THE EFFECTS OF MOTIVES AND THE EGO DEFENSE OF DENIAL ON DEFENSIVE PROCESSES IN PERSON PERCEPTION

By

Avi Assor

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Psychology

1981

ABSTRACT

THE EFFECTS OF MOTIVES AND THE EGO DEFENSE
OF DENIAL ON DEFENSIVE PROCESSES
IN PERSON PERCEPTION

By

Avi Assor

The concept of a defensive process played an important role in many major theories of personality, psychopathology, and psychotherapy. A defensive process was viewed by most theorists as consisting of the following three essential components: (1) arousal of anxiety following the perception of a threatening stimulus; (2) defensive cognitive activity involving the denial or diminution of the threatening aspects of the stimulus; and (3) reduction in level of anxiety following the defensive cognitive activity. Despite the importance of the concept of a defensive process and despite the wide consensus regarding its essential nature, the operation of a complete defensive process, including all three essential components, has never been demonstrated empirically. The major purpose of the present study was to demonstrate the operation of such a process. The specific phenomenon and procedure selected to demonstrate the hypothesized defensive process involved exposure of dominance oriented individuals to motivationally threatening target persons.

In addition to its primary purpose, the present study also provided an opportunity to examine the effects of the dependency motive and

the ego defense of denial on perceivers emotional reactions to the perception of motivational threats to their dominance and dependency motives (i.e., first defensive component).

Fifty males, who were classified as high on dominance or on dependency motivation and high or low on denial, were assigned to two motivational threat conditions. In both conditions subjects observed a video-tape of a dominant person working with a submissive person on a rescue problem. However, in the "Dominance Threat" condition subjects expected to evaluate and later work with the dominant person, whereas in the "Dependency Threat" condition subjects expected to evaluate and later work with the submissive target person. Subjects' skin conductance was monitored as they observed and evaluated the target persons orally. Subjects were classified as dominants or dependents on the basis of their scores on the shortened version of the Dominance scale of the CPI (Assor, Aronoff, & Messé, 1981) and the Succorance scale of the EPPS (Edwards, 1959). The ego defense of denial was assessed by means of the Reversal scale of the DMI (Gleser & Ihilevitch, 1969). Subjects' phasic electrodermal activity (EDA) served as an indicator of emotional autonomic arousal and anxiety.

Results showed that, as predicted, a complete defensive process, including all three components, was evidenced for threatened dominance oriented subjects, who used the oral evaluation defensively. More specifically, dominance oriented subjects showed an increase in phasic EDA after they observed the motivationally threatening dominant target person (i.e., first component), and after they used the evaluative activity defensively to devalue the dominant target person (i.e., second component) they indeed showed the expected relative reduction in phasic EDA.

Results also showed that, as predicted, dependency oriented subjects responded with greater phasic EDA to the target persons who posed a more severe threat to their dependency motive. As expected, the ego defense of denial moderated the effects of threatened motives on autonomic arousal. Thus, among subjects whose predominant motives were threatened, those subjects who were high rather than low on denial showed a higher level of phasic EDA.

The discussion underscored the theoretical significance of the present research as the first investigation which demonstrated the operation of a complete defensive process experimentally. Discussion focused on the maladaptive consequences of the defensive cognitive activity of devaluation, the importance of motives and ego defenses as determinants of physiological stress reactions, the differential effect of motives on covert emotional reactions versus overt behavior, and the utility of the present findings in demonstrating the limitations of Schachter's and Singer's (1962) theory of emotion.

To Tirtza

ACKNOWLEDGMENTS

Many people deserve thanks for their assistance in the preparation of the dissertation. I wish to thank Dr. Joel Arnoff for his support, advice, and guidance throughout my doctoral studies. I especially appreciate Joel's emphasis on quality, his enthusiasm for intellectual inquiry and psychological research, and his willingness to take a great deal of interest in my professional development and research activities without trying to impose his own approach or research interests on me.

I wish to thank Dr. Lawrence Messé for his help throughout my graduate studies. Larry provided an example of a critical, open-minded, serious, yet not pompous, psychologist. My discussions with him improved the quality of my research and helped to solve many difficult problems.

Joel's and Larry's thorough, thoughtful, prompt, and frequent feedback during the last stage of the dissertation project was particularly valuable. Their advice on theoretical, methodological, and editorial issues helped to improve the quality of the dissertation considerably and their interest and encouragement helped to increase my motivation and enthusiasm during the laborious writing and revising process.

I wish to thank Dr. Albert Rabin for his critique of the manuscript. His comments helped to clarify a number of theoretical issues and improved the clarity of the presentation. I wish to thank Dr. Hiram Fitzgerald for introducing me to the basic principles and literature of psychophysiology, and for his advice and comments regarding measurement issues in psychophysiology.

I wish to thank Dr. Norman Kagan who allowed me to use his laboratory, and introduced me to the practical aspects of psychophysiological measurement. I greatly appreciate his generosity and I would like to note that without his assistance this research would not have been possible.

Much deserved thanks go to the actors who participated in the preparation of the video-tape: Dennis Martin, Bruce Marr, Martin Winer, Allen Seagul, and Tom Zaret. I especially want to acknowledge the cooperation of Tom Zaret who agreed to undertake the preparation of a completely new video-tape after his first partner had to leave town prior to the completion of the video-taping.

I wish to thank David Anderson, former T.V. technician of the Psychology Department, for his generous assistance in producing the video-tapes. I enjoyed working with Dave and I greatly appreciate his patience and persistance.

Thanks are also due to the many undergraduate research assistants who helped to administer the research instruments, conduct pilot testing, record the physiological activity, and code the data: Jeff Levitt, Mark Boegehold, Chris Carmel, Denise Mohelman, Joy Gooding, Scott Gooding, Julie Endres, Jim Gordon, Mike Hoffman, and David Alvis. I appreciate their persistance in the performance of tasks which were often onerous.

I wish to thank Dr. Steven Neinaber and Dr. Penelope Hale, my clinical supervisors at the Psychology Department of Wyandotte General Hospital, for their support of my request for a limited amount of research time. Steve's and Penny's support and understanding made the completion of the dissertation much easier than I expected.

Finally, I want to thank Tirtza, my wife, for being a constant source of strength and understanding, and for the invaluable help she provided throughout the dissertation project.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Emotionally Mediated Defensive Processes in Person Perception: A General Introduction

Most personality theorists (e.g., Adler, 1927; Freud, 1936; Horney, 1945; Maslow, 1970; Murray, 1938; Rogers, 1951; Sullivan, 1948) have assumed that perceivers' needs and wishes can influence their perception and evaluation of other people through an emotionally mediated defensive process. While these theorists differ in their specific definitions of defensive processes, most of them agree on a few basic elements, which were first described by Freud (1936). According to Freud (1936), a defensive process is assumed to be activated by the perception of a threatening stimulus, which arouses anxiety. If the perceivers think that they cannot do anything to reduce the threat, then, some of them are likely to engage in cognitive activities that are aimed at the denial or diminution of the threatening aspects of the stimulus. This cognitive activity results in a reduced level of anxiety, at least temporarily.

According to the above description, a defensive process consists essentially of three basic components:

1. Arousal of anxiety--in response to the perception of a threatening stimulus.
2. Defensive cognitive activity--aimed at the denial or diminution of the threatening aspects of the stimulus.

3. Reduction in the level of anxiety--following the defensive cognitive activity.

Despite the strong consensus among theorists regarding the essential nature of defensive processes, not enough empirical evidence is presently available to demonstrate that perceivers' needs influence their perception and evaluation of other people through an emotionally mediated defensive process. To summarize the state of research on this problem, while many studies have demonstrated the existence of defensive cognitive activity (component 2), no study has demonstrated the third component (reduction in the level of anxiety) and only a few studies have demonstrated the first component (arousal of anxiety). Moreover, no research to date has demonstrated the existence and operation of all three components or processes in response to the same threatening stimulus.

The research that has addressed the question of defense most directly is often referred to as the "New Look" studies (Eriksen, 1963, 1968). These investigations have demonstrated that perceivers' individual dispositions affect their recall of threatening stimuli in a manner that appears defensive. Moreover, this work also yielded some evidence that personal characteristics can affect the recognition of threatening stimuli.

The "New Look" studies, however, did not demonstrate the existence of emotionally mediated defensive process in person perception, primarily for two reasons: (1) this research did not show that the cognitive activity was followed by a decrease in anxiety; and (2) in such work, the threatening stimuli and the targets for defensive cognitive activity were not people, but rather, words or unfinished tasks. In addition, with some exceptions (e.g., McGinnes, 1949; Lazarus & McCleary, 1951), most

investigations did not establish that the exposure to the presumably threatening stimuli actually increased perceivers' anxiety.

One minor limitation of the "New Look" studies as they apply to person perception is that the threatened personal concerns were limited to aggression, sex, and self-esteem. From the point of view of person perception, the inclusion for study of social motives such as dominance, dependence, and affiliation might have been desirable because of the potential impact of this type of motives on the pattern of social interaction and relations that perceivers might develop with the perceived person.

In addition to the "New Look" studies, there were two other sets of studies which demonstrated the impact of personal dispositions and needs on defensive cognitive activity. The first group of studies demonstrated that deprivation of physiological and psychological needs resulted in defensive cognitive activity (e.g., Lazarus, Yousem, & Arenberg, 1953; McLelland & Atkinson, 1948; Murray, 1959; Sanford, 1936, 1937). The second set of studies demonstrated that psychological motives and personality dispositions influenced person perception processes in a manner that appeared defensive (e.g., Assor, Aronoff, & Messe', 1981; Centers, 1971; Chance & Meaders, 1960; Jones, 1954; Jones & Daugherty, 1959; Thibaut & Reicken, 1955). However, both sets of investigations produced no evidence to support the notion of arousal and reduction of anxiety. In addition, the need deprivation research, like the "New Look" studies, did not examine defensive cognitive activity that was directed at other people.

The first component of the hypothesized defensive process--anxiety arousal following the perception of a threatening stimulus--was demonstrated by many studies. Within this area, a number of studies also

have demonstrated that subjects can be emotionally and physiologically aroused if their social motives, enduring behavior patterns, or racial preferences are threatened (e.g., Runkin & Campbell, 1955; Vidulich & Krevanick, 1966; Vogel, Raymond, & Lazarus, 1959; Von Egeren, 1979a, 1979b). However, these studies did not demonstrate the existence of defensive cognitive activity that operated to reduce emotional arousal.

The research that has come closest to demonstrating an emotionally mediated defensive process in person perception was conducted by Luborsky and his colleagues (Luborsky, Blinder, & Mackworth, 1963; Luborsky, Blinder & Schimek, 1965). In that investigation, subjects' tendencies to use the defenses of isolation and repression were measured by a number of instruments. Then, in a separate session, subjects were asked to look at pictures that were classified previously either as sexually or aggressively threatening or as nonthreatening. As they observed the pictures, subjects' electrodermal activity and eye fixations on the pictures were monitored. Later, the subjects also were asked to recall the pictures.

Luborsky et al. (1963) reported that the threatening pictures were associated with greater electrodermal activity than were the nonthreatening pictures. In addition, subjects tended to show more avoidance tendencies, in terms of both looking activity and recall, in response to the pictures which were associated with greater electrodermal activity.

In a further analysis of data from the same study, Luborsky et al. (1965) found that the defense of isolation was strikingly associated with venturing to look around more, whereas the defense of repression was associated with looking around less, and that "isolators" were better than "repressors" in their recall of sexual content. In addition, they

also found that repression was positively correlated with electrodermal activity for sexual pictures, but negatively correlated with electrodermal activity for nonthreatening stimuli.

Luborsky and his colleagues' research demonstrated the existence and operation of the first two components of the emotionally mediated defensive process. However, like many of the studies cited previously, this research did not demonstrate the existence of the third component, reduction in level of anxiety as a result of defensive cognitive activity. In addition, since the study investigated reactions to pictures rather than to people with whom one expects to interact, the generalizability of the findings to defensive reactions in actual social encounters is seriously limited.

Threatened Motives as Activators of Emotionally Mediated Defensive Processes in Person Perception

In light of the lack of sufficient evidence, the present study was designed to demonstrate the operation of the three essential components of the emotionally mediated defensive process in person perception. The first step in demonstrating such a process was to select a threatening stimulus that would activate the defensive process.

While personality theorists propose a variety of different threatening stimuli which may activate defensive processes in person perception, most of them share at least one basic premise concerning the kind of stimulus which will activate a defensive process. According to this premise, a defensive process would be activated if perceivers feel that a target person might threaten the continuing gratification of their enduring and predominant motives, and that there is little they can do to prevent the threat from materializing. Because of the relatively

strong theoretical consensus regarding this basic premise, it seemed to be a logical starting point for the empirical testing of the notion of emotionally mediated defensive person perception. However, before we present the current investigation in detail, we would like to demonstrate briefly that the proposed premise concerning the activation of defensive person perception, indeed, is supported by many of the major theoretical approaches to personality.

The Status of Threatened Motives as Activators of Defensive Processes in Person Perception in Some Major Theories of Personality

In orthodox psychoanalytic thinking, the broad concept of character (Fenichel, 1945) seems to contain within its domain the more specific concept of enduring motive. According to Fenichel, a character of an individual consists of this person's general, stable, and largely ego-syntonic mode of adaptation to the long term internal and external demands experienced by the individual.

Depending on their central conflicts and major defenses, as well as external circumstances, different characters are assumed to have developed different enduring motives (with concomitant interpersonal styles) which they habitually try to gratify in their daily interactions with other people. The continuing gratification of these motives provide individuals with what can be described as their first line of defense. Thus, the gratification of motives allows individuals to continue to avoid facing more deep, painful, and disturbing conflicts. Therefore, enduring motives determine both the kinds of gratification which individuals generally seek from other people and the threats and frustrations to which these people are most vulnerable. For example, an individual with an oral-dependent character is assumed to have very different motives than an individual with an anal or narcissistic character.

The fact that orthodox psychoanalysis viewed motives as an important aspect of people's characters is clearly demonstrated in Fenichel's (1945) discussion of the inability of persons with severe character disorders to form healthy relationships with other people. Thus, he makes the following statements about individuals with severe character disorders:

> The interest in external objects exists because external objects represent either a threat or a potential gratification . . . some predominant need, overshadowing everything else, more or less excludes real object relationships, because the objects are used in order to satisfy the predominant need. (p. 508)

Among current psychoanalytic thinkers the concept of character recently has been discussed widely, especially with regard to the question of narcissistic characters. Many of these theorists also have described in great detail the different ways by which a given motive, as the dominant feature of an individual's character, may serve as a defense against a more basic and painful conflict. For example, Kernberg (1975) proposed that the striving toward self-aggrandizement and the concomitant tendency toward devaluation of other people that constitute the most salient overt motivational features of narcissistic characters actually serve as a defense against emotional dependence on other people.

According to Kernberg, narcissistic individuals try to avoid dependency because they are afraid that close emotional involvement with others would activate:

> More primitive, pathological object relations centered around narcissistic rage and envy, fear and guilt because of this rage, and yet a desparate longing for a loving relationship that would not be destroyed by hatred. (p. 274)

Thus, the need for the love of the primary object represents the most basic need of the narcissistic character, whereas a secondary set

of needs involves the need to demonstrate independence and express anger in relation to the primary love object. The overt motivation toward self-aggrandizement and avoidance of interpersonal closeness, therefore, represents a defense against an underlying conflict involving more basic but covert needs.

The terminology used in the present study reserves the name motive for the readily observable overt strivings which characterize individuals. The term need designates the more basic, less specific, and often covert forces underlying the motives. It should be noted that the above distinction between need and motive is influenced by Aronoff's and Wilson's definition of peripheral motives and core basic needs in relation to Maslow's (1970) theory of motivation.

Orthodox psychoanalytic theorizing focused on intrapersonal rather than interpersonal conflict. Consequently, the constructs of predominant motivational orientation and character and their implications for defensive processes in person perception did not occupy a central place in analytic thinking. Many of the psychoanalytically oriented thinkers after Freud, however, placed a major emphasis on interpersonal relations and conflicts. As a result, they also emphasized the importance of interpersonal threats and the defense against such threats.

Sullivan (1948) postulated the process of selective inattention to the anxiety provoking attributes of others. Similarly, Horney (1945) proposed that in order to defend themselves against a state of basic anxiety, people develop three basic orientations toward others: moving towards, against, and away. Horney's concept of basic orientation has much in common with the construct of motive. Thus, the motive characterizing individuals who tend to "move toward" others is the need for dependency, which is expressed in attempts to attain support and protection

against helplessness. Individuals who are inclined to "move against" have a strong need for dominance, recognition, superiority, and control, as well as a strong need to avoid closeness, intimacy, and dependency. Persons who tend to "move away" have a need for detachment, withdrawal, and avoidance of closeness.

According to Horney (1945), encounters with persons who appear likely to interfere with perceivers' ability to maintain their basic orientation and continue to gratify the needs associated with it tend to arouse anxiety and trigger a defensive process. It is interesting to note that in addition to situational, stimulus specific defensive perceptual biases, Horney also postulated the existence of cross-situational enduring perceptual biases, designed to protect the needs associated with the three basic orientations from frustration and threat.

The first characteristic that Maslow (1970) ascribed to the self-actualized, healthy individual was the ability to perceive others and the world in general in a nondefensive "fresh" way, undistorted by the perceiver's needs. Maslow, of course, also postulated the existence of enduring motives that are related to individuals' basic needs.

Because of his emphasis on the concept of need, Murray's (1938) approach is especially close to the basic premise tested in this study. Murray (1938) defined need as a force which "organizes perception, apperception, intellection, conation, and action" (p. 124) and which manifests itself by "leading the organism to search for or to avoid encountering or, when encountered, to attend and respond to certain kinds of press" (p. 124). Press was described by Murray as the degree to which external environmental stimuli such as people, events, or situations gratify or frustrate the organism's needs. According to Murray, different needs, by definition, have different presses.

Consistent with his general approach, Murray assumed that a certain need would activate defensive perceptual processes if the perceiver experiences or anticipates experiencing a negative press for that need. The process of anticipation of press to a certain need was called by Murray "pressive apperception." In the case of defensive person perception processes, the press would be another person who is experienced, or is expected to be experienced as threatening or frustrating to one of the perceiver's needs.

