussion. Perhaps the most significant of these involve the use of the present experimental technique for further exploration of defensive behavior. Several directions seem promising at this point: (1) What range of defenses are amenable to imitation? (2) Can established defensive styles be "reshaped" through the introduction of appropriate models? (3) Can defensive styles initially be acquired through simple imitation of important models? These general questions represent logical extensions of the present work and appear amenable to empirical test by employing the experimental technique advanced in this study.
CHAPTER VII

SUMMARY

The purposes of the present study were threefold: (1) the extension of modeling effects to a new class of behaviors -- defensive behavior; (2) the elaboration of Rotter's Social Learning Theory (SLT) into the area of differential defensive prediction, and (3) the employment of a personality measure, freedom of movement (FM), derived from SLT, to predict to extent of modeling.

The basic design called for the exposure of HFM and LFM Ss to a model, who in the face of failure at a task, consistently enacted the defense of excuse making. Three response consequences were differentially provided by the experimenter to the modeled defensive statements as follows: positive (or sympathy), neutral (or no comments), negative (or interpretation). Following exposure to the model and subsequent response consequences, the children were placed in a similar task situation and they, too, were failed. Control children were also failed in the situation but did not view the imitation film.

Two dependent measures were employed: total defensiveness and imitative defensiveness. Predictions for these two classes
of behavior paralleled one another. In general, it was hypothesized that the model would serve to elicit increased defensiveness and would, in addition, serve to "shape" the nature of this defensiveness along imitative lines. Further, it was expected that LFM Ss would show more modeling effects than HFM Ss, based upon Rotter's position that FM represents a dispositional variable for engaging in non-constructive behavior.

A theoretical rationale outlining conditions for differential defensive prediction within SLT was advanced. In general, this rationale holds that such prediction is a function of expectancies for substitute reward and punishment associated with that defense, both within the situation and built-up through previous experience. The present study attempted to systematically vary situational expectancies for substitute reward and punishment through the introduction of positive, neutral and negative response consequences. It was assumed that such treatments would serve as guidelines for altering expectancies concerning the consequences of defensive behavior, in general, and excuse-making behavior, in particular. More specifically, it was assumed that the sympathy condition would be most facilitative; the neutral condition, moderately facilitative, and the interpretive condition, inhibiting.

Results of the study, in general, support the major predictions. The effects of models upon the elicitation and shaping of defensiveness were demonstrated and these differences were greater
for LFM Ss than HFM Ss, as predicted. The expected effects of the response-consequent conditions were only partially supported. Interpretation was shown to be a significant suppressing agent, but the facilitative effects of sympathy were not demonstrated for either dependent variable. It was argued, in an attempt at explanation, that (1) sympathy takes its reinforcement value largely in the context of an established relationship, a condition unmet in the present study, and (2) a positive reinforcement operation in an essentially disinhibiting situation could result in conflict which is ultimately resolved through conventional dissonance-reducing procedures or through rejecting the reward.

Finally, several general directions for future research into defensive behavior employing the present experimental technique were advanced.
APPENDIX A

Imitation Film

Action

Shot panning Major Jones, seated at desk with numerous trophies displayed.

Close-up of target, and Close-up of chart:
  9 = marksman (badge shown)
  11 = sharpshooter (badge shown)
  12 = expert (badge shown)

Major Jones indicates with pointer.

Quick shot of Major Jones

Close-up of GI Joe loading pistol.

GI Joe aims and fires #1, Observer is looking through scope.

GI Joe aims and fires #2

GI Joe aims and fires #3

GI Joe aims and fires

Close-up of target (showing two hits and two misses)

GI Joe fires #5

Script

Major Jones: This is a film about a soldier who is trying to win a medal for good shooting. We will call him GI Joe. GI Joe will have 15 shots with a pistol.

He will be shooting at this target. He must get at least nine hits in the black center in order to win a medal. This is an official army test. If he gets 9 hits, he will be a marksman. If he gets 11 hits, he will get a sharpshooter badge. If he gets 12 or more he will get the expert medal. This is the highest medal for good shooting that the army gives.

I am Major Jones, GI Joe's Commanding Officer. Let's watch and see if GI Joe can win a medal.

This is GI Joe now.

Observer: (seconds later) A miss

Observer: (seconds later) A hit

Observer: (seconds later) A miss

Observer: (seconds later) A hit

Observer: That makes 2 hits and 2 misses.

Observer: Miss

GI Joe: Aw, my finger slipped. (Wipes hands)
APPENDIX A (CONTINUED)

**Action**

GI Joe fires #6

**Script**

Observer: Miss
GI Joe: Aw, something down there made me jiggle it.

GI Joe fires #7

Observer: Miss
GI Joe: Oh, it slipped again.
(Wipes hands)

GI Joe fires #8
Quick close-up target.

Observer: Hit. (seconds later).
That makes 3 hits and 5 misses.

GI Joe fires #9

Observer: Miss
GI Joe: I'm much better with a different gun.

GI Joe fires #10

Observer: Miss
GI Joe: I wish this was a rifle.
(Assumes rifle stance)

GI Joe fires #11

Observer: Miss
GI Joe: If only I had a rifle.
(Assumes rifle stance).

GI Joe fires #12
Close-up of target

Observer: Hit. (seconds later)
That makes 4 hits and 8 misses.

GI Joe fires #13

Observer: Miss
GI Joe: I haven't really been trying.

GI Joe fires #14

Observer: Miss
GI Joe: I'm glad I don't care about this.

GI Joe fires #15

Observer: Miss
GI Joe: Really, I'm glad I didn't win.

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APPENDIX B

Response Consequences

RATIONALIZATION: Sympathy Condition

1. Aw, my finger slipped.
2. Aw, something down there made me jiggle it.
3. Oh, it slipped again.

E: It's too bad that keeps happening.

4. I'm much better with a different gun.
5. I wish this was a rifle.
6. If only I had a rifle...

E: It's too bad he didn't have another gun.

7. I haven't really been trying.
8. I'm glad I don't care about this.
9. Really, I'm glad I didn't win.

E: I can see how he could feel that way.

SUMMARY STATEMENT: Well, the soldier didn't seem to do too well. But he had so many troubles. I'm sure he could have done better otherwise.
RATIONALIZATION: Interpretation Condition

1. Aw, my finger slipped.
2. Aw, something down there made me jiggle it.
3. Oh, it slipped again.

   E: I wonder if he isn't making excuses.

4. I'm much better with a different gun.
5. I wish this was a rifle.
6. If only I had a rifle...

   E: The worst he does the more he seems to blame it on the gun.

7. I haven't really been trying.
8. I'm glad I don't care about this.
9. Really, I'm glad I didn't win.

   E: I wonder if he isn't saying that because of his missing so much.

SUMMARY STATEMENT: Well, the soldier didn't seem to do too well.
He seemed to be making a lot of excuses over his poor shooting.
APPENDIX C

Teacher's Nominations

The following presents the personality descriptions employed in the nominations of subjects and the original Level of Aspiration pattern upon which they are based, as initially set down by Rotter (1954; p. 319-321).

1. LFMA (Avoidant Pattern): This student seems uncertain about how well he will do and gives the impression he would rather not try and possibly fail. He impresses others as lacking in confidence. This might be reflected in a hesitancy to speak up in class even if he thinks he knows the answer. It might also be reflected in a hesitancy to try new tasks or to play new games. In short, he simply doesn't seem willing to take a chance. On the playground he shys away from new games. In the classroom, doing well seems to be a matter of life or death. If he fails, he gets very upset. If he succeeds, it doesn't seem to add to his confidence.

The above LFMA description was written from the following pattern:

(Avoidant Pattern): High Negative D-score Pattern. This response is characterized by an average number of shifts and frequent shifts down after success. D-scores are generally below -2.0.

Predominant in the subject's behavior is the desire not to take a chance, to avoid failure at all costs. This is the extreme of the low negative pattern. (Pattern No. 7, p. 321).

2. LFMP (Fantasy Achievement Pattern): This student tries to be among the best students even though his work is only average or perhaps below. If he fails, it doesn't seem to diminish his confidence. He likes to talk or brag about what he plans
to do, but never gets around to doing it. He seems to gain satisfaction in this way, whether he succeeds or even follows through. In short, he would like to be noticed, but in the absence of success, resorts to big plans and bragging.

The above LFM description was written from the following pattern:

(Fantasy Achievement Pattern): Very High Positive D-Score Patterns. In this response there is an average amount of shifts and frequently one or more shifts upward after failure. D-Scores are usually above +6.0. In this pattern the reaction is largely a phantasy response. The subject leaves the reality of the situation and gains his satisfaction merely from the statement of high goals itself or by implying by the statement that he expects to do well and, in fact, is surprised that he is not reaching his goal. This lack of contact with reality is often emphasized by a larger number of unusual shifts up after failure, and by the "repression" of failures. (Pattern No. 6, p. 321).

3. HFM (Reality Pattern): This student usually expects to do well in everything he tries and does do well. He might be characterized by others as confident. In the classroom he sets goals within his reach and manages to successfully complete them. He is not fearful of new tasks. In fact, he seems to welcome them. If he doesn't understand something, he will ask about it. If he thinks he knows the answer, he is not hesitant to speak up. On the playground he actively participates with the other children. He doesn't seem to shy away from new games, but, in fact, enjoys them. If he does fail, he doesn't get extremely upset or make a lot of excuses. Failure, whether in the classroom or on the playground, isn't a matter of life or death. He takes it in stride and frequently ends up trying harder or attempting a different way to succeed.