In summary, it should be noted that the premise that was examined in this study is essentially the same as Murray's conception of the interaction between need and negative press as the process responsible for the activation of defensive person perception.

The Effects of the Ego Defense of Denial on Emotionally Mediated Defensive Processes

The discussion of defensive processes in person perception has focused to this point only on one kind of personality variable, namely, psychological motives. However, based on the psychoanalytic literature (Freud, S., 1927; Freud, A., 1937) and on Lazarus and his colleagues' theoretical and empirical work (Lazarus & Baker, 1956, 1957; Lazarus & Alfert, 1964), it was hypothesized that the intensity and nature of the defensive process in person perception would be influenced by perceivers' preferred mode of defense, in addition to their predominant motives.

In this context, Lazarus' and Baker's (1956, 1957) conception of motive and defense as two determinants of individuals' reaction to stress seems particularly instructive:

> In the theoretical approach to psychological stress recently proposed by Lazarus and Baker (1956, 1957), two problems were emphasized. On the one hand, an individual's pattern of motivation was regarded as determining the potency of any situation in producing stress. On the other hand, once a stress reaction is aroused, the person's

> behavior depends upon his method of coping with the disturbance. (Vogel, Raymond, & Lazarus, 1959, p. 225).

People's methods of coping with emotional disturbance and stress long have been considered by psychoanalytic writers such as A. Freud (1937) to be at least partially determined by their preferred mode of defense. The "New Look" studies have demonstrated that people's mode of coping with emotional stress on the cognitive level is strongly affected by their defenses (Eriksen, 1963, 1968). Moreover, there also exists some evidence which suggests that defenses affect the degree of emotional arousal and disturbance in response to threat.

Lazarus and Alfert (1964) demonstrated that subjects high on denial (as measured by a number of MMPI scales) manifested a higher level of physiological arousal in response to a stressful film than did subjects low on this defense. In their verbal reports, however, subjects high on denial proclaimed to have felt less emotional disturbance than their low denial counterparts.

In another study, which previously was described at length, Luborsky, Blinder, and Schimeck (1965) demonstrated that when looking at sexually threatening pictures, subjects who were high on repression (as measured by a number of Rorschach scales) showed a greater degree of physiological arousal than subjects who were low on repression. The "repressors" also engaged in more avoidance looking. More recently, Notarius and Levenson (1979) showed that subjects who were less facially expressive in response to a threat of shock evidenced greater reactivity to it in terms of their heart rate responses.

Taken together, these studies have demonstrated that individuals who try to repress, inhibit, or deny their voluntary affective responses to threat show greater physiological reactivity to threat than do individuals

who are less inclined to try to repress, inhibit, or deny their affective reactions.

It seems reasonable to assume that this response tendency in individuals who are high on denial and inhibition is a function of their basic fear of experiencing, acknowledging, and expressing negative emotions and socially undesirable wishes. Therefore, when such emotions or desires are activated in them, individuals high on denial and inhibition feel more threatened and they actually experience more anxiety and stronger arousal of the autonomic nervous system than individuals who are low on denial and inhibition. At the same time, these defensive individuals try to deny and control their emotional reactions in those expressive channels that are more easily given to voluntary control by the nervous system, such as verbal reports and facial expressions.

Based on the research findings and theoretical considerations discussed to this point, it was hypothesized that individuals who are high on the tendency to deny negative emotions and socially undesirable wishes would show a greater degree of anxiety and autonomic arousal following the perception of a threat to their predominant motive than would individuals who are low on the defense of denial.

The Present Study

The Motives Chosen for Study: Dominance and Dependency

The motives selected for investigation in this study were dominance and dependency. In the area of personality theory, the theorist that provided the most extensive description of these motives is Karen Horney (1945). The dominance motive seems to constitute the core characteristic of Horney's "Moving Against" orientation (pp. 63-72) whereas the dependency

motive seems to constitute the core characteristic of the "Moving Toward" orientation (pp. 48-62).

In a variety of empirical investigations, the dimension of dominance-submission has emerged as one of the more central constructs of group process and social interaction (e.g., Bales, 1970; Leary, 1957; Mehrabian, 1972). Research also has shown that dominance and dependency related personality variables are important determinants of the position that individuals occupy along the dominance-submission dimension in a wide variety of groups (e.g., Bales, 1970; Leary, 1957; Megargee, Bogart, & Anderson, 1966; Schultz, 1958; Smelser, 1961). Thus, it seemed reasonable to posit that dominance and dependency are social motives that influence the manner in which individuals typically strive to structure the various interpersonal situations that they encounter.

Dominance-oriented persons seem interested primarily in the attainment of control of, and recognition from, the other members of the group, and, therefore, they strive to obtain higher status or leadership positions. Since the attainment and exhibition of control and superiority are so important for the dominance oriented persons, they try to avoid situations and relationship that reveal their direct dependence on other people. Consequently, they develop an overly emphasized need to demonstrate independence.

In contrast, dependency oriented persons primarily seem interested in decreasing their sense of helplessness and inadequacy by minimizing responsibility, shrinking from interpersonal conflicts and, most important, by obtaining the support of others through occupying lower status or follower positions. The support that a dependent person seeks from others is both emotional (i.e., reassurance and approval) and instrumental (i.e., help and guidance in making decisions, meeting demands,

and performing actions related to different aspects of one's daily existence).

The Manipulation of the Level of Threat Posed by Target Persons to the Dominance and Dependency Motives

In order to test the premise that an emotionally mediated defensive process in person perception would be activated in response to motivational threat, an attempt was made in the present research to create two contexts in which target persons would pose threats to the dominance or dependency motives of perceivers. In one context, the dominance motive received high threat and the dependency motive received low threat. This context was called the "Dominance Threat" condition. In the second context, the dependency motive received high threat, and the dominance motive, low threat. This context was called the "Dependency Threat" condition.

Previously, it was stated that an emotionally mediated defensive process would be triggered only if the motivational threat that is involved is serious and significant. This position is, of course, very similar to Murray's (1938) assumption that a need would be activated (and influence emotional and cognitive functions) only when adequate press is present. Based on these considerations, the first task of this study was to maximize the threat posed by the target persons to a particular motive in one condition, while minimizing the threat to the same motive in the other condition.

The choice of the particular motivational threat manipulation used in the present study, to a large extent, was based on the threat manipulation employed in a previous study by Assor Aronoff and Messe' (1981). In that study, subjects viewed a tape of two persons working together on three tasks. The level of threat which the target person posed to

perceivers' dominance and dependency motives was manipulated through the status attributed to one person relative to the other (i.e., relative rank, power, and ability). Results showed that as predicted dominance oriented perceivers evaluated the same persons more positively when they were presented as possessing less status than their partners, whereas the reverse pattern was true for dependency oriented subjects.

In light of the positive results of the previous study, it was assumed that radically different motivational threat conditions can be created if perceivers observe a very dominant and competent person working with a submissive and incompetent person, and expect to evaluate, and work with, one of these target persons. More specifically, it was hypothesized that dominance-oriented perceivers would be threatened more by the prospect of evaluating and working with a very dominant and competent person than by the prospect of evaluating and working with a submissive and incompetent person. Conversely, dependency oriented individuals were expected to be more threatened by the prospect of evaluating and working with a submissive and incompetent person than by the prospect of evaluating and working with a very dominant and competent person.

In order to insure that in the "Dependency Threat" condition, dominance oriented perceivers would not be threatened merely by the exposure to a very competent target person whom they do not expect to meet (as happened in the study by Assor et al., 1981), the difference between the task competence presented by the two target persons in the "Dependency Threat" condition was designed to be less large than in the "Dominance Threat" condition.

The design of the two motivational threat conditions was based on the notion that dominance oriented subjects would focus on the competitive, status, recognition, and control aspects of the situation, whereas

dependency oriented subjects would focus on the possibility of confusion, helplessness, and failure.

In summary, then, a "Dominance Threat" condition was developed in which subjects would observe a very dominant person working with a submissive person who was also much less task-competent than the dominant person. The subjects would expect to evaluate and work with the dominant person. In the "Dependency Threat" condition, subjects also would observe a dominant person and a submissive person working together, but the difference in task competence between the target persons would be less large, and the subjects would expect to meet the submissive person.

The Effects of the Ego Defense of Denial on Emotional Arousal

The defense characteristic selected for study in the present investigation was the general tendency toward denial of negative emotions and socially undesirable wishes. The effects of denial on emotional arousal were discussed previously. Therefore, in this section I discuss the hypothesized process through which motives and defenses are thought to jointly affect emotional arousal.

According to the hypothesized process, after perceivers were threatened by the perception of a particular target person (which constitutes a threat to their predominant motive), they would experience an increase in anxiety. Once perceivers' anxiety was aroused, their reaction would depend on their fear of experiencing and acknowledging negative emotions which, in turn, is reflected in their tendency to use denial type of defenses. Perceivers who are high on denial would become especially anxious. Therefore, for these perceivers the initial increase in anxiety due to motivational threat would be amplified further by their fear of negative emotional states.

In contrast, perceivers who are relatively less fearful of experiencing and acknowledging negative emotions would show the initial increase in anxiety due to the threat of their motive, but would not show an additional increase due to fear of negative emotions.

The Effects of the Dominance and Dependency Motives on Evaluation

The specific cognitive process examined in this study was the dimension of favorability of evaluation in forming impressions of others. Factor analyses consistently have shown that the evaluative dimension accounts for the largest portion of the variance in the semantic space of a wide range of concepts and stimuli (e.g., Osgood, Suci, & Tannenbaum, 1957) and is an important feature of the description of persons (e.g., Levy, & Dugan, 1960; Warr & Knapper, 1968). The evaluative process was chosen because the results of a previous study (Assor, Aronoff, & Messe', 1981) showed that evaluation can be used defensively by dominance and dependency oriented perceivers in their evaluations of high and low status target persons.

In contrast to the previous study, which demonstrated the operation of the second component, the present study was aimed at demonstrating the operation of all three components of the hypothesized defensive process. As was explained previously, historically, the demonstration of the first and especially the third component was much more problematic than the demonstration of the second component. Therefore, in constructing the evaluation procedure and the experiment as a whole, a special effort was made to maximize the likelihood that the first and third components would be detected.

Consistent with this emphasis, the present study included two features which were likely to increase the probability of demonstrating the

operation of the first and third components, but also were likely to suppress some of the negativity bias detected in the previous study in subjects whose predominant motive was threatened. The above "trade-off" between components 1 and 3 versus component 2 seemed reasonable because it was expected that for those threatened subjects who would show a negativity bias despite the presence of the two "negatively suppressing" features, a complete defensive process would be more readily detected because of the presence of the same two features.

The first "negativity suppressing" feature consisted of the evaluation procedure. In contrast to the previous study (Assor et al., 1981), the present study employed a procedure of an oral evaluation by means of an intercom system, rather than a paper and pencil, relatively more private, evaluation. The oral evaluation procedure was preferred because it enabled us to capture the increase in autonomic emotional arousal following each evaluative response and, thereby maximized the probability of detecting the third component of the hypothesized defensive process.

However, while it increased the probability of detecting the third defensive component, the public evaluation was expected to decrease the probability that subjects would show a negative evaluative bias when evaluating a motivationally threatening target person. The expectation that oral and public evaluation will cause suppression of negative evaluative bias was based on the notion that public evaluation would only increase the already strong normative pressure (see Sears & Whitney, 1973) against negative evaluation.

The second feature of the present experiment which was expected to suppress the expression of less favorable evaluations was the outcome dependency of the evaluators on the target persons. More specifically, subjects in the present experiment expected that after they evaluated

the target persons they would meet and work with them. Studies by Battistich (1979); Berscheid, Graziano, Mason, and Dermer (1976); and Tyler and Sears (1977) have demonstrated that under such conditions of outcome dependency, subjects tend to suppress their negative opinions of their future partners, and instead, display a positivity bias. As was explained previously, subjects were lead to believe that they would meet the target person in order to increase the threat potential of the target persons relative to the subjects' predominant motives.

In view of the hypothesized "negativity suppressing" effects of the oral evaluation and the outcome dependency factors, it was difficult to predict whether the dominance and dependency motives would have any effects on evaluation. In this context, the results of a recent study by Battistich (1979) seem particularly relevant because both studies employed similar procedures and instruments.

Battistich (1979), unlike Assor et al. (1981), did not find any effects of dominance or dependency on evaluation of dominant or submissive target persons. Battistich attributed his lack of results for evaluation to the operation of two possible factors, which were not present at the Assor et al. (1981) study. The first factor involved the outcome dependency of the subjects on the target person that they evaluated. The second factor involved the extreme levels of sociability or lack of sociability and assertiveness or lack of assertiveness exhibited by Battistich's target persons. Battistich (1979) hypothesized that the more extreme and unambiguous nature of his target persons, as compared to the target persons employed by Assor et al. (1981), prevented the subjects in his study from demonstrating significant perceptual distortion or bias.

The present investigation was similar to Battistich's (1979) study in that subjects expected to meet the target persons, but it was dissimilar in that the target persons did not exhibit an extreme level of sociability or lack of sociability. Because of the difference in the procedures of the two studies, it was not possible to utilize Battistich's lack of findings to predict lack of evaluation effects in the present study. However, Battistich's negative results were useful because they increased my awareness that the results obtained by Assor et al. (1981) may not be replicated when evaluation is performed under more inhibiting and threatening conditions, as was the case in the present study.

The foregoing discussion suggested that under the circumstances of the present study little or no effects of motives on evaluation would be detected. In the following section, I attempt to show that if an effect will be detected it will only be on the sociability subdimension of evaluation, whereas the competence subdimension will not be affected by cognitive bias. This hypothesis is based on the findings obtained by Assor (1978). Assor (1978) showed that the general evaluation dimension used in the Assor et al. (1981) study could be broken down into a sociability and a competence subdimensions. This finding was consistent with results obtained by Rosenberg, Nelson, and Virekanathan (1968), Friendly and Glucksberg (1970), and Zana and Hamilton (1972). When the combined effect of motive and target person was examined on each subdimension of evaluation separately, it was found that as predicted, the effect was only significant for the sociability subdimension.

According to Assor (1978), perceivers did not use the competence subdimension defensively because this aspect of the target person was defined unambiguously by the experimental manipulation. In contrast, the sociability subdimension was used defensively, because there

existed a great deal of ambiguity concerning the sociability of the target persons.

The target persons used in this study were similar to the ones used by Assor (1978) with regard to differences in the ambiguity of their sociability and competence. As a result, it was expected that if motives would have an effect on evaluation, this effect would be evidenced on the sociability, but not on the competence subdimension of evaluation. If such an effect would be found, it was hypothesized that dominance oriented perceivers would evaluate the submissive target person as more sociable than the dominant target person, to a greater extent than would dependency oriented perceivers. The expected evaluative pattern was assumed to serve a defensive function for dominance oriented individuals because it would help them to increase their self-evaluation relative to the devalued, yet threatening, dominant target person. Dependency oriented perceivers were not expected to devalue the dominant person relative to the submissive one on the sociability subdimension, because they were expected to be more threatened and therefore more annoyed by the submissive person than by the dominant person.

The Effects of the Ego Defense of Denial on Evaluation

There are at least two hypotheses that one can derive from theory (Freud, 1937) concerning the effects of ego defenses on evaluation. According to the first hypothesis, psychological defenses are assumed to be activated in response to an increase in anxiety. Therefore, it seemed reasonable to expect that perceivers' defenses would affect their evaluations of other people only when these people pose a serious threat to their motives and arouse sufficient anxiety to activate ego defenses.

According to the second hypothesis, individuals who are high on the defense of denial will be especially fearful of experiencing and expressing anger and hostile thoughts. Therefore, they might be expected to evaluate others more favorably than most people on a regular basis and without being threatened.

The empirical evidence for the influence of ego defenses on evaluation is scant and rather inconsistent. Thus, while studies by Altrocchi and Perlish (1963) and McDonald (1965) found that subjects who were high on the defenses of denial, repression, and intellectualization attributed less hostility to others, Altrocchi, Shrauger, and McLeod (1964) failed to confirm these findings.

As was pointed out by Shrauger and Altrocchi (1964), the utility of the above studies was limited because in all of them subjects and target persons interacted before the evaluations were made. Therefore, one cannot be sure whether differences in the attribution of hostility were due to individual differences in the interpretation of essentially similar behavior or due to differential influence of the subjects on the person described.

More recent studies by Gleser and Sacks (1973) and Kipper and Ginot (1979) did not suffer from the methodological flow of differential influence raised by Altrocchi (1964), and, therefore, might be more relevant to the question of the effect of defense on evaluation. Interestingly enough, these studies found no evidence for the effect of defense on the evaluation of other people.

Kipper and Ginot (1979) asked subjects to evaluate video tapes of target persons who played different roles. As noted by Kipper and Ginot (1979), this task did not constitute a serious threat to subjects. Therefore, subjects' preferred modes of defense could only influence

their evaluations through a cross situational, general favorability or negativity bias. The lack of positive findings, therefore, suggests that the defense of denial does not produce a general evaluative bias.

A study by Gleser and Sachs (1979) is more relevant to the theoretically derived hypothesis that ego defenses affect evaluation only when the subject is threatened. In that study, subjects were administered a test which ostensibly measured intellectual ability and then were led to believe that they failed it seriously. After they completed a number of questionnaires, and before the end of the experiment, subjects were asked to evaluate the investigator. The researchers report that no significant correlations were found between defense scores and evaluations of the experimenter, which were all uniformly positive. These negative results, however, should be interpreted with caution, since it might be that the process of evaluating the experimenter was too threatening and therefore resulted in little variation in evaluation scores.

It seems reasonable to assume that the process of evaluating one's future partner, which is employed in the present study, is less threatening than that of evaluating one's experimenter. However, as was explained previously, the procedure employed in the present study was expected to suppress or, at least, moderate the negativity bias of subjects whose motives were threatened. Therefore, although the circumstances of the present investigation seemed to be somewhat less threatening than that of Gleser and Sach's (1973) study, it was unclear whether the theoretically expected effect of denial on evaluation would be evidenced despite the "negativity suppressing" nature of the experimental procedure. If such an effect would be found, it was hypothesized that among perceivers whose motives were threatened by the target persons,

perceivers who are high rather than low on denial would evaluate the target persons more favorably.

Reduction of Anxiety as a Function of Motive Related Defensive Evaluation

On the basis of our description of the defensive process, we expected that defensive use of evaluation would be followed by reduced level of anxiety, as indicated by one's level of emotional arousal during the evaluation period.

As was explained before, some dominance oriented perceivers whose dominance motive was threatened were expected to use the sociability subdimension of evaluation defensively. More specifically, it was hypothesized that they would try to devalue the dominant target person in order to increase their self-evaluation relative to him. The resulting increase in positive self-evaluation was expected to be associated with a reduced level of anxiety and emotional arousal. Therefore, it was predicted that for dominance oriented perceivers who would be exposed to the "Dominance Threat" condition, less favorable evaluation of the dominant target person on the sociability subdimension would be associated with reduced level of anxiety and emotional arousal.

As was explained previously, subjects in the other motive by threat conditions were not expected to use the sociability subdimension of evaluation defensively, but rather, to express their degree of liking for the target person. Negative interpersonal evaluations are socially undesirable and therefore are likely to be anxiety provoking, especially if made out loud and publicly. Therefore, it was not expected that for subjects in the three other motive by threat groups, unfavorable evaluation would be associated with reduced level of anxiety and emotional arousal.

It is important to note that because of the specific evaluative procedure employed in this study, the concept of reduced level of anxiety or emotional arousal is not intended to designate an absolute reduction in one's level of anxiety (i.e., a situation where one's post-evaluation level of anxiety is lower than one's pre-evaluation level of anxiety). The act of public evaluation was expected to increase the anxiety and emotional arousal of all subjects. Within this context, reduced level of emotional arousal would be indicated by a relatively small increase in emotional arousal.

A Note on the Measurement of Anxiety

As was explained previously, the major objective of this study was to demonstrate the existence and operation of the three essential components of an emotionally mediated defensive process. It should be recalled that the first and third components of this process were assumed to involve arousal and reduction of anxiety. Therefore, the measurement of anxiety played an important role in the present study.

The two methods which were employed most frequently in past research to measure anxiety are self-reports and physiological measures. Self-report measures were found to be susceptible to conscious and unconscious distortions (e.g., Clum & Clum, 1973; Gleser & Sachs, 1973; Lazarus & Alfert, 1963). Physiological measures were found to be less susceptible than self-reports to conscious and unconscious distortions (e.g., Lazarus & Alfert, 1963) and therefore were selected to measure anxiety in the present investigation.

The specific physiological process selected as an indicator of anxiety in this study was phasic electrodermal activity (EDA). Phasic EDA consists of sudden and transient changes in skin conductance that

appear spontaneously or in response to external stimuli. In contrast to phasic EDA, tonic EDA consists of relatively long-term changes in EDA (Hasset, 1978). Studies by Kilpatrick (1972), Katkin (1965), Miller (1968) and Miller and Shmavonian (1965) demonstrated that phasic, but not tonic, EDA is a good index of emotional autonomic arousal induced by exposure to physical or psychological threat. Conversely, tonic, but not phasic, EDA was found to be a good index of cognitive or perceptual activity.

Kilpatrick (1972) for example, asked subjects to work on a neuropsychological test and created two psychological stress conditions by varying the introduction to the test. In the high stress condition subjects were told that they would take a test of brain damage and intelligence, and they would be required to compare their scores on the test with those of other subjects. In the low stress condition, subjects were told that the purpose of the experiment was to explore the relationship between task preferences and physiological variables. Results showed that subjects who were exposed to a condition of high psychological stress showed significantly more phasic EDA than subjects who were exposed to a condition of low physiological stress. As predicted, subjects in the two stress grou-s did not manifest a significant difference in levels of tonic EDA.

Another important investigation which related psychological threat to phasic EDA was the research by Luborsky et al. (1963, 1965), which was described previously in detail. Luborsky and his colleagues found that exposure to threatening pictures was associated with increase in phasic EDA. In addition, they also found that subjects' post-experimental ratings of their anxiety in response to different pictures were highly and positively correlated with their phasic EDA during their exposure to these

pictures. The results of Luborsky et al. (1963, 1965) are especially relevant to the present research because both studies involved induction of psychological threat by means of a visual display.

Taken together, the results of the studies cited and surveyed above suggest that phasic EDA would be a reasonably valid measure of emotional autonomic arousal related to anxiety. Since emotional autonomic arousal served as the operational measure of anxiety, the hypotheses tested in this study were formulated in terms of emotional autonomic arousal.

Hypotheses

Hypothesis I

Perceivers' emotional autonomic arousal will be affected by the degree to which the people whom they observe pose a threat to their predominant motives. Thus, I expected a motive of perceiver by motivational threat interaction: A situation involving target persons that theoretically should be threatening to dominance oriented subjects would be more autonomically arousing to these people than one in which such target persons are absent; in contrast, a situation involving target persons which theoretically should be threatening to dependency oriented subjects would be more autonomically arousing to these people than a situation devoid of such target persons.

Hypothesis II

Individuals who are high on denial will show greater emotional autonomic arousal following the perception of a threat to their predominant motive than will individuals who are low on denial. Thus, I expected a motive by threat by denial interaction: Among dominance oriented perceivers who would be exposed to the "Dominance Threat" condition, a greater increase in emotional autonomic arousal would be evidenced in

perceivers who are high rather than low on denial; similarly, among dependency oriented perceivers who would be exposed to the "Dependency Threat" condition, a greater increase in emotional autonomic arousal would be evidenced in perceivers who are high, rather than low on denial.

Hypothesis III

For dominance oriented perceivers who will be exposed to the "Dominance Threat" condition, less favorable evaluation of the dominant target person on sociability will be followed by a reduced level of emotional autonomic arousal. Among subjects in the three other motive by threat conditions, less favorable evaluation of the target person on sociability would not be followed by a reduced level of emotional autonomic arousal.

In addition to three formal hypotheses presented above, the present study also provided an opportunity to explore two other questions regarding the effects of motives and ego defense on evaluation under threatening, "negatively-suppressing," conditions. The first question was whether perceivers' motives would interact with the threat posed by the target persons to each motive to affect the evaluation of the target persons on sociability. The second question was whether perceivers' tendency to use the ego defense of denial would interact with perceivers' motives and the degree to which the target persons pose a threat to these motives, to affect the evaluation of the target persons on sociability.

CHAPTER II

METHOD

Overview of the Study

Male students participated in two sessions. In the first session they completed a variety of personality instruments aimed at measuring dominance, dependency, defense mechanisms and a number of other dispositions. Subjects classified as high on dependency or dominance then were invited to a second session in which they watched a video-tape of two target persons working together. Subjects were told that they were going to evaluate, and then later work with, one of the two people they were about to observe. Subjects' electrodermal activity was monitored as they watched and evaluated their future partner.

Subjects

Two hundred fifty-one male undergraduates from several introductory courses in psychology participated in the first session. Fifty-four subjects were invited to participate in the second session, and 53 of them agreed to participate.[1] All subjects received extra credit toward their course grade for taking part in the study.

---

[1]Of the 53 subjects who took part in the experimental session, the data of 3 were not included in the analysis because of equipment problems in recording physiological activity, or because of problems with the audio-visual equipment.

First Session

During the first session groups of 15-30 subjects at a time completed three instruments for the purposes of the present investigation: (1) a shortened version of the Dominance scale of the CPI (Gough, 1957; Assor, Aronoff, & Messe', 1981); (2) the Succorance scale of the Edwards Personal Preference Schedule (Edwards, 1959); and (3) the Defense Mechanism Inventory (Gleser & Ihilevitch, 1969). For other research purposes subjects also completed the Aronoff Sentence Completion (Aronoff, 1971); the Marlow-Crowne Social Desirability Scale (Crowne & Marlow, 1960); the Private Self-Consciousness factor of the Self-Conscousness scale (Fenigstein, Scheier, & Buss, 1975) and the Deference scale of the Edwards Personal Preference Schedule (Edwards, 1959).

Classification of Subjects to the Dominance and Dependency Groups

Two scales were used to select subjects for each one of the motive groups discussed in the Introduction.

A shortened 22-item version of the 46-item Dominance scale of the CPI was used to assess dominance motivation, which is closely associated with an expressed confidence in one's social competence. As was demonstrated by Assor, Aronoff, and Messe' (1981), subjects who score low on the shortened Dominance scale not only express little interest in dominance but also report feelings of anxiety and helplessness regarding their performance in social settings and social interactions. The validity of the scale as a measure of dominance motivation was demonstrated in the study by Assor, Aronoff, and Messe' (1981) and by Assor and O'Quin (1981).

The Succorance scale of the Edwards Personal Preference Schedule (Edwards, 1959) was used to measure subjects' expressed interest in receiving emotional and instrumental support from other people. Although

endorsement of the items comprising the Succorance scale often implies an implicit acknowledgment of difficulties in coping, the scale does not measure directly expressed feelings of social anxiety and helplessness. An extended discussion of the validity and correlates of the Succorance scale can be found in Assor (1978).

Subjects were selected for the dominance group if they scored within the top third on the shortened Dominance scale and within the bottom third on the Succorance scale. Subjects were selected for the dependency group if they scored within the top third on the Succorance scale and the bottom third on the revised Dominance scale. According to this classification, subjects in the Dominance group were high on dominance and low on succorance. Therefore, they were characterized by a strong need for independence, as well as a strong interest in dominance. This combination of concerns seems to provide a good operationalization of the dominance motive discussed in the Introduction.

Subjects in the dependency group were high on succorance and low on dominance. Therefore, they were characterized by feelings of social anxiety and helplessness, an inclination to avoid interpersonal struggles for dominance, and a need for emotional and instrumental support. This combination of dispositions seemed to provide a good operationalization of the dependency motive discussed in the Introduction.

The succorance and the shortened dominance scales appear in Appendix A. The shortened dominance scale comprises the first part of the Psychological Inventory and the succorance scale comprises the second part of that inventory.

Measurement of Ego Defenses

The Defense Mechanism Inventory (DMI) developed by Gleser and Ihilevitch (1969) was used to measure ego defenses. The DMI provides

scores for five clusters of defenses. These cluster are described by Gleser and Ihilevich (1969) in the following way:

> Turning Against Object (TAO). This class of defenses deals with conflict through attacking a real or presumed external frustrating object. Such classical defenses as identification-with-the-aggressor and displacement can be placed in this category.
>
> Projection (PRO). Included here are defenses which justify the expression of aggression toward an external object through first attributing to it, without unequivocal evidence, negative intent, or characteristics.
>
> Principalization (PRN). This class of defenses deal with conflict through invoking a general principle that "splits off" affect from content and represses the former. Defenses such as intellectualization, isolation, and rationalization fall into this category.
>
> Turning Against Self (TAS). In this class are those defenses that handle conflict through directing aggressive behavior toward S himself. Masochism and autosadism are examples of defensive solutions in this category.
>
> Reversal (REV). This class includes defenses that deal with conflict by responding in a positive or neutral fashion to a frustrating object which might be expected to evoke a negative reaction. Defenses such as negation, denial, reaction formation, and repression are subsumed under this category. (p. 52)

From the above description it is clear that the defenses clustered under the category of Reversal (REV) involve a tendency to deny negative emotions and socially undesirable wishes. Therefore, REV was viewed as an appropriate operational measure of the construct of denial that was discussed in the Introduction.

The validity of the REV scale, was demonstrated in a number of studies. Gleser and Ihilevich (1969) showed that as expected, REV and to a lesser extent, PRN, correlated positively with social desirability scales such as the MMPI L and K scales and negatively with Welsh's MMPI Anxiety factor. Schill, Rader, Evans, and Segal (1976) showed that for males, guilt about hostility was positively related to REV and PRN. Schill and Bekker (1976) found that males who were high on the defenses of REV and PRN and low on PRO tended to give less sexual associations in response to double entendre word association test.

Cohen (1969) showed that subjects who reported frequent dream recall were lower on REV than were infrequent dream recallers. Klein, Gonen, and Smith (1975) reported that high REV and TAS scores were consistent with the psychogenic diagnosis of a patient with painful Ecchymosis following surgery for a herniated lumbar disc. Perhaps, most relevant to our specific hypotheses, Minsky (1978) found that in comparison to normotensives, hypertensives scored significantly higher on REV and TAS and significantly lower on TAO.

A median split was used to assign subjects into a high vs. low group on reversal. The DMI appears in Appendix A under the name Situational Survey.*

The Manipulation of Threat Posed by the Target Persons to Motives

In order to standardize the presentation of target persons across subjects, it was decided to prepare video-tapes of staged interactions between two male actors. These video-tapes were presented to subjects as "live broadcasts" of an interaction between two persons, one of whom the subject was to meet later. Based on the considerations outlined in the Introduction, two scripts were prepared, one for each threat condition.

Both scripts portrayed two target persons who were asked to role play two leaders of a rescue expedition, whose aim was to evacuate 3000 people from a flooded valley. The target persons were provided with a large map and a list of problems they had to solve. Their task was to prepare an optimal evacuation plan.[2] Both scripts presented one target person as more dominant and competent than the other. However,

---

[2]The evacuation problem and map appear in Appendix B.

based on the considerations discussed in the Introduction, the script designed for the condition of "Dominance Threat" portrayed a larger difference in the task competence of the two target persons than the script designed for the "Dependency Threat" condition.

As was explained in the Introduction, the threat that the target persons posed to the perceivers' motives was manipulated also through the particular target person whom the perceivers expected to meet. Thus, in the "Dominance Threat" condition subjects expected to meet the dominant and competent target person, whereas in the "Dependency Threat" condition subjects expected to meet the submissive and less competent target person.

Controlling for Actor Effect

In order to produce video-tapes from the scripts, two pairs of actors were hired. Each pair of actors produced one "Dominance Threat" video-tape and one "Dependency Threat" video-tape. Thus, a total of four tapes were produced, two for each threat condition.

Design

The combination of factors that was explored in this study constituted a design with the following dimensions: perceiver's predominant motive (dominance vs. dependency) x perceiver's score on the ego defense of denial (high vs. low) x motivational threat of observed interaction (threat dominance vs. threat dependency) x actor pair (two pairs).

To avoid misunderstandings concerning the possibility of a confounding in the two motivational threat conditions, a clarification of the logic of the design seems to be in order. As was discussed earlier, each motivational threat condition contains two main elements. The first element was the competence and dominance of the target person whom the perceiver expected to evaluate and with whom he expected to work. The

second element was the relative difference in the task competence exhibited by the two target persons in the two types of interactions.

It is important to note that not systematically varying the combination of these two elements was not a confounding, given the issues that this study attempted to clarify. This study was not concerned with trying to determine how threatening each component of the situation was for a particular motive. Rather, it was focused on trying to demonstrate that persons who are theoretically expected to threaten a motive indeed invoke the expected defensive process. The primary goal of the observed interaction was to present subjects with stimuli that on theoretical grounds, could be expected to maximize or minimize the threatening or gratifying aspects of the target persons. If there were several situational factors that combined to make the target person theoretically more threatening or frustrating, so much the better; it would mean that the power of the experimental design was increased.

Setting and Apparatus During the Experimental Session

Subjects were seated in a comfortable chair facing the TV monitor that was used to show the video-tapes. The polygraph used was a Grass Model 7 type, and was located in a different room, out of sight of the subject. Skin conductance was recorded from both hands. The electrodes used to record skin conductance were of the silver-silver chloride type. One electrode was placed on the hypothenar eminence of each hand and a second electrode was placed on the internal side of the upper part of each lower arm. Each skin conductance electrode had a contact area of .78 cm^2. Skin resistance units were automatically converted into skin conductance units by means of a Hagforth bridge. The electrolyte was a Redux paste produced by Hewlet Packard. The sites on which the electrodes

were placed were cleaned with a 5% Saline solution and were dried before the electrodes were applied.

Procedure of the Experimental Session

The experimental session took place between 1 to 2 months after the personality testing session. Each subject was tested individually.

For purposes of data analysis and in order to provide a summary of the procedure, the experiment was divided into a number of periods and subperiods. A complete list of the periods and subperiods appears in the sequence chart presented in Figure 1.

1. Pre-tape Period: Upon arriving at the session, the subject was met by a male experimenter who gave the subject the following explanation about the experiment:

> "The main purpose of the study is to learn how people in leadership positions deal with problem situations and how present leaders are influenced by past leaders in the way they deal with problems. In order to be able to study these questions, the subjects in this experiment were divided into pairs. Each pair represents a generation of leadership. The pairs are always composed of one veteran member who already participated in a leadership dyad in the previous generation and a new member who will go on to the next generation.
>
> As far as you are concerned, you will first observe, through this close circuit TV, the two leaders of the past generation coping with a problem. Second, since we are interested in how people remember past leaders, we will ask you to describe your impressions of these people. In the third stage, the more veteran member of the pair that you have observed will leave, and you would come in and work with the other member on a new problem situation. While you are working with him, you will be observed, through a close circuit TV,

Number of Period	Name of Period	Name of Subperiod	Description of Events
1	Pre-tape	Introduction	Experimenter introduces the experiment.
		Hook-up	Assistant attaches electrodes.
		Baseline	Physiological baseline is obtained while subject relaxes.
		Give Problem	Experimenter gives problem sheet to subject.
		Read Problem	Subject reads the problem.
		Turn on TV	Experimenter returns and turns on the TV.
2	Observe Task	Observe Task	Subject watches target persons working on a problem together.
3	Observe Interview	Observe Interview	Subject watches experimenter talking to target persons about the task they have just completed.
4	Wait for Evaluation	Wait for Evaluation	Subject waits for the evaluation to start.
5	Evaluation	Explanation	Experimenter explains the evaluation procedure via intercom.
		Evaluation Proper	Subject evaluates his future partner by responding orally to evaluation scales which appear on the TV monitor.
6	Final Wait	Final Wait	Subject waits for experimenter to return and take him to meet his future partner.

Figure 1. A Sequence Chart of the Experimental Procedure.

Number of Period	Name of Period	Name of Subperiod	Description of Events
7	Experimenter Return	Experimenter Return	Experimenter returns and explains that the subject will not meet the target person. Then, subject is asked to complete four questionnaires.
8	Questionnaires	Questionnaires	Subject completes questionnaires.

Figure 1. Continued.

by a new person. In the last stage, the now veteran member of the dyad will leave and you will be joined by the new person, who had previously observed you and your first partner through the close circuit TV. In summary, you would go through the following stages:

1. Observe a leadership dyad of the last generation.
2. Describe your impressions of the past generation of leadership.
3. Join the less veteran member of the last dyad to work on a new problem.
4. Work on another problem with a new person who has previously observed you and your previous partner.

Now, before you start watching your future partner and his current partner, I would like to connect you up to this machine, which is called a polygraph. The polygraph measures some basic physiological responses and would tell us how your body responds to problem situations. We are interested in this information because it can help us to better understand your problem solving behavior later on. The questionnaires that you completed in the first session were also designed for a similar purpose. We wanted to know something about yourself as a person so that we would be able to understand better your problem solving behavior. Any questions?

O.K., I now will go to the control room to turn on the polygraph and (name of assistant), who is my assistant would come in and do the hook-up."

The experimenter left and an assistant came in and connected the subject to the polygraph. Then, the assistant said:

"O.K., now that the electrodes are all hooked up, we need to adjust the machine to the different signals of your body. While we

are doing these adjustments I would like you to close your eyes and relax your body so that we can get a good baseline measurement of your resting body. One important thing that I would like to ask from you is not to move your body, or move it as little as possible because body movements throw off our measurements.

Any questions?

Have a good rest then, and (name of experimenter) will be back in about 10 minutes."

The assistant left, and the subject remained alone in the room for 10 minutes, during which time his physiological reactivity baseline was recorded. After 10 minutes the experimenter entered the room and said:

"Hello, your rest period is over. Meanwhile, I presented the leadership pair that you are about to observe with their problem, and they are now reviewing it. To insure that as you observe them you would know what is going on, here is a description of the problem that they got and a map that goes with it. Remember that this is not the problem that you will get, so you will not be expected to know or solve it. Therefore, in reading it, don't try to remember all the details; just try to understand the basic components so that you can understand what the couple that you will observe is trying to do. I will go now to the control room and will be back in 4-5 minutes. Then you will be able to ask me any questions that you might have about the problem that you read."

The experimenter then stepped out, leaving the subject to read the problem alone. After 5 minutes the experimenter entered the room and said:

"Do you have any questions about this problem?"

After answering the subject's questions, if he had any, the experimenter then said:

> "O.K., the members of the leadership couple in the other room are ready to start on their problem. I will now turn on the close circuit TV, and in a moment or so you will see me starting them on their problem. Remember that you will meet the person who will be sitting on the left (or right). His name is Jack (or Bruce). After the leadership dyad will finish working on their problem I will use the close circuit TV to ask you for your impressions of them. You will answer me through the intercom system. I will come into the room only after you have finished the evaluation. Again, remember that you will meet and work with the person who will be sitting on the left (or right). His name is Jack (or Bruce)."

Before the experimenter left the room he turned on the TV monitor and stepped out, leaving the subject alone in the room. On the TV screen the subject then saw the experimenter entering another room with two other persons. After the experimenter introduced the target persons to each other, he explained the problem situation to them and then left the room.

In reality, the experimenter never went to the observed room and the whole introductory period was pre-recorded. The above deception was designed to insure that the subjects would believe that what they saw on the TV monitor was a live broadcast rather than a pre-recorded program. A post-experimental check showed that all subjects believed that the broadcast, indeed, was live.

2. Observe Task Period: During this period the subject sat alone in the room and watched a stimulus tape in which the two target persons tried to solve a flood rescue problem in about 20 minutes.

3. Observe Interview Period: After the alloted time had expired the experimenter (on the tape) entered the room and asked the observed target persons how they felt about the task. The experimenter also mentioned that after a period of rest one target person would proceed to the next stage of the experiment and meet his future partner. That "future partner" was, of course, the actual subject.

4. Wait for Evaluation Period: After the subject observed the experimenter and the two target persons leave the room (via the TV monitor) he sat alone in the observation room for 85 seconds, waiting for the evaluation to start. During that time, the TV monitor was on but the picture was blank, with no sound. The subject was told that at the end of the observation task he would evaluate his future partner, and therefore it is reasonable to assume that while he was waiting, he expected to start the evaluation soon.

5. The Evaluation Period: The evaluation period started with an explanation of the evaluation procedure. The subject was alone in the room and the explanation was given through the TV monitor and the intercom system. Although it was prerecorded, the explanation was presented and sounded as if it were live. The subject was asked to evaluate his future partner on 20 semantic differential scales. The scales appeared on the TV monitor one at a time. Each scale was preceded by a tone. The tone alerted the subject that a new scale was about to appear. The subject was given 15 seconds to respond to each scale, after which a new scale appeared. The subject responded to each scale by saying out loud the number that he viewed as most descriptive of his future partner with regard to the specific scale in question.

6. The Wait Period: After the evaluation period ended, the experimenter (through the intercom system) thanked the subject and told him

that in a short while he would come to take him to meet his future partner. Then, the subject was left alone in the room for a minute and a half. The TV monitor was still on but the picture was blank and had no sound.

7. Experimenter Return Period: The experimenter entered the room and said:

> "(Name of subject), I am going to tell you now something that might make you a little angry or disappointed--you are actually not going to meet (name of target person) right now, and are not going to work on any problem with him. This is because we are more interested in how you react to people who are coping with problem situations than in how you can cope with such situations yourself.
>
> We told you that you will meet (name of target person) so that you would get more involved with what you have seen.
>
> So, what you had seen actually was prerecorded. During the last year we made many videotapes of many subjects trying to solve problems together. We selected this tape and a few others because the two subjects in it displayed very different approaches to the problem and the whole situation. We were interested to see how people reacted to the way these two very different people handled the situation.
>
> Because we are interested in your reactions to what you have just seen, I am going to give you a few questionnaires that will ask you to describe your feelings during the experiment and your perception and memories of the people that you saw."

The experimenter then showed and explained to the subject the different questionnaires. The subject's dominant hand was released from the electrodes in order to allow him to write. The electrodes and pressure

gauge were still attached to the rest of the subject's body, although the polygraph was turned off by this point. The subject was led to believe that his physiological reactions continued to be recorded in order to maintain adequate level of ego involvement and make the questionnaires an integral part of the experiment.

8. Questionnaire Period: After the experimenter left, the subject completed a number of questionnaires which were included in the procedure for subsidiary research purposes which were unrelated to the main purpose of the present study. Therefore, these questionnaires were not examined in the present investigation.

After the subject completed the questionnaires he was disconnected from the polygraph. Before the subject left the experimenter told him that while it was too risky to explain the experiment to the subject fully at that point, he would be happy to do so at the end of the term. The experimenter then gave the subject a card with the experimenter's office address and telephone.

Arousing Subjects' Motives

The procedure of the experimental session included several features that were designed to increase subjects' level of motivational arousal. These features included: (1) the anticipation of being video-taped and watched while working on a problem; (2) the expectation that one would be evaluated publicly; (3) the expectation that one would evaluate his future partner publicly; (4) the knowledge that in order to do well on the task, a pair of subjects has to demonstrate leadership and an ability to cope with difficult problem situations; and (5) the fact that subjects were tested alone rather than in a group. It was assumed that the increased motivational arousal would enhance the impact of the threat

conditions on subjects' dominance and dependency motives, and, therefore, would increase the probability that defensive processes in person perception would be activated.

Dependent Measures I

The Measurement of Emotional Autonomic Arousal

As was explained in the Introduction, level of anxiety-related emotional autonomic arousal was measured in the present study by monitoring subjects' phasic electrodermal activity (EDA). The two measures of phasic EDA employed in the present study were (S)pontaneous Skin Conductance Response (F)frequency (SF) and amplitude of Skin Conductance Response (SCR). It should be noted that both the SF and the SCR measures were computed for the hand that showed the greatest reactivity during the "Pre-Tape" period.

The SF Measures

The measure of phasic EDA used to test Hypotheses I and II was the frequency of Spontaneous Skin Conductance Responses (SSCR) per minute. For brevity sake this measure would be refered to as SF, which stands for (S)SCR (F)requency. The SF measure is used to measure phasic EDA when relatively sudden changes in skin conductance are observed that cannot readily be attributed to one particular external stimulus. The number of spontaneous skin conductance responses is measured over a period of time and the resulting SF indicates the overall autonomic arousal during the period of interest (e.g., Kilpatrick, 1972; Goleman & Schwartz, 1976; Hasset, 1978). Because of the considerable variation in amplitude of SSCR among subjects, it was decided to institute two criteria for an SSCR. A more stringent criteria (i.e., relatively large increase in

skin conductance) was applied to subjects who showed SSCRs with relatively large amplitudes during the "Pre Tape" period. A less stringent criteria (i.e., relatively small increase in skin conductance) was applied to subjects who showed SSCRs with small amplitudes during the "Pre-Tape" period. More specifically, if the subject's largest skin conductance increase in 3 seconds during the "Pre-Tape" period was equal to or smaller than 0.5 micromhos then the subject was assigned to the "low SSCR amplitude" group. For subjects in this group, an SSCR was marked if an increase equal to or greater than 0.1 micromhos had occured in 3 seconds. If the subject's largest skin conductance increase in 3 seconds during the "Pre-Tape" period was greater than 0.5 micromhos then the subject was assigned to the "high SSCR amplitude" group. For subjects in this group an SSCR was marked if an increase equal to or greater than 0.2 micromhos had occured in 3 seconds.

A raw measure of number of SSCR per minute (SF) was computed for the following time segments:

1. "Baseline" subperiod (MIN)
2. "Highest Frequency" (MAX)
3. "Observe Task" period
4. "Observe Interview" period
5. "Wait for Evaluation" period
6. "Final Wait" period

Although the Baseline subperiod lasted 10 minutes, SF were measured only over 6 minutes, in the interval between the 3rd and 9th minute. This was done because during this interval subjects seemed most relaxed. The segment of the highest frequency was the 1 minute (between the end of "Baseline" and the beginning of the "Observe Task" period) during which the highest SF was detected. In line with the notion of range correction

(e.g., Lykken, 1972; Lykken, Rose, Luther, & Maley, 1966), SF measured during the "Baseline" subperiod provided an estimate of subjects' lower limit (MIN) whereas SF measured during the segment of the "Highest Frequency" provided an estimate of the upper limit (MAX). An estimate of subjects' range of SF was obtained by subtracting the MIN baseline SF (MIN) from the highest frequency SF (MAX).

The final, range-corrected, measures of SF for each period of interest were computed according to the following formula: $SF_x = (SF_y - MIN)/(MAX - MIN)$. SF_y signifies the raw value of SF during the period of interest. MAX is SF during the "Highest Frequency" segment. MIN is SF during "Baseline." SF_x signifies the SF during the period of interest, corrected for range.

The SCR Measures

The measure of phasic EDA used to test Hypothesis III was the Skin Conductance Response (SCR). Unlike the SF measure, SCR is used to measure changes in skin conductance in response to an external stimulus. In our case, the external stimulus consisted of the semantic differential scale which appeared on the TV monitor. The subject had 15 seconds to respond to the scale. The SCR for each scale consisted of the increase in skin conductance (in micromhos) during the interval beginning 1 second before the appearance of the scale of interest and ending 2 seconds before the appearance of the next scale. Thus, SCR is the increase in skin conductance over the 14 seconds following the appearance of a scale.

Following Lykken's (1972) suggestion, SCR for each scale was corrected for range. An estimate of maximum SCR was obtained by measuring the largest increase in skin conductance over 14 seconds during the "Pre-Tape" period. Range corrected SCR for each scale was computed by dividing the raw SCR for the scale by the maximum SCR.

To assess level of autonomic emotional arousal in response to sociability related words (see Table 1), the mean, range-corrected, SCR for the 10 sociability scales was computed. The resulting measure was called SCR Sociability. To assess level of emotional arousal in response to competence related words (see Table 2), the mean, range-corrected, SCR, for the 10 competence scales was computed. The resulting measure was called SCR Competence.

Dependent Measures II

The Evaluation Measures

Subjects evaluated their future partner via 20 semantic differential scales. The scales consisted of bipolar traits chosen from Anderson's (1968) likeability ratings of 555 traits. Each trait had either a positive or a negative likeability value. The content of 10 scales was viewed as socio-emotional. The content of the other 10 scales was seen as reflecting traits related to task competence.

The 10 sociability scales each were randomly assigned to two subgroups, five items in each subgroup. The 10 competence scales were also randomly assigned to two subgroups in a similar fashion. The order of

Table 1.--Adjective Pairs That Comprised the Semantic Differential Scales of the Sociability Measure.

Warm - Cold	Sincere - Not Sincere
Conceited - Modest	Not Snobbish - Snobbish
Phony - Not Phony	Showy - Not Showy
Tolerant - Intolerant	Noisy - Not Noisy
Bossy - Not Bossy	Patient - Impatient

Note: All scales were scored so that a larger value reflected a more favorable value.

Table 2.--Adjective Pairs That Comprised the Semantic Differential Scales of the Competence Measure.

Intelligent - Unintelligent	Not Smart - Smart
Mediocre - Outstanding	Decisive - Indecisive
Follower - Leader	Submissive - Dominant
Inventive - Not Inventive	Imaginative - Unimaginative
Insecure - Confident	Incompetent - Competent

Note: All scales were scored so that a larger value reflected a more favorable score.

the four subgroups was counterbalanced using a ABBA/BAAB design. The scales' order factor was completely crossed with the motive, threat, and actors factors.

The subject's responses on the 10 sociability scales were summed together to produce a sociability scale. The 10 responses on the competence scales were summed together to produce a competence scale. The internal consistency (coefficient α) of the sociability scale was .78 and the internal consistency of the competence scale was .96. The correlation between the two scales was -.15 and was not significant statistically.

CHAPTER III

RESULTS

Hypothesis I: The Effects of Motives on Emotional Autonomic Arousal in Response to Target Persons

Hypothesis I predicted that perceivers' emotional autonomic arousal would be affected by the degree to which the people whom they observe pose a threat to their predominant motives.

Hypothesis I was examined through four analyses of variance performed on the SF measures taken during the "Observe Task," "Observe Interview," "Wait for Evaluation," and "Final Wait" periods. The design of these analyses of variance was a 2 (motive of perceiver: dominance vs. dependency) x 2 (perceiver's score on reversal: high vs. low) x 2 (motivational threat of observed interaction: dominance threat vs. dependency threat).[3] The results of these analyses that are relevant to Hypothesis I are presented in Tables 3 and 4.

Inspection of Table 3 reveals that the expected motive of perceiver by motivational threat interaction was statistically significant in the "Observe Interview," "Wait for Evaluation," and "Final Wait" periods, but not in the "Observer Task" period.

Inspection of Table 4 reveals that in three out of four periods, as predicted, dominance oriented perceivers who were exposed to the

---

[3]Preliminary tests indicated that actor pair did not have a systematic affect on the dependent variables, so to achieve reasonable number of subjects per cell, this factor was not included in subsequent analyses.

Table 3.--Motive of Perceiver by Motivational Threat Interaction and Motive of Perceiver by Motivational Threat by Reversal Interaction for SF Measures During Four Periods.

Period	Motive of Perceiver by Motivational Threat	Motive of Perceiver by Motivational Threat by Reversal
	ANOVA *F*	ANOVA *F*
Observe Task	.01	3.54*
Observe Interview	6.86**	4.28**
Wait for Evaluation	7.72***	5.74**
Final Wait	8.43***	.08

Note: The number of subjects per cell ranged from four to eight; df for subjects within conditions were 35; df for other effects were 1.

*$p < .07$

**$p < .05$

***$p < .01$

Table 4.--Mean SF as a Function of Perceivers' Motives and Motivational Threat Conditions During Four Periods.

Motive of Perceiver	Motivational Threat	
	Dominance Threat	Dependency Threat
Observe Task Period		
Dominance	.38	.26
Dependency	.24	.13
Observe Interview Period		
Dominance	1.07[b]	.56[b]
Dependency	.69[a]	.98[a]
Wait for Evaluation Period		
Dominance	.74[a]	.47[a]
Dependency	.32[b]	.93[b]
Final Wait Evaluation		
Dominance	.75[b]	.43[b]
Dependency	.35[b]	.76[b]

Note: The number of subjects per cell ranged from 10 to 12. Planned comparisons (t-tests) were based on Winer (1971, p. 384).

[a]For each period, the difference between means marked by the superscript a was significant at the $p < .10$ level.

[b]For each period, the difference between means marked by the superscript b was significant at the $p < .05$ level. The planned comparisons were made horizontally, within motive and between threat conditions.

"Dominance Threat" condition manifested a significantly greater increase in SF (relative to their initial range) than dominance oriented perceivers who were exposed to the "Dependency Threat" condition. The only period in which the predicted difference was small and nonsignificant was the "Observe Task" period. As for dependency oriented subjects, inspection of Table 4 reveals that, in three out of four periods, as predicted, dependency oriented perceivers who were exposed to the "Dependency Threat" condition manifested a significantly greater increase in SF (relative to their initial range) than dependency oriented perceivers who were exposed to the "Dominance Threat" condition. Again, the only period in which the predicted difference did not emerge was the "Observe Task" period.

Overall, then, Hypothesis I was strongly supported by the results of the present study.

Hypothesis II: The Joint Effects of Motives and the Ego Defense of Denial on Emotional Autonomic Arousal in Response to Target Persons

Hypothesis II was examined through the same ANOVA's which were used to examine Hypothesis I. The results of these ANOVA's that are relevant to our hypothesis are presented in Table 3. The means on which these ANOVA's were based are presented in Table 5.

Inspection of Table 3 reveals that the expected motive of perceiver by threat by reversal interaction occurred in the "Observe Task," "Observe Interview," and "Wait for Evaluation" periods, but not in the "Final Wait" period. The interaction was statistically significant in the "Observe Interview" and the "Wait for Evaluation" period. The

Table 5.--Mean SF as a Function of Perceivers' Motives, Reversal, and Motivational Threat During Four Periods.

Motive of Perceiver	Score on Reversal	Motivational Threat	
		Dominance Threat	Dependency Threat
Observe Task Period			
Dominance	Low	.27	.38
	High	.49[a]	.15[a]
Dependency	Low	.20	-.06[b]
	High	.28	.32[b]
Observe Interview Period			
Dominance	Low	.55[a]	.70
	High	1.60[a,b]	.43[b]
Dependency	Low	.59	.94
	High	.80	1.02
Wait for Evaluation Period			
Dominance	Low	.43[a]	.58
	High	1.05[a,b]	.36[b]
Dependency	Low	.35	.66[c]
	High	.30[d]	1.21[c,d]
Final Wait Period			
Dominance	Low	.51	.38
	High	1.00	.48
Dependency	Low	.22	.89
	High	.49	.64

Note: The number of subjects per cell ranged from four to eight; for each period, the difference between means sharing a common superscript was significant at the $p < .05$ level (planned comparisons, Winer, 1971, p. 384).

interaction in the "Observe Task" period was marginally significant at the $p < .07$ level.[4]

Inspection of Table 5 reveals that as predicted, in all four periods, dominance oriented perceivers who were exposed to the "Dominance Threat" condition, showed a greater increase in SF when they were high rather than low on reversal. Although the difference in SF was always substantial, and in the predicted direction, it only reached conventional levels of statistical significance during the "Observe Interview" and "Wait for Evaluation" periods.

As for dependency oriented subjects, inspection of Table 5 reveals that in three out of four periods, as predicted, among dependency oriented perceivers who were exposed to the "Dependency Threat" condition, those who were high on reversal manifested higher SF than did those who were low on reversal. The differences obtained were significant for the "Observe Task" and "Wait for Evaluation" periods and nonsignificant for the "Observe Interview" period. The difference obtained in the "Final Wait" period was not in the predicted direction, and was nonsignificant.

Overall, then, Hypothesis II was generally supported by the findings. Thus, as predicted, perceivers who were high on reversal tended to react with greater emotional autonomic arousal when their predominant motive was threatened then perceivers who were low on reversal. While this pattern was demonstrated with a high level of consistency for dominance oriented individuals, it emerged less consistently among dependency oriented subjects.

---

[4]Since the pattern of means obtained during the "Observe Task" period was as predicted (see Table 5) it is reasonable to assume that the slightly lower level of significance obtained during this period was due to the rather low level of SF exhibited by subjects during this period.

Hypothesis III: Relative Reduction in Emotional Autonomic Arousal Following Motive Related Defensive Evaluation

Hypothesis III predicted that for dominance oriented perceivers who would be exposed to the "Dominance Threat" condition, less favorable evaluation of the dominant target person on sociability would be followed by a reduced level of emotional arousal.

Hypothesis III was examined through a set of correlations computed between sociability and SCR sociability for each of the four combinations of motive of perceiver and motivational threat factors. For comparative and exploratory purposes, the correlations between competence and SCR competence, and general evaluation and SCR general evaluation, also are presented. The results of these correlations are presented in Table 6.

Inspection of Table 6 reveals that for dominance oriented perceivers who were exposed to the "Dominance Threat" condition, as predicted, less favorable evaluation of the dominant target person on sociability was associated with reduced autonomic arousal. No relationship between sociability and emotional autonomic arousal were detected for the other motive by threat groups.

It is important to note that, in the present experiment, emotional autonomic arousal was always measured after the oral evaluation. Therefore, the results of the correlational analysis can be more readily interpreted in causal terms than is usually the case with correlational findings. Overall, then, the findings obtained in the present investigation provided strong confirmation for Hypothesis III, and suggest that at least for dominance oriented individuals, motive related defensive evaluation is likely to result in relative reduction in emotional autonomic arousal.

Table 6.--The Joint Effects of Motive of Perceiver and Motivational Threat on the Correlations Between Favorability of Evaluation and SCR Scores.

Motive of Perceiver	Motivational Threat	
	Dominance Threat	Dependency Threat
	Sociability	
Dominance	.51**	-.27
Dependency	-.02	-.02
	Competence	
Dominance	.15	-.22
Dependency	-.11	-.09
	General Evaluation	
Dominance	.38*	-.19
Dependency	-.01	-.04

Note: The number of subjects per cell ranged from 12 to 13.

*$p < .10$

**$p < .05$

The Effects of Motives and Denial on Evaluation Under Threatening Conditions

As was explained previously, the present study provided an opportunity to explore two questions regarding the effects of motives and ego defense on evaluation under threatening, "negativity suppressing," conditions. The first question was whether the motives of dominance or dependency would interact with the threat posed by the target persons to each motive to affect the evaluation of the target persons on sociability. The other question explored was whether the ego defense of denial would interact with perceivers' motives and the degree to which the target persons posed a threat to these motives, to affect the evaluation of the target persons on sociability.

The two possibilities discussed above were explored through an analysis of variance performed on the sociability measure. For comparative and exploratory purposes similar ANOVA's were performed also on the competence measure. The design of these ANOVA's was a 2 (motive of perceiver: dominance vs. dependency) x 2 (perceiver's score on reversal: high vs. low) x 2 (motivational threat potential of the observed interaction: dominance threat vs. dependency threat). The results of these ANOVA's that are relevant to the questions explored are presented in Table 7. The means on which the ANOVA's were based are presented in Table 8.

Inspection of Table 7 reveals that the relevant two and three ways interactions were nonsignificant. The findings, therefore, suggest that under threatening "negativity suppressing" conditions, the motives of dominance and dependency and the defense of denial do not affect sociability evaluations.

Table 7.--Motive of Perceiver by Motivational Threat Interaction and Motive of Perceiver by Motivational Threat by Reversal Interaction for Evaluation Measures.

Dependent Measure	Motive of Perceiver by Motivational Threat	Motive of Perceiver by Motivational Threat by Reversal
	ANOVA F	ANOVA F
Sociability	.39	2.34
Competence	.01	.46

Note: The number of subjects in each cell ranged from four to eight; df for subjects within conditions were 38; df for other effects were always 1.

Table 8.--Mean Evaluation Scores as a Function of Perceivers' Motives, Reversal, and Motivational Threat.

Motive of Perceiver	Score on Reversal	Motivational Threat	
		Dominance Threat	Dependency Threat
		Sociability	
Dominance	Low	4.68	5.29
	High	4.22	5.28
Dependency	Low	4.17	5.77
	High	4.62	5.23
		Competence	
Dominance	Low	6.10	2.42
	High	5.32	2.88
Dependency	Low	6.23	2.91
	High	6.04	3.32

Note: The number of subjects in each cell ranged from four to eight.

CHAPTER IV

DISCUSSION

Theoretical Significance of the Demonstration of a Complete Defensive Process

The major goal of the present study was to provide evidence for the operation of emotionally mediated defensive processes in person perception. It should be recalled that such defensive processes were defined as consisting of three essential components:

1. Arousal of anxiety--in response to the perception of a threatening stimulus.
2. Defensive cognitive activity--involving the denial or diminution of the threatening aspects of the stimulus.
3. Reduction in level of anxiety--following the defensive cognitive activity.

In terms of the specific phenomena and procedure examined in this study it was hypothesized that dominance oriented subjects who would observe persons who would pose a threat to their motives and would use the evaluative activity defensively (to devalue the threatening persons), would show a complete defensive process.

Results showed that as predicted, a complete defensive process, including all three essential components, was evidenced for dominance oriented individuals who used the evaluative activity defensively. More specifically, these subjects showed an increase in emotional autonomic arousal after they were exposed to motivationally threatening target

persons (i.e., first component), and after they devalued the threatening target person on sociability (i.e., second component) they indeed showed the predicted relative reduction in emotional arousal (i.e., third component).

As was indicated in the Introduction, the concept of emotionally mediated defensive process played a central role in many major theories of personality and psychopathology (e.g., Adler, 1927; Freud, 1936; Horney, 1945; Rogers, 1951; Sullivan, 1948). Similarly, the concept of a defensive process has been widely accepted by psychotherapists and psychodiagnosticians because of its considerable explanatory power. However, despite the importance of the concept of a defensive process, and despite the strong consensus among theorists regarding the essential nature of such process, no experimental evidence was available prior to the present study for the existence and operation of a complete defensive process.

The present study, therefore, showed for the first time that the phenomenon of a defensive process indeed exists and can be demonstrated in the laboratory. The ecological validity of this demonstration seems substantial because the threatening stimuli were people with whom subjects expected to interact, rather than pictures or words.

Additional Theoretical Implications

The Maladaptive Consequences of the Defensive Cognitive Activity of Devaluation

The concept of defense has acquired a central place in dynamic theories of psychotherapy and psychopathology because these theories (e.g., S. Freud, 1936; A. Freud, 1937; Horney, 1945; Sullivan, 1948) assume that defensive cognitive activity often has serious long term maladaptive effects on the individual's life, despite the immediate

subjective feeling of relief it seems to bring to the individual. Thus, it is assumed that because the process of abandoning one's defenses is very painful, many individuals are reluctant to do so and, as a result, continue to suffer throughout their life from the damaging effects of their defense structure.

The defensive cognitive activity demonstrated in the present study seems to be particularly congruent with the theoretical notion of maladaptive defense discussed above. Thus, while the process of devaluing other competent persons is tension reducing for dominance oriented individuals, it is also likely to be socially maladaptive in the long run. It seems reasonable to assume that within a wide variety of social settings, an individual who frequently devalues other successful people is likely to encounter more and more resentment and hostility and less and less cooperation and affection.

As a result, this individual is likely to feel isolated and disliked by others. The feeling of being isolated and disliked will hurt most human beings. However, according to the clinical observations of Kernberg (1975), Horney (1945), Miller (1981), and Kohut (1977), lack of love is particularly painful for narcissistic individuals who are concerned with power and dominance. According to these writers, narcissistic dominance strivings are likely to develop as a defense against and/or as a compensation for lack of sufficient love and acceptance by the individual's primary love objects. Therefore, dominance oriented individuals are often more in need of love and attention than most other people.

Overall, then, it seems that the defensive activity of devaluation is likely to worsen the individual's social adjustment and, perhaps, also

to increase the basic deficiency in love against which it was designed to defend.

The Effects of Motives and Ego Denfeses on Physiological Stress Reactions

While the major focus of the present study was on defensive person perception, the results obtained also are relevant to the question of the psychological determinants of physiological stress reactions. More specifically, our findings supported the approach adopted by Lazarus and Baker (1956, 1957). According to this approach, the amount of psychological and physiological stress that people experience is determined by the level of threat posed to their predominant psychological motives and by the defenses they have developed in order to cope with such threats.

The effects of psychological motives and defensive styles on physiological stress reactions and susceptibility to illness were recently demonstrated by McClelland and his co-workers in a number of studies focusing on inhibited power motivation. McClelland (1979) reported that men who were characterized by the inhibited power motive syndrome in their early thirties were much more likely to have high blood pressure 20 years later than were men with other motivational syndromes. McClelland, Floor, Davidson, and Saron (1980) proposed that the explanation for this relationship lies in the greater activation of the sympathetic nervous system (which also characterizes Type A individuals) and which could lead to chronically elevated blood pressure.

In a study designed to test this hypothesis, as well as a number of other predictions, McClelland and his co-workers (McClelland et al., 1980) found that individuals high in the need for power, high in inhibition, and high in power stress (the HHH group) reported more frequent and more severe illnesses than other individuals, and they showed above

average epinephrine excretion rates in their urine. McClelland and his co-workers interpreted their findings as consistent with the hypothesis that "a strong need for Power, if it is inhibited and stressed leads to chronic sympathetic overactivity" (p. 11).

The findings obtained by McClelland et al. (1980) are very relevant to the results of our study, and therefore it is important to understand the nature of the variables investigated by McClelland and his associates.

The variable of "activity inhibition" is measured through TAT stories and consists of the number of times which the word "not" appears in the stories written by a particular individual. Men who were high on n Power and low on inhibition were found to be less controlled in expressing their sexual impulses, lied more, and drank more alcohol than other men. Men who were high on n Power and high on inhibition drank less alcohol and were found to be better managers than other men (McClelland et al. 1980).

The variable of "power stress" measures the frequency of occurrence of events related to the power motive in the life of a particular individual.

The study by McClelland et al. (1980) seems to have demonstrated by means of correlational methods a phenomenon which is very similar to the one that the present study investigated experimentally. McClelland's n Power corresponds to our dominance motive, inhibition corresponds to reversal, and power stress corresponds to the motivational threat factor. The results of the present study confirmed the findings obtained by McClelland et al. (1980) in that high-reversal high-dominance subjects in the "Threat Dominance" condition consistently showed the highest level of autonomic arousal relative to the other seven groups of subjects (as classified by motive, defense, and motivational threat).

The great similarity of the findings of the two investigations suggests that high reversal, high dominance individuals might be especially prone to develop high blood pressure and a high level of susceptibility to illness if the circumstances of their life would expose them to repeated motivational threats (i.e., Murray's dominance press or McClelland's power stress). This hypothesis can, of course, be examined by means of empirical research. In addition, the relationship between activity inhibition and reversal, as well as n Power and the dominance motive also should be explored.

The Differential Effect of Motives on Covert and Overt Behavior

The results of the present study showed that for threatened dominance oriented subjects who did not use the evaluative activity defensively, relatively favorable sociability evaluations (i.e., nondefensive evaluations) were followed by increased emotional arousal. Thus, while threatened dominance oriented subjects did not overtly show negative cognitive bias (relative to other groups of subjects) in their evaluation of the dominant target person, their covert emotional reactions indicated that for them, but not for other groups of subjects, the evaluative activity had a clear and significant defensive function (as indicated by the effect it had on subsequent emotional arousal). Thus, individual differences related to the dominance motive were detected in subjects' covert emotional reactions but not in their overt behavior.

The notion of differential effect of motives on overt behavior as compared to covert emotion is highly consistent with the basic assumptions of Freudian theory (Freud, 1927; Fenichel, 1945). According to this theory, an individual's motives or impulses often are denied overt expression by the person's Ego because their expression is likely to

bring negative social consequences. The principle guiding such an inhibition is, of course, the reality principle. At the same time, Freudian theory predicts that the inhibition of the overt expression of an impulse (or an impulse-determined defensive activity) will result in increased tension.

The results obtained in the present experiment seem to be congruent with the Freudian paradigm. Thus, it can be hypothesized that strong external normative pressure against negative public evaluation mobilized subjects' ego (or reality orientation) to prevent the expression of overt (counter normative) defensive behavior. The suppression of defensive activity resulted in increased tension.

The Freudian perspective and the findings of the present experiment both suggest that for people with a reasonably developed "Ego," motives and personality dispositions will affect behavior only when the behavior in question is not counter-normative. This principle or observation may help to explain the failure of many studies to demonstrate the effects of individual dispositions on behavior.

As was demonstrated in the present study, the failure to obtain behavioral differences does not necessarily mean that the personality variable examined in a particular study did not operate and affect subjects differentially, at least emotionally. Rather, as in the present study, it is possible that subjects' reality orientation (i.e., Ego) prevented them from expressing their motives behaviorally while at the same time responding to them emotionally.

The suppression of motive determined behavior in order to comply with social norms and expectations may be especially expected in experimental situations, because in such situations the approval of the experimenter plays a very important role (e.g., Rosenthal, 1964; Orne, 1962).

However, in less structured natural settings and over prolonged periods of time, people are likely to exercise less control over the expression of their motives (and motive determined defensive activities) and, consequently, the effects of motives on overt behavior are likely to be more clearly evidenced.

The Limitations of Schachter's Theory of Emotion

Hypothesis III predicted that for dominance oriented perceivers who would be exposed to the "Dominance Threat" condition, less favorable evaluation of the dominant target person on sociability would be associated with reduced emotional autonomic arousal. As was shown in the Results section, this hypothesis was confirmed.

The results obtained in relation to Hypothesis III might help to demonstrate the limitations of Schachter and Singer's (1962) view regarding the determinants of emotional experience. According to Schachter and Singer, in order for people to experience an emotion they first need to experience a state of physiological arousal. After they have been aroused, people then utilize the cues that are available to them to determine the specific kind of emotion that they experience.

While Schachter's approach has been useful in explaining a wide variety of emotion-related phenomena, it cannot account for the results obtained in relation to Hypothesis V. The Schachterian approach, in fact, would most likely predict that for threatened dominance oriented subjects, and all other groups of subjects, negative evaluation would be associated with an increase or no change in physiological arousal.

Viewed from a Schachterian perspective, threatened dominance oriented subjects experienced a situation of increased arousal and then

evaluated their future partner publicly. It would seem reasonable to assume that most "Schachterians" would say that under such conditions the public evaluation would serve to label and define subjects' specific emotional state. Therefore, the more one would define his future partner as intolerant, cold and bossy, the more one would be likely to feel anxious and/or angry about the possibility of meeting with him. The more one would feel anxious and angry, the greater his emotional autonomic arousal would be.

A strict "Schachterian" can, or course, claim that positive evaluation would create feelings of excitement, joy, and positive anticipation and in turn, a more negative evaluation would be associated with less joy and therefore, less emotional arousal.

Such an account, however, does not seem plausible, since it cannot explain why only threatened dominance oriented subjects showed the presumed decrease in positive excitement (and the concomitant decrease in emotional arousal) after they evaluated their future partner less favorably. From a Schachterian position alone we would not expect differential results by motive groups. However, if motive groups were to be considered, we would expect dependency oriented subjects to be at least as excited about the positive socio-emotional characteristics of their future dominant partner.

In summary, the fact that unfavorable evaluation was associated with reduced emotional arousal for threatened dominance oriented subjects only, suggests that in the present study the concept of motive related defensive process was more useful for the understanding and prediction of emotional behavior than was the Schachterian perspective.

Explanation for the Lack of Interaction Effects on Autonomic Arousal During the "Observe Tape" and "Final Wait" Periods

Inspection of Table 3 reveals a curious but unpredicted pattern: On the one hand, the motive by threat interaction was significant during the last three periods measured but not during the "Observe Task" period, and on the other hand, the motive by threat by defense interaction was significant in the first three periods but not during the last period, the "Final Wait" period. The explanation for these patterns is not clear.

One possible reason why perceivers' motives were not threatened during the observation period might be that during that time perceivers generally did not anticipate or think about their meeting with their future partners. According to this explanation, the more one thinks about meeting with motivationally threatening target persons, the more one would feel threatened. The assumption that thinking about the interaction with the target persons was threatening for subjects is reasonable, because it is during that period that perceivers' motives were most likely to be threatened, frustrated, or gratified.

It is interesting to note that this explanation is very consistent with Miller's (1944) findings concerning approach-avoidance conflicts. According to Miller, the closer one gets to the goal, the stronger the avoidance gradient becomes. In our situation, the closer the subject was to meeting the target person (in his thoughts or in reality) the more he reacted to the threat posed by him to his predominant motive.

The lack of significant results for the motive by threat by denial interaction during the "Final Wait" period is difficult to explain. The interaction effects obtained for the first three periods were a function of the increased arousal of high denial subjects whose motives were

threatened. High denial subjects were expected to become more anxious than low denial subjects when their motives were threatened, because they have little tolerance for anxiety. The lack of significant three-way interaction effects during the last period was due to the fact that high denial subjects whose motives were threatened did not show the kind of increases in arousal which they have manifested in the previous three periods.

One possible reason why high denial subjects whose motives were threatened were less upset by their anxiety during the last period might be attributed to the fact that after this period subjects expected to meet the target person and, therefore, a high arousal level would seem appropriate and would not provoke more anxiety.

The Effects of Motives on Evaluation

As was explained in the Introduction, the present experiment provided an opportunity to examine whether the effects of motives on evaluation that were obtained in a previous study (Assor et al., 1981) would be replicated under the more inhibiting, "negativity-suppressing" conditions of the present experiment.

As was shown in the Results section, no effects of motives on evaluation were evidenced in the present study. The lack of effects of motives on evaluation in the present study stands in sharp contrast to the positive results obtained by Assor et al. (1981), but is consistent with the negative results obtained by Battistich (1979) under more threatening conditions. The contrast between the positive results of Assor et al. (1981) and the lack of effects of motives on evaluation in Battistich's (1979) study and in the present study, suggests that motives influence social evaluation mostly in nonthreatening situations, in which

the evaluator is not outcome-dependent on the target person and the evaluation is private rather than public.

The Joint Effects of Motives and the Ego Defense of Denial on Evaluation

The present experiment provided an opportunity to explore whether under relatively threatening conditions, perceivers whose predominant motive would be threatened by a target person would evaluate that person more favorably if they (the perceivers) would be high rather than low on denial. As was shown in the Results section, the defense of denial did not interact with motive of perceiver and motivational threat of the observed interaction, to affect evaluation under the conditions of the present experiment. The lack of positive findings cannot be attributed only to the threatening, "negativity suppressing," nature of the experimental procedure because inspection of Table 8 reveals a strong trend in a direction opposite to the one predicted on theoretical grounds. If the lack of significant effects was only due to the moderating or suppressing effect of the threatening nature of the procedure, then we should have observed a trend in the predicted, rather than the nonpredicted, direction.

One possible explanation for the lack of effects of defense on evaluation involves the instrument through which the defense of denial was measured. It will be recalled that ego defenses were measured in the present study by the Defense Mechanism Inventory (Glesser & Ihilevich, 1969). The DMI consists of 10 short stories, each followed by 20 multiple choice items. In response to each story the subject is asked to choose from a number of possible reactions his most likely response if the incident described in the story actually had happened to him.

Inspection of the 10 stories of the DMI reveals that all of them involve direct and unjustified frustration, attack, or damage to the main character. As noted by Schill (1976), all those incidents can be expected to evoke anger. In fact, since the frustration or attack are clearly unjustified, the instigation to anger and aggression is very direct and strong.

The type of responses available to subjects responding to the DMI are rather extreme. Thus, in response to strong and direct instigation to aggression, one can either endorse aggressive, suspicious, or self-punitive reactions, or choose denial type of responses. Overall, then, the DMI presents subjects with situations involving strong instigation to aggression and then asks subjects to either endorse socially undesirable responses or deny their anger. Based on the above characteristics of the DMI, it seems reasonable to assume that ego defenses (as measured by the DMI) affect the individual's evaluative responses only if the individual clearly perceives in himself an aggressive urge, and does not have an option of expressing his anger in an indirect, neutral, or sublimated manner.

Given the nature of the DMI, and the conditions under which the defenses measured by the DMI were expected to affect evaluation, it is not surprising that the DMI did not predict favorability of evaluation in the present study or in other studies (Kipper & Ginot, 1979; Glesser & Sacks, 1973). Subjects in the present study did not experience a direct and unjustified attack on themselves. In addition, even if subjects did feel angry they could express this anger in a rather indirect way through the evaluation procedure.

In this context, it should also be noted that the sociability evaluations were generally within the positive range (4-7) of the semantic

differential. Therefore, even those evaluations which were relatively less favorable were not likely to be perceived by subjects as hostile. Since the less favorable evaluations given by a subject were not perceived by him as hostile, he was not likely to feel a need to deny them.

Defensive Versus Expressive Explanations of the Findings

One of the more serious questions that might be posed about the present study involves the nature of the process that was demonstrated: Was it essentially defensive, or expressive and cathartic. Thus, the present experiment could be viewed as a demonstration of anger arousal in response to motivational threat and anger reduction as a function of devaluation. If indeed, this was the case, then the present study would not have provided evidence for the operation of emotionally mediated defensive process in person perception.

There are a number of reasons, however, why the process demonstrated in the present experiment should not be viewed as fulfilling mainly a cathartic function.

As was explained previously, the present study can be viewed as a catharsis type of experiment. However, even as a catharsis study, the present study differs widely from past catharsis experiments in the type and potency of the anger provocation it induced. Past studies typically used a direct, rude, and clearly unjustified anger provocation, such as insults, or rude and recurrent interferance with one's attempts to concentrate on a difficult task (e.g., Hokanson & Burges, 1962; Schill, 1972). The better controlled catharsis studies often made a special effort to insure that the emotion aroused was anger, but not fear (e.g., Kahn, 1966).

The reason that subjects in the present study might have experienced anger is that their motives were indirectly threatened by mere exposure to target persons who never addressed the subjects either directly or indirectly. Threat, by definition, involves the activation of apprehenson, fear, or anxiety. Therefore, unlike the anger provocation methods used in previous studies, the anger provocation "method" used in the present study strongly intermingled arousal of anger with arousal of anxiety or fear.

While the possibility of anger arousal without anxiety arousal seems remote, the possibility that devaluation has a cathartic rather than defensive effect seems, at a first glance, plausible. Thus, the effects of punitive behavior toward a frustrator on reduction of blood pressure were demonstrated by many investigators (e.g., Gambaro & Rabin, 1969; Hokanson & Shetler, 1961; Van Egeren, Abelson, & Thornton, 1978). In the present experiment, public devaluation can be viewed as a punitive behavior (verbal aggression) and as such could be expected to reduce physiological arousal.

There are a number of problems with the cathartic explanation presented above. First, and most important, it should be noted that although the catharsis effect was demonstrated for physiological measures of cardiovascular activity (mainly dyastolic blood pressure) the evidence with regard to phasic electrodermal activity (EDA) indicates that in males, verbal expression of anger and dislike causes a significant increase rather than a decrease in phasic electrodermal activity (Kahn, 1966; Frodi, 1978). Thus, the reduced arousal observed in the subjects of our study cannot be attributed to a cathartic effect because no such effect ever has been demonstrated for phasic EDA. The fact that in our study less favorable evaluations were followed by reduced phasic EDA

(for threatened dominance oriented subjects) suggests that the less favorable evaluations were not viewed by subjects as expressions of anger, and therefore, did not cause the increase in phasic EDA observed in Kahn's (1966) and Frodi's (1978) experiments.

The notion that the less favorable impressions were not viewed by subjects as expressions of anger or hostility was supported by the fact that the less favorable impressions were generally still within the limits of the positive portion of the semantic differential scale.

A second problem with the cathartic explanation is related to the fact that even for blood pressure measures, the cathartic effect was demonstrated only when the expression of anger was viewed by subjects as legitimate, morally justified, not counter-normative, and not risky (Hokanson & Shetler, 1961; Gambaro & Rabin, 1969; Van Egeren, Abelson & Thornton, 1978; Stone & Hokanson, 1969; Schill, 1972). In view of the fact that subjects were not bothered or insulted rudely by the target persons, and given the strong normative pressures against negative public evaluation (Sears & Whitney, 1973), subjects in the present experiment were not likely to feel that verbal aggression toward their future partner would be legitimate, consistent with norms, and not risky. Therefore, verbal expression was not likely to help subjects to reduce their blood pressure, much less their phasic EDA.

In summary, our survey of the different problems associated with the cathartic explanation suggests that this explanation cannot account adequately for the results obtained in the present study. In comparison to the cathartic explanation, the defensive explanation seems much less problematic and can better account for the results obtained in this study.

According to the defensive explanation, threatened dominance oriented subjects felt somewhat less anxious after they had devalued the

target person because it helped them to restore their positive self-evaluation in comparison to that person. Because dominance oriented subjects are interested in relative superiority, they did not need to evaluate the target person in a very negative and hostile way in order to reduce their anxiety. Instead, they evaluated the target person positively, yet clearly below their level, thereby avoiding the repercussions of the negative evaluation while still managing to decrease anxiety.

The effect of defensive evaluation on emotional arousal was explained so far as a function of the attempts of dominance oriented subjects to maintain satisfactory level of positive self-evaluation. However, the effects of defensive evaluation on arousal can also be explained as a function of interpersonal, in addition to intrapersonal, defensive processes. According to the interpersonal defensive explanation, dominance oriented subjects devalued their dominant future partner in order to impress the experimenters as superior to him. While under the "Dominance Threat" condition, the demonstration of such superiority (relative to the dominant target person) on the competence dimension was highly unlikely, it was quite possible on the sociability dimension. This might be another reason for the strong relationship found between devaluation and reduced arousal on the sociability dimension as compared to the competence dimension.

In summary, while the cathartic interpretation of the present experiment seems implausible, it is possible that the defensive processes involved were both intra- and inter-personal.

Limitations of the Present Study and Suggestions for Future Research

The major limitation of the present study seems to be the lack of measurement of specific emotions as compared to the state of general

emotional autonomic arousal. Because anxiety was not measured directly, no direct evidence for the operation of a defensive process in person perception was obtained. Similarly, the lack of direct measures of anxiety and anger did not permit the conclusive determination of whether the present study involved defensive, cathartic or both types of processes. Although the differential measurement of emotion is still a very complicated task, the positive results obtained in the present investigation suggest that such an undertaking would be worthwhile. (For different methods of measuring differential emotions, see Ekman & Friesen, 1975; Schwartz, Fair, Salt, Mandel, & Klerman, 1976; Ax, 1957; Levy, 1975).

Another limitation of the present study was the combining of two situational factors in the motivational threat factor. As was described previously, one factor involved the dominance and competence of the target person which the perceiver expected to meet, and the other factor was the level of discrepancy between the task competence of the two target persons being observed. In view of the positive findings of the present investigation, future research might profitably focus on the examination of the contribution of each component of the motivational threat factor to the effects obtained in the present study.

One apparent limitation of the present study is the fact that the second component of the hypothesized defensive process--defensive cognitive activity--was elicited by the experimental procedure and did not emerge spontaneously. Therefore, it might be argued that under "natural" conditions of exposure to threat, in which perceivers would not be "forced" to focus on the threatening stimulus, perceivers would not engage in any defensive process involving active distortion. Instead, they might, for example, turn their attention to another activity.

In view of the argument presented above, it should be emphasized that the results of the present study should not be interpreted as demonstrating the occurrence of a complete defensive cycle following the initial perception of a threatening stimulus. However, the findings can be interpreted as demonstrating the occurrence of a complete defensive process following re-emergence of the threatening stimulus. From a theoretical standpoint (Freud, 1937), the limitation of the findings to re-emerging or repeated threatening stimuli is not really a problem because the major function of defense is not so much the initial repression of the threatening stimuli but the continuing repression of these stimuli, especially under conditions in which they threaten to re-emerge.

Another apparent limitation of the present study involves the fact that the reduced level of emotional arousal after the evaluations was not actually an absolute reduction relative to the pre-evaluation level, but rather a relatively small increase in arousal. The lack of absolute reduction in arousal would be a problem if we were to interpret the present experiment as demonstrating a complete defensive cycle following the initial exposure to a threatening stimuli.

As indicated by the term cycle, under such conditions we would expect that the defensive cognitive activity would reduce the high level of emotional arousal produced by the initial perception of the threatening stimuli. However, if the present experiment is viewed as demonstrating a defensive process activated in response to the re-emergence of the threatening stimuli, then the lack of absolute reduction of emotional arousal is entirely expected on theoretical grounds. In a situation where a threatening stimuli re-emerges, it is reasonable to expect that perceivers' anxiety would increase. The task

of defensive cognitive activity under such conditions is to minimize the increase in emotional arousal, as was the case in the present study.

Overall, despite the various limitations, the results of the present study provided strong evidence for the operation of emotionally mediated defensive processes in person perception. Contrary to past studies, the present experiment demonstrated the operation of all three essential components of the defensive process in relation to one stimulus, and the stimuli used were people rather than words or pictures. The ecological validity of the study seems substantial because the stimuli were people with whom subjects expected to interact.

In addition, the present study also demonstrated that threatened psychological motives can operate as activators of emotionally mediated defensive processes in person perception. In the area of human stress, the present study demonstrated the importance of psychological motives and ego defenses as determinants of physiological stress reactions.

In light of the positive findings obtained in the present investigation, future research might profitably concentrate on the examination of the specific emotions involved in the processes demonstrated in this study, and on the investigation of the different interpersonal and personal consequences of defensive person perception processes.

APPENDICES

APPENDIX A

PERSONALITY QUESTIONNAIRES

APPENDIX A

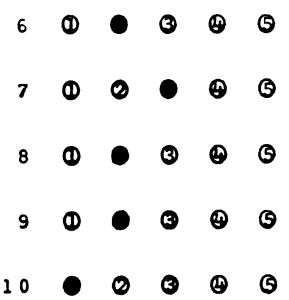
PERSONALITY QUESTIONNAIRES

SITUATIONAL SURVEY

INSTRUCTIONS: Read carefully. (Do not make any marks on this booklet.)

On each of the following pages is a short story. Following each story are four questions with a choice of five answers for each. The four questions relate to the following four kinds of behavior: actual behavior, impulsive behavior in fantasy, thoughts, and feelings. Of the four, it is only actual behavior which is outwardly expressed; the other three take place only in the privacy of one's mind and, therefore, have no external repercussions.

What we want you to do is to select the one answer of the five which you think is the most representative of how you would react, and mark the number corresponding to that answer on the computer answer sheet by darkening the space marked three (3) next to that number. Then select the one answer you think is least representative of how you would react and mark it by darkening the space marked one (1) next to that number. The other three responses should be marked as two (2). For example, let us assume that out of the five possible answers to a question (e.g., numbers 6, 7, 8, 9, 10), response number 7 is the one you consider most representative of the way you would react, and response number 10 is the least representative. In this case, the corresponding part of the answer sheet would look like this:



Read all the five answers following the question before you make your selections. In marking your answers on the computer sheet, be sure that the number of the answer agrees with the number on the computer sheet.

There are no right or wrong answers here; the only thing that should guide your selections is your own knowledge of yourself. Allow your mind to imagine for a moment that the event described in the story is really happening to you, even though you may never have experienced such an event. When you select your responses remember we are not asking which answer you like most and like least, but rather the answers which would best and least represent the way you would act and feel in these situations.

If you have no questions, please turn to the next page and begin.

Note: Be sure to write your name and the date, and darken the spaces for your student number and sex on the computer answer sheet.

1 = Least Representative

2 = In Between

3 = Most Representative

You are waiting for the bus at the edge of the road. The streets are wet and muddy after the previous night's rain. A car sweeps through a puddle in front of you, splashing your clothing with mud.

A. What would your ACTUAL reaction be?

1. I would note the car's license number in order to find out whether the driver had a motive for splashing me.
2. I'd wipe myself off with a smile.
3. I'd yell curses after the driver.
4. I would scold myself for not having worn at least a raincoat.
5. I'd shrug it off, after all things like that are unavoidable.

B. What would you IMPULSIVELY (in fantasy) want to do?

6. Wipe that driver's face in the mud.
7. Report that incompetent driver to the police.
8. Kick myself for standing too close to the edge of the road.
9. Let the driver know that I don't really mind.
10. Let that driver know that bystanders also have rights.

C. What THOUGHT might occur to you?

11. Why do I always get myself into things like this?
12. To hell with that driver!
13. I'm sure that basically that driver is a nice fellow.
14. One can expect something like this to happen on wet days.
15. I wonder if that fellow splashed me on purpose.

1 = Least Representative

2 = In Between

3 = Most Representative

D. How would you FEEL and why?

16. Satisfied, after all it could have been worse.

17. Depressed, because of my bad luck.

18. Resigned, for you've got to take things as they come.

19. Resentment, because the driver was so thoughtless and inconsiderate.

20. Furious that he got me dirty.

In the army you hold a post of responsibility for the smooth operation of an important department which is constantly under great pressure to meet deadlines. Because things haven't been running as smoothly as they should lately, despite your initiative and resourcefulness, you have planned some changes in personnel for the near future.

Before you do so, however, your superior officer arrives unexpectedly, asks some brusque questions about the work of the department and then tells you that he is relieving you of your post and assigning your assistant to your place.

A. What would your ACTUAL reaction be?

21. I'd accept my dismissal gracefully, since the superior is only doing his job.

22. I'd blame my superior for having made up his mind against me even before the visit.

23. I'd be thankful for being relieved of such a tough job.

24. I'd look for an opportunity to undercut my assistant.

25. I'd blame my assistant for not being competent enough.

1 = Least Representative

2 = In Between

3 = Most Representative

B. What would you IMPULSIVELY (in fantasy) want to do?

26. Congratulate my assistant on his promotion.

27. Expose the probable plot between my superior and my assistant to get rid of me.

28. Tell my superior to go to hell.

29. I'd like to kill myself for not having made the necessary changes sooner.

30. I'd like to quit, but one can't do that in the army.

C. What THOUGHT might occur to you?

31. I wish I could come face to face with my superior in a dark alley.

32. In the army it is essential to have the right man in the right job.

33. There is no doubt that this was just an excuse to get rid of me.

34. I'm really lucky that I only lost my job and not my rank as well.

35. How could I be so dumb!

D. How would you FEEL and why?

36. Resentful, because he had it in for me.

37. Angry, at my assistant for getting my job.

38. Delighted that nothing worse had happened.

39. Upset that I am a failure.

40. Resigned, after all, one must be satisfied with having done the best one can.

1 = Least Representative
2 = In Between
3 = Most Representative

You are living with your aunt and uncle, who are helping to put you through college. They have taken care of you since your parents were killed in an automobile accident when you were in your early teens. On a night that you have a late date with your "steady," there is a heavy storm outside. Your aunt and uncle insist that you call and cancel your date because of the weather and the late hour. You are about to disregard their wishes and go out the door when your uncle says in a commanding tone of voice, "Your aunt and I have said that you can't go, and that is that."

A. What would your ACTUAL reaction be?

41. I would do as my uncle said because he has always wanted what was best for me.

42. I'd tell them, "I always know you didn't want me to grow up."

43. I would cancel my date, since one must keep peace in the family.

44. I'd tell them it was none of their business and go out anyway.

45. I'd agree to remain at home and apologize for having upset them.

B. What would you IMPULSIVELY (in fantasy) want to do?

46. Knock my head against the wall.

47. Tell them to stop ruining my life.

48. Thank them for being so concerned with my welfare.

49. Leave, slamming the door in their faces.

50. Keep my engagement, rain or shine.

1 = Least Representative

2 = In Between

3 = Most Representative

C. What THOUGHT might occur to you?

51. Why don't they shut up and leave me alone?

52. They never have really cared about me.

53. They are so good to me, I should follow their advice without question.

54. You can't take without giving something in return.

55. It's my own fault for planning such a late date.

D. How would you FEEL and why?

56. Annoyed, that they think I am a baby.

57. Miserable, because there is nothing much I can do.

58. Grateful for their concern.

59. Resigned, after all you can't get your own way every time.

60. Furious, because they interfere with my business.

You are extremely eager to do well in sports, but of all those at which you have tried your hand, only in basketball have you been able to achieve a measure of success. However, until now, whenever you have applied for membership in a team or sports club, although the judges have appeared impressed with your initial performance, their final decision has always been the same--they tell you that you've just missed making the grade.

One afternoon your car breaks down and you are forced to take a bus home during the rush hour. As you stand in the crowded bus, you hear your wife's voice. She is seated together with the manager of the team to which you have just applied. You overhear the manager tell her, "Your husband has a nice style of play, we're thinking of asking him to join

1 = Least Representative

2 = In Between

3 = Most Representative

our club." Then you hear your wife laugh and reply, "Take it from me, he hasn't got what it takes in the long run."

A. What would your actual reaction be?

61. I'd have it out with her.

62. I would greet her affectionately, as usual, when I arrived home because I know she really appreciates me.

63. I'd be quiet and withdrawn for the rest of the evening, not mentioning what I had overheard.

64. I'd take it in my stride, for women's talk is never taken seriously.

65. I'd tell her that I wasn't surprised by what I'd overheard because I had always thought she was two-faced.

B. What would you IMPULSIVELY (in fantasy) want to do?

66. Tell my wife that I overheard her, and was proud of her frankness.

67. Break her neck.

68. Tell her that men expect loyalty from their wives.

69. Let her know that I'd always suspected her of talking behind my back.

70. Stop off somewhere so I wouldn't have to face her.

C. What THOUGHT might occur to you?

71. I bet she talks about me that way to everybody.

72. What could I have done that makes her feel this way about me?

73. I'm sure she's only kidding.

74. One shouldn't be bothered by such talk.

75. She needs to be taught a lesson.

1 = Least Representative

2 = In Between

3 = Most Representative

D. How would you FEEL and why?

76. Worthless, because I'd realize what a failure I was as a husband.

77. Outraged, that she had spoken of me that way.

78. Unconcerned, because women are like that.

79. Furious, because her gossip has probably contributed to most of my past failures.

80. Serene, because I know the manager will realize that she doesn't know what she is saying.

At your job you want to impress upon your foreman the fact that you are more skilled than your fellow workers. You are eagerly awaiting an opportunity to prove yourself.

One day a new machine is brought into the factory. The foreman calls all the workers together and asks whether anyone knows how to operate it. You sense the chance you have been waiting for, so you tell the foreman that you have worked with a similar machine and would like a chance to try your hand at this one. But he refuses, saying, "Sorry, we can't take the chance," and calls a veteran worker to come over and try to get the machine started.

No sooner has the veteran worker pulled the starter, then sparks begin to fly and the machine grinds to a halt. At this point the foreman calls and asks you if you still want a chance to try and start the machine.

1 = Least Representative

2 = In Between

3 = Most Representative

A. What would your ACTUAL reaction be?

81. I'd say that I doubt if I could do it either.

82. I'd tell my fellow workers that the foreman wants to hold me responsible for the machine's crack-up.

83. I'd tell the foreman that I appreciated his giving me the chance.

84. I'd decline, cursing the foreman under my breath.

85. I'd tell the foreman that I would try because one must never back down from a challenge.

B. What would you IMPULSIVELY (in fantasy) want to do?

86. Tell that foreman that he'll not make me the scapegoat for a broken machine.

87. Thank the foreman for not letting me try it first.

88. Tell the foreman that he should try to start a broken machine himself.

89. Point out to the foreman that experience doesn't guarantee success.

90. Kick myself for talking myself into an unbearable situation.

C. What THOUGHT might occur to you?

91. That foreman is really a pretty decent guy.

92. Damn him and his blasted machine.

93. This foreman is out to get me.

94. Machines are not always reliable.

95. How could I be so stupid as to even think of operating that machine.

1 = Least Representative

2 = In Between

3 = Most Representative

D. How would you FEEL and why?

96. Indifferent, because when one's abilities are not appreciated one's enthusiasm is lost.

97. Angry that I was asked to do an impossible job.

98. Annoyed that I was purposely put on the spot.

99.

100. Disgusted with myself because I risked making a fool out of myself.

On your way to catch a train, you are hurrying through a narrow street lined with tall buildings. Suddenly a piece of masonry comes crashing down from a roof where repairmen are working. A piece of brick bounces off the sidewalk, bruising you in the leg.

A. What would your ACTUAL reaction be?

101. I'd tell them I ought to sue them.

102. I'd curse myself for having such bad luck.

103. I'd hurry on, for one should not permit oneself to be diverted from one's plans.

104. I'd continue on my way, grateful that nothing worse had happened.

105. I'd try to discover who the negligent persons are.

B. What would you IMPULSIVELY (in fantasy) want to do?

106. Remind the men of their obligation to public safety.

107. Assure those men that nothing serious had happened.

108. Give them a piece of my mind.

109. Kick myself for not having watched where I was going.

110. See to it that those careless workers lose their job.

1 = Least Representative
2 = In Between
3 = Most Representative

C. What THOUGHT might occur to you?

111. Those men don't know how to do their job right.

112. I'm lucky that I wasn't seriously hurt.

113. Damn those men!

114. Why do these things always happen to me?

115. One can't be too careful these days.

D. How would you FEEL and why?

116. Furious, because I was hurt.

117. Angered, because I was almost killed by their negligence.

118. Calm, for one must practice self-control.

119. Upset by my bad luck.

120. Thankful that I'd gotten away with no more than a scratch.

Driving through town in the late afternoon, you arrive at one of the busiest intersections. Although the light has changed in your favor, you see that pedestrians are not obeying the "wait" sign and are blocking your path. You attempt to complete your turn with due caution before the light turns against you. As you complete the turn, a traffic policeman orders you over to the side and charges you with violating the pedestrians' right-of-way. You explain that you had taken the only possible course of action, but the policeman proceeds to give you a ticket nevertheless.

1 = Least Representative

2 = In Between

3 = Most Representative

A. What would your ACTUAL reaction be?

121. I'd blame myself for having been careless.

122. I'd go to court and bring counter charges against the policeman.

123. I'd ask the policeman why he had such a grudge against drivers.

124. I'd try to cooperate with the policeman, who, after all, is a good guy.

125. I'd take the ticket without question, since the policeman was just doing his duty.

B. What would you IMPULSIVELY (in fantasy) want to do?

126. Tell the policeman he can't use his position to push me around.

127. Kick myself for not having waited for the next green light.

128. Thank the policeman for saving me from a possible accident.

129. Stand up for my rights as a matter of principle.

130. Slam the door in his face and drive off.

C. What THOUGHT might occur to you?

131. He's doing the right thing, actually I ought to thank him for teaching me an important lesson.

132. Each man must carry out his job as he sees it.

133. This guy ought to go back to pounding a beat.

134. How could I be so stupid!

135. I bet he gets a kick out of giving tickets to people.

1 = Least Representative
2 = In Between
3 = Most Representative

D. How would you FEEL and why?

136. Boiling anger, because he's making trouble for me.

137. Resentment, because he's picking on me.

138. Ashamed, because I was negligent.

139. Indifferent, after all, this sort of thing happens all the time.

140. Relieved, because I'd been prevented from getting into worse trouble.

You return home after spending two years in the army. At the time you joined you had had a choice between enlistment and a position in your father's business. You preferred the army despite parental advice. Now that you are home again, you find that your range of opportunity hasn't widened appreciably. You can either join your father's business or get a job as an untrained worker. You would like to open a coffee shop, but you lack the capital necessary to carry out such an enterprise. After a great deal of hesitation, you decide to ask your father to put up the money. After listening to your proposal, he reminds you that he had wanted you to take a job with his firm instead of joining the army. Then he tells you, "I'm not prepared to throw away my hard-earned money on your crazy schemes. It's time you started helping me in my business."

1 = Least Representative

2 = In Between

3 = Most Representative

A. What would your ACTUAL reaction be?

141. I'd accept his offer, since everyone depends on everyone else in this world.

142. I would admit to him that I guess I am a bad risk.

143. I'd tell him off in no uncertain terms.

144. I'd tell him that I always suspected that he had a grudge against me.

145. I'd thank him for holding a job open for me all these years.

B. How would you IMPULSIVELY (in fantasy) want to react?

146. Go to work for him and make him happy.

147. Give up trying and end it all.

148. Take my father's offer since offers like that don't grow on trees.

149. Let him know what a miser everyone thinks he is.

150. Tell him that I wouldn't work for him if he were the last man on earth.

C. What THOUGHT might occur to you?

151. He'll get what's coming to him one day.

152. Family considerations can't enter into business decisions.

153. Why was I so stupid as to bring the subject up.

154. I must admit that my father is acting for my own good.

155. This proves what I've suspected all along, that my father has never believed in me.

1 = Least Representative

2 = In Between

3 = Most Representative

D. How would you FEEL and why?

156. Angry, because he doesn't want me to succeed on my own.

157. Grateful for his offer of a job with a future.

158. Resentful that he is sabotaging my future.

159. Resigned, since you can't have everything your own way all the time.

160. Hopeless, because I couldn't get my father's support.

Having just come out of an exhibition at the art museum, you stop by to visit your girl friend. You are rather exhausted but impressed, and deeply inspired by what you have just seen. Referring to your visit to the museum, you remark that it must be very exciting to be a creative artist. Your girl friend asks, "Would you really like to be an artist?" You reply eagerly, "Not a painter, but a ballet dancer! A ballet dancer is what I've always wanted to be." Your girl friend jerks away from you in dismay, exclaiming, "What kind of a man are you, anyway?"

A. What would your ACTUAL reaction be?

161. I'd tell her that it's obvious now that she'd never liked me.

162. I'd tell her, "One's profession is no indicator of one's manliness.

163. I'd insult her.

164. I'd tell her that I'm sure she doesn't really mean what she is saying.

165. I'd tell her how sorry I am to disappoint her.

1 = Least Representative

2 = In Between

3 = Most Representative

B. What would you IMPULSIVELY (in fantasy) want to do?

166. Tell her I can't help being the way I am.

167. Leave, slamming the door in her face.

168. Assure her that I have no intention of really going into ballet.

169. Tell her that she is ignorant about art and is just jealous because she doesn't know as much about the arts as I do.

170. Tell her that there is nothing unmanly about ballet dancing.

C. What THOUGHT might occur to you?

171. I deserve such a rebuff.

172. A little knowledge is a dangerous thing.

173. She is an extremely limited girl.

174. This girl deserves to be taught a lesson she won't forget.

175. She really cares about me.

D. How would you FEEL and why?

176. Happy that she is so frank with me.

177. Annoyed at myself for discussing it with her.

178. Unaffected, because girls say things like that without really meaning them.

179. Angry because she is so stupid.

180. Furious that she dared to speak to me in that way.

You and an old school friend are competing for a newly vacated executive position in the firm where you work. Although both your chances seem about equal, your friend has had more opportunity to show resourcefulness in critical situations. Recently, however, you have successfully

1 = Least Representative
2 = In Between
3 = Most Representative

pushed through some excellent deals. In spite of this, the board of directors decides to promote your friend rather than you.

A. What would your ACTUAL reaction be?

181. I'd try to find out which director "blackballed" me.

182. I'd continue to do my duty as a responsible person must.

183. I'd accept the outcome as proof that I'm not executive material.

184. I'd protest the decision of the board most vehemently.

185. I'd congratulate my friend on the promotion.

B. What would you IMPULSIVELY (in fantasy) want to do?

186. Ask the board to reconsider, since a mistake would be detrimental to the company.

187. Kick myself for having aspired to a job for which I wasn't qualified.

188. Show the board how biased they've been in their unjust treatment of me.

189. Help my friend make a success at the new job.

190. Break the neck of each and every member of the board of directors.

C. What THOUGHT might occur to you?

191. I guess I just don't have what it takes.

192. I probably wouldn't enjoy an executive position as much as the one I have now.

193. There is certainly something fishy about the board's decision.

194. One must take a blow such as this in one's stride.

195. Damn that board of directors.

1 = Least Representative

2 = In Between

3 = Most Representative

D. How would you FEEL and why?

196. Happy that I still have the job I am used to.

197. Upset because my inadequacy was made public.

198. Furious at the directors because of their treatment of me.

199. Resigned, for that's the way it goes in the business world.

200. Angry, because I have been the victim of an unjust decision.

PSYCHOLOGICAL INVENTORY

On this questionnaire you will find a series of statements which a person might use to describe himself/herself. Read each statement and decide whether or not it describes you. Then indicate your answer on the separate answer sheet.

In marking your answers on the answer sheet, be sure that the number of the statement you have just read is the same as the number on the answer sheet. Please answer every question, even if you are not completely sure of the answer.

For the first set of questions, you will be asked to indicate whether the statement is TRUE or FALSE as it applies to you. If you feel it is true, mark a 1 on the answer sheet. If you feel it is false, mark a 2.

1. I doubt whether I would make a good leader.
2. I think I would enjoy having authority over other people.
3. When in a group of people I have trouble thinking of the right things to talk about.
4. If given the chance I would make a good leader of people.
5. In school I found it very hard to talk before the class.
6. I have not lived the right kind of life.
7. I have a natural talent for influencing people.
8. I seem to do things that I regret more often than other people do.
9. I am certainly lacking in self-confidence.
10. When I work on a committee I like to take charge of things.
11. In a group, I usually take the responsibility for getting people introduced.
12. I would be willing to describe myself as a pretty "strong" personality.
13. There are times when I act like a coward.
14. I must admit I am a pretty fair talker.
15. I think I am usually a leader in my group.
16. I enjoy planning things, and deciding what each person should do.
17. I would rather not have very much responsibility for other people.

18. I like to give orders and get things moving.

19. I am embarrassed with people I do not know well.

20. I'm not the type to be a political leader.

21. People seem naturally to turn to me when decisions have to be made.

22. I dislike to have to talk in front of a group of people.

For the next set of questions, you will receive pairs of statements. You will be asked to indicate which of the two statements is more characteristic of you. Choose the statement that is most true for you and indicate which one you have chosen by marking a "1" or a "2" on the answer sheet. If neither of the statements is true, then choose the statement which is least inaccurate.

23. 1. I like my friends to show a great deal of affection toward me.
    2. I like to become sexually excited.

24. 1. I like to be called upon to settle arguments and disputes between others.
    2. I like my friends to do many small favors for me cheerfully.

25. 1. I like to keep working at a puzzle or problem until it is solved.
    2. I like my friends to treat me kindly.

26. 1. I feel like criticizing someone publicly if he deserves it.
    2. I like my friends to make a fuss over me when I am hurt or sick.

27. 1. I like my friends to sympathize with me and to cheer me up when I am depressed.
    2. When with a group of people, I like to make the decisions about what we are going to do.

28. 1. I like my friends to do many small favors for me cheerfully.
    2. I like to stay up late working in order to get a job done.

29. 1. I like to form new friendships.
    2. I like my friends to help me when I am in trouble.

30. 1. I like to judge people by why they do something--not by what they actually do.
    2. I like my friends to show a great deal of affection toward me.

31. 1. I like to experiment and try new things.
    2. I like my friends to be sympathetic and understanding when I have problems.

32. 1. I like to forgive my friends who may sometimes hurt me.
    2. I like my friends to encourage me when I meet with failure.

33. 1. I like my friends to feel sorry for me when I am sick.
    2. I feel better when I give in and avoid a fight, than I would if I tried to have my own way.

34. 1. I like my friends to make a fuss over me when I am hurt or sick.
    2. I feel like blaming others when things go wrong for me.

35. 1. I like my friends to be sympathetic and understanding when I have problems.
    2. I like to meet new people.

36. 1. I feel that I should confess the things that I have done that I regard as wrong.
    2. I like my friends to sympathize with me and to cheer me up when I am depressed.

37. 1. I like to have my life so arranged that it runs smoothly and without much change in my plans.
    2. I like my friends to feel sorry for me when I am sick.

38. 1. I like my friends to help me when I am in trouble.
    2. I like to treat other people with kindness and sympathy.

39. 1. I like my friends to make a fuss over me when I am hurt or sick.
    2. I like to talk about my achievements.

40. 1. I like my friends to be sympathetic and understanding when I have problems.
    2. I like to accept the leadership of people I admire.

41. 1. I like to avoid sutations where I am expected to do things in a conventional way.
    2. I like my friends to sympathize with me and to cheer me up when I am depressed.

42. 1. When planning something, I like to get suggestions from other people whose opinions I respect.
    2. I like my friends to treat me kindly.

43. 1. I like my friends to do small favors for me cheerfully.
    2. I like to judge people by why they do something, not by what they actually do.

44. 1. I like my friends to help me when I am in trouble.
    2. I like to do things for my friends.

45. 1. I like to accomplish tasks that others recognize as requiring skill and effort.
    2. I like my friends to encourage me when I meet with failure.

46. 1. I like my friends to feel sorry for me when I am sick.
    2. I like to avoid situations where I am expected to do things in a conventional way.

47. 1. I like my friends to encourage me when I meet with failure.
    2. I like to be successful in things undertaken.

48. 1. I like to be regarded as physically attractive by those of the opposite sex.
    2. I like my friends to show a great deal of affection toward me.

49. 1. I like my friends to treat me kindly.
    2. I like to have my work organized and planned before beginning it.

50. 1. I like to be the center of attention in a group.
    2. I like my friends to make a fuss over me when I am hurt or sick.

APPENDIX B

EVACUATION PROBLEM AND MAP

APPENDIX B

THE EVACUATION PROBLEM

General Overview

The two subjects were asked to role-play or pretend that they are part of the leadership of a small state in the 18th century. A remote large valley was flooded and the people there face a serious danger of drowning, starvation, and spreading diseases. The two subjects were appointed as leaders of an evacuation expedition that will depart from the capital area, go to the flood area, and bring its 3000 inhabitants back to the capital area.

The task of the subjects is to prepare the best plan they can for the expedition and the evacuation. In order to do so, they have to address and solve the following problems:

First Problem--Crossing the X River

As you can see from the map, the first problem is how to cross the X river. The bridges are all destroyed and since the stream is very turbulent, it is impossible to cross it by boats, rafts, or swimming. The X river is 90 feet wide.

Second Problem--Influencing the mountain men

The second problem is how to influence the hostile mountain men to let the expedition pass through their territory. There are about 3000 mountain men and they are spread all over the mountain area. The mountain men dislike farming and are tough fighters.

The expedition needs to go through the mountains because it needs to get to the secret tunnels (see map).

Third Problem--Opening the tunnels

The third problem is related to the crossing of the Y river. Because of the flood, there are no bridges left on the Y river, and it is impossible to cross it by swimming, boats, or rafts.

The only way to insure safe crossing of the Y river is to use the four secret tunnels to divert water (under the ground) from the Y to the Z river. As a result of the diversion, the Y river will become more shallow at the point below the tunnels, and could be safely crossed there.

It should be noted that the existence of the tunnels is known only to the leaders of the expedition, and that the tunnels have been closed for many generations and it is possible that some dirt has accumulated in them.

With regard to the opening of the tunnels, the problem is whether to open the tunnels all at once or one at a time, and if one at a time, which tunnel to open first.

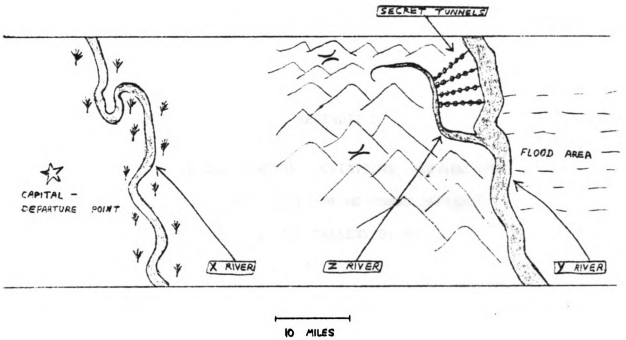
Fourth Problem--Bringing back the evacuees

After the evacuation has started, the problem is how to bring the evacuees back to the capital area safely and quickly.

Fifth Problem--Preparing the list

The last thing the subjects will have to do is make a list of how many people, what kind of people, and what kind of equipment they want to take with them.

THE EVACUATION MAP



NOTE: THE RIVERS AND MOUNTAINS IN THIS MAP ARE NOT DRAWN TO SCALE.

APPENDIX C

MEANS, STANDARD DEVIATIONS, MINIMUM AND MAXIMUM VALUES OF MEASURES EMPLOYED IN THE PRESENT STUDY

APPENDIX C

Table C:1.--Means, Standard Deviations, Minimum and Maximum Values of Measures Employed in the Present Study.

Name of Measure	Mean	Standard Deviation	Minimum Value	Maximum Value
Sociability	4.91	.91	2.60	7.00
Competence	4.40	1.71	1.40	6.80
General Evaluation	4.66	.79	3.25	6.85
SF Baseline	.75	1.34	0.00	5.83
SF Highest Frequency	6.46	4.35	0.00	16.00
SF Observe Task	.25	.34	-1.28	.89
SF Observe Interview	.85	.62	-.33	2.70
SF Wait for Evaluation	.60	.55	-.33	3.00
SF Final Wait	.56	.44	-.33	1.75
SCR Competence	.31	.27	0.00	1.61
SCR Sociability	.29	.27	0.00	1.80
SCR General Evaluation	.30	.26	0.00	1.70
Largest increase in skin conductance over 3 seconds	8.36	8.84	.20	33.00
Largest increase in skin conductance over 15 seconds	14.70	14.42	0.80	61.00
Shortened Dominance Scale	13.28	6.86	3.00	22.00
Succorance Scale	11.85	5.22	4.00	21.00
Reversal	37.19	7.98	23.00	53.00

BIBLIOGRAPHY

BIBLIOGRAPHY

Adler, A. The practice and theory of individual psychology. New York: Harcourt, Brace, and World, 1927.

Altrocchi, J., and Perlitsh, Hilda D. Ego control patterns and attribution of hostility. Psychological Reports, 1963, 12, 811-818.

Altrocchi, J., Shranger, S., and McLeod, M. A. Attribution of hostility to self and others by expressors, sensitizers, and repressors. Journal of Clinical Psychology, 1964, 20, 233.

Anderson, N. H. Likableness ratings of 555 personality trait words. Journal of Personality and Social Psychology, 1968, 9, 272-279.

Aronoff, J. A test and scoring manual for the measurement of safety, love and belongingness, and esteem needs. Unpublished manuscript, Michigan State University, 1971.

Aronoff, J., and Wilson, J. P. Personality in the social process. Manuscript in preparation, n.d.

Assor, A. The relationship between motivation of perceivers and their evaluation of high and low status persons. Unpublished master's thesis, Michigan State University, 1978.

Assor, A., Aronoff, J., and Messé, L. A. Attribute relevance as a moderator of the effects of motivation on impression formation. Journal of Personality and Social Psychology, 1981, in press.

Assor, A. and O'Quin, K. R. The intangibles of bargaining: Power and competence versus deference and approval. Journal of Social Psychology, in press.

Bales, B. F. Personality and interpersonal behavior. New York: Holt, Reinehart, and Winston, 1970.

Berscheid, E., Graziano, W., Monson, T., and Dorner, M. Outcome dependency: Attention, attribution, and attraction. Journal of Personality and Social Psychology, 1968, 8, 13-19.

Battistich, V. Personality and situational influences in person perception and social cognition: An interactive model of the impression formation process. Unpublished doctoral dissertation, Michigan State University, 1979.

Centers, R. Evaluating the loved one: The motivational congruency factor. Journal of Personality, 1971, 39, 303-318.

Chance, E.C. and Meaders, W. Needs and interpersonal perception. Journal of Personality, 1960, 28, 200-210.

Clum, G. A. and Clum, J. Choice of defense mechanisms and their relationship to mood level. Psychological Reports, 1973, 32, 507-510.

Cohen, D. B. Frequency of dream recall estimated by three methods and related to defense preference and anxiety. Journal of Consulting and Clinical Psychology, 1969, 33, 661-667.

Crowne, D. P. and Marlowe, D. A new scale of social desirability independent of psychopathology. Journal of Consulting Psychology, 1960, 24, 349-354.

Edwards, A. L. Edwards Personal Preference Schedule. New York: The Psychological Corporation, 1959.

Ekman, P. and Friesen, W. V. Unmasking the face. New Jersey: Prentice Hall, 1975.

Eriksen, C. W. Perception and personality. In J. Wepman and R. Heine (Eds.), Concepts of personality. Chicago: Aldine, 1963.

Eriksen, C. W. and Pierce, J. Defense mechanisms. In E. F. Borgatta and W. W. Lambert (Eds.), Handbook of personality theory and research. Chicago: Rand McNally and Company, 1968.

Fenichel, O. The psychoanalytic theory of neuroses. New York: W. W. Norton, 1945.

Fenigstein, A., Scheier, M. F., and Buss, A. H. Public and private self-consciousness: Assessment and theory. Journal of Personality and Social Psychology, 1975, 43, 522-527.

Freud, A. The ego and the mechanisms of defense. London: Hogarth Press, 1937.

Freud, S. The problem of anxiety. New York: Norton, 1936.

Freud, S. Instincts and their vicissitudes. In S. Freud, Collected papers, London: Institute for Psychoanalysis and Hogarth Press, 1925, vol. 4.

Freud, S. The Ego and the Id. London: Hogarth Press, 1927.

Friendly, M. L. and Glucksberg, S. On the description of subcultural lexicons: A multi-dimensional approach. Journal of Personality and Social Psychology, 1970, 14, 55-65.

Frodi, A. Experiential and physiological responses associated with anger and aggression in women and men. Journal of Research in Personality, 1978, 12, 335-349.

Gambaro, G. and Rabin, A. I. Diastolic blood pressure responses following direct and displaced aggression after anger arousal in high- and low-guilt subjects. Journal of Personality and Social Psychology, 1969, 12, 87-94.

Gleser, G. and Ihilevich, D. An objective instrument for measuring defense mechanisms. Journal of Consulting and Clinical Psychology, 1969, 33, 51-60.

Gleser, G. C. and Sachs, M. Ego defenses and reaction to stress: A validation study of the Defense Mechanisms Inventory. Journal of Consulting and Clinical Psychology, 1973, 40, 181-187.

Goleman, D. and Schwartz, G. E. Meditation as an interpretation in stress reactivity. Journal of Consulting and Clinical Psychology, 1976, 44, 456-463.

Gough, H. G. The California psychological inventory. Palo Alto, California: Consulting Psychologists Press, 1957.

Horney, K. Our inner conflicts. New York: Norten, 1945.

Hasset, J. A primer of psychophysiology. San Francisco: W. H. Freeman, 1978.

Hokanson, J. E. and Burgess, M. The effects of status, type of frustration, and aggression on vascular processes. Journal of Abnormal and Social Psychology, 1962, 65, 232-237.

Hokanson, J. E. and Shetler, S. The effects of overt aggression on physiological arousal level. Journal of Abnormal and Social Psychology, 1961, 63, 446-448.

Jones, E. E. Authoritarianisms as a determinant of first impression formation. Journal of Personality, 1954, 23, 107-127.

Jones, E. E. and Daugherty, B. N. Political orientation and the perceptual effects of an anticipated interaction. Journal of Abnormal and Social Psychology, 1959, 59, 340-349.

Kahn, M. The physiology of catharsis. Journal of Personality and Social Psychology, 1966, 3, 278-286.

Katkin, E. S. Relationship between manifest anxiety and two indices of autonomic response to stress. Journal of Personality and Social Psychology, 1965, 2, 324-333.

Kernberg, O. Borderline conditions and pathological narcissism. New York: Jason Aronson, 1975.

Kilpatrick, D. G. Differential responsiveness of two electrodermal indices to psychological stress and performance of a complex task. Psychophysiology, 1972, 9, 218-226.

Kipper, D. A. and Ginot, E. Accuracy of evaluating videotape feedback and defense mechanisms. Journal of Consulting and Clinical Psychology, 1979, 47, 493-499.

Klein, R. F., Gonen, J. Y., and Smith, C. M. Psychogenic purpura in a man. Psychosematic Medicine, 1975, 37, 41-49.

Kohut, H. The restoration of the self. New York: International Universities Press, 1977.

Lazarus, R. S. and Alfert, E. Short circuiting of threat by experimentally altering cognitive appraisal. Journal of Abnormal and Social Psychology, 1964, 69, 195-205.

Lazarus, R. S. and Baker, R. W. Personality and psychological stress: A theoretical and methodological framework. Psychological Newsletter, 1956, 8, 21-32.

Lazarus, R. S. and Baker, R. W. Motivation and personality in psychological stress. Psychological Newsletter, 1957, 8, 159-193.

Lazarus, R. S. and McCleary, R. W. Autonomic discrimination without awareness: A study of subjeption. Psychological Review, 1951, 58, 113-122.

Lazarus, R. S., Yousem, H., and Arenberg, D. Hunger and perception. Journal of Personality, 1953, 21, 312-328.

Leary, T. Interpersonal diagnosis of personality. New York: Ronald Press, 1957.

Levy, L. (Ed). Emotions: Their parameters and measurement. New York: Raven Press, 1975.

Levy, L. H. and Dugan, R. D. A constant error approach to the study of dimensions of social perception. Journal of Abnormal and Social Psychology, 1960, 61, 21-24.

Luborsky, L., Blinder, G., and Schimek, J. Looking, recalling, and GSR as a function of defense. Journal of Abnormal Psychology, 1965, 70, 270-280.

Luborsky, L., Blinder, B., and Mackworth, N. Eye fixation and recall of pictures as a function of GSR responsivity. Perceptual and Motor Skills, 1963, 16, 469-483.

Lykken, D. T. Range correction applied to heart rate and to GSR data. Psychophysiology, 1972, 9, 373, 379.

Lykken, D. T., Rose, R., Luther, B., and Maley, M. Correcting psychophysiological measures for individual differences in range. Psychological Bulletin, 1966, 66, 481-484.

Maslow, A. H. Motivation and personality. New York: Harper and Brothers, 1970.

McClelland, D. C. Personality. New York: Dryden, 1951.

McClelland, D. C. Inhibited power motivation and high blood pressure in men. Journal of Abnormal Psychology, 1979, 88, 182-190.

McClelland, D. C., Floor, E., Davidson, R. J., and Saron, C. Stressed power motivation, sympathetic activation, immune function, and illness. Journal of Human Stress, 1980.

McClelland, D. C. and Atkinson, J. W. The projective expression of needs. I. The effect of different intensities of the hunger drive on perception. Journal of Psychology, 1948, 25, 205-222.

McDonald, R. L. Ego control patterns and attribution of hostility to self and others. Journal of Personality and Social Psychology, 1965.

McGinnies, E. Emotionality and perceptual defense. Psychological Review, 1949, 56, 244-251.

Megargee, E. I., Bogart, P., and Anderson, D. J. The prediction of leadership in a simulated industrial task. Journal of Applied Psychology, 1966, 50, 292-295.

Mehrabian, A. Nonverbal communication. Chicago: Aldine-Atherton, 1972.

Minsky, P. J. High blood pressure and interpersonal "disengagement": A study of maladaptive coping styles and ameliorative treatments. Unpublished doctoral dissertation, Loyala University of Chicago, 1978.

Miller, A. Prisoners of childhood. New York: Basic Books, 1981.

Miller, N. E. Experimental studies of conflict. In J. McV. Hunt (ed.), Personality and the behavior disorders. New York: Ronald Press, 1944.

Miller, L. H. The bidimensional nature of the galvanic skin response. Unpublished doctoral dissertation, Duke University, 1968.

Miller, L. H. and Shmavonian, B. M. Replicability of two GSR indices as a function of stress and cognitive activity. Journal of Personality and Social Psychology, 1965, 2, 753-756.

Murray, E. J. Conflict and repression during sleep deprivation. Journal of Abnormal and Social Psychology, 1959, 59, 95-101.

Murray, H. A. Explorations in personality: A clinical and experimental study of fifty men of college age. New York: Oxford, 1938.

Notarius, C. I. and Levenson, R. W. Expressive tendencies and physiological response to stress. Journal of Personality and Social Psychology, 1979, 37, 1204-1210.

Orne, M. T. On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. American Psychologist, 1962, 17, 776-783.

Osgood, C., Suci, G. J., and Tannenbaum, P. H. The measurement of meaning. Unbana, Illinois: University of Illinois Press, 1957.

Rankin, R. E. and Campbell, D. T. Galvanic skin response to Negro and White experimenters. Journal of Abnormal and Social Psychology, 1955, 51, 30-33.

Rogers, C. R. Client centered therapy. Boston: Houghton-Mifflin, 1951.

Rosenberg, S., Nelson, C., and Vinekananthan, P. S. A multidimensional approach to the structure of personality impressions. Journal of Personality and Social Psychology, 1970, 16, 619-626.

Rosenthal, R. Experimenter outcome-orientation and the results of the psychological experiment. Psychological Bulletin, 1964, 61, 405-412.

Sanford, R. N. The effects of abstinence from food upon imaginal processes: A preliminary experiment. Journal of Psychology, 1936, 2, 129-136.

Sanford, R. N. The effects of abstinence from food upon imaginal processes: A further study. Journal of Psychology, 1937, 3, 145-159.

Schachter, S. and Singer, J. Cognitive, social and physiological determinants of emotional state. Psychological Review, 1962, 69, 379-399.

Schill, T. R. Aggression and blood pressure responses of high- and low-guilt subjects following frustration. Journal of Consulting and Clinical Psychology, 1972, 38, 461.

Schill, T. and Bekker, D. Sexual responsivity and ego defenses. Journal of Clinical Psychology, 1976, 32, 79-80.

Schill, T., Rader, G., Evans, R., and Segal, S. Defense preference of high- and low-hostility guilt subjects. Journal of Consulting and Clinical Psychology, 1976, 44, 867.

Schutz, W. C. FIRO: A three dimensional theory of interpersonal behavior. New York: Rinehart, 1958.

Schwartz, G. E., Fair, P. L., Salt, P., Mandel, M. R., and Klerman, G. L. Facial muscle patterning to affective imagery in depressed and non-depressed subjects. Science, 1976, 192, 489-491.

Sears, D. O., and Whitney, R. E. Political persuasion. Morristown, N.J.: General Learning Press, 1973.

Stone, L. J., and Hokanson, J. E. Arousal reduction via punitive behavior. Journal of Personality and Social Psychology, 1969, 12, 72-79.

Sullivan, H. S. Conceptions of modern psychiatry. Washington, D.C.: William Alanson White Psychiatric Foundation, 1948.

Thibaut, J. W. and Reicken, H. W. Authoritarianism, status, and the communication of aggression. Human Relations, 1955, 8, 95-120.

Vogel, W., Raymond, S., and Lazarus, R. S. Intrinsic motivation and psychological stress. Journal of Abnormal and Social Psychology, 