This HFM description written from the following pattern:

(Realistic Pattern): Low Positive D-Score Pattern. In this response estimates are on the average higher than past performances but adequate adjustments are made to success and failure. D-scores usually range from 0.0 to +3.0. There is an average number of shifts and generally an absence of unusual shifts. If there is one unusual shift, it occurs under somewhat justifiable circumstances.
This is the culturally "normal" reaction to success and failure, a middle ground between flexibility of reaction to success and failure and stability. Expressed goals are above but not too far above past accomplishments. (Pattern No. 1, p. 319).
APPENDIX D

Subject Response Sheet

Name ____________________ Age ___ Grade ____ Number ______

Practice: Hits ______ Misses ______

Pre-Film Comments:

Film Comments:

100
APPENDIX D (CONTINUED)

Gun Situation:  Hits________________  Misses________________

Responses:    (S) = Spontaneous;  (Q) = "What's happening?"
APPENDIX D (CONTINUED)

Post-Experimental Questioning:

1. How did you like the game?

2. How well do you think you did? What happened?
APPENDIX E

Scoring Manual

The following scheme and examples illustrate the manner in which the dependent variables (total and imitative defensiveness) are scored. Non-imitative defensiveness is defined as statements in which the clear-cut attempt is to protect self-esteem in the face of failure (Score 1). Partially-imitative responses are defined as those responses which capture the essence of a defensive theme or employ some of the behavior and verbalizations enacted by the model (Score 2). Directly imitative defensiveness is defined as word-for-word reproduction of the model's verbalizations (Score 3).

Comments which are repeated are also scored, as in the example, "My foot keeps slipping." (Score 2). "It's still slipping." (Score 2 again). Elaborations of comments, however, are not given additional scoring as in the case, "I have never shot a gun before." (Score 1). "Oh, once I did but that was over at Mark's house and that was a long time ago." (Do not score).
Imitative Categories

1. Unusual movement (slipping, jiggling, etc.) which affects performance.

   **Imitative:** (Score 3)

   1. Aw, my finger slipped.
   2. It slipped again.
   3. Something down there made me jiggle it.

   **Partially-imitative:** (Score 2)

   1. It's just slipping in my hand.
   2. My foot keeps slipping.
   3. The gun jiggled.
   4. Wipes hands (Behavior)

2. Statements which imply the Subject could do better with a rifle.

   **Imitative:** (Score 3)

   1. I wish this was a rifle.
   2. If only I had a rifle.

   **Partially-imitative:** (Score 2)

   1. I can only shoot with a rifle.
   2. It's not just like a rifle.
   3. Assumes rifle stance (Behavior)

3. Statements which imply the Subject could do better with a different gun.

   **Imitative:** (Score 3)

   1. I'm much better with a different gun.

   **Partially-imitative:** (Score 2)

   1. I never was good at these guns.
   2. I can't shoot with a pistol either.
APPENDIX E (CONTINUED)

4. Statements which imply the Subject is not putting out his best effort.

Imitative: (Score 3)
1. I haven't really been trying.

Partially-Imitative (Score 2)
1. I wasn't aiming that time.
2. I was just going like that (Feigns indifference).

5. Subject denies caring about his performance or winning.

Imitative: (Score 3)
1. Really, I'm glad I didn't win.
2. I'm glad I don't care about this.

Partially-imitative (Score 2)
1. I'm not disappointed (about losing).

General Defensive Statements (Score all 1).

1. Unusual physical or emotional states which affect performance.
   1. My arm is weak.
   2. My eyes keep changing.
   3. I get nervous when I'm shooting.
   4. My eyes get glary.
   5. I was keeping my eye on the wrong one.

2. Unpredictability of the target.
   1. When I shoot it again, the rocket went through a different hole.
   2. I didn't know when the rockets were going to come.
APPENDIX E (CONTINUED)

3. Difficulty with trigger.
   1. It only went off when the rocket got between the holes.
   2. The trigger is a hard one.

4. Lack of experience or knowledge specific to the game.
   1. I haven't shot a gun before.
   2. I don't know if you look through this (the sight) or not.
   3. I never learned to shoot at a moving target yet.

5. Timing of shooting was off.
   1. I was shooting too late.
   2. The last one, I did it too quick.

6. Comments which suggest the Subject narrowly missed. (This is scored because there is no realistic way in which to determine this).
   1. I just missed it.
   2. It went right by it--almost touched it.

7. Difficulties because of the target.
   1. She went so slow I couldn't hit 'em.
   2. The rocket goes past too fast.

8. Something interferes with free movement of the gun.
   1. I can't get at the one I want to shoot at.
   2. If I could get this higher (the gun), I could probably aim it at the top one.

   1. I didn't even fire it that time.
10. Attributing responsibility to the gun.
   1. It missed.
   2. I aimed right but it missed.

11. Difficulties with the construction of the gun.
   1. I think the handle on the bottom disturbs me.
   2. This shouldn't be like that (indicates gun is incorrectly constructed).

12. Miscellaneous difficulties.
   1. I can't shoot very good sitting down.
   2. It (the gun) doesn't shoot anything.
   3. The chair is wiggly.
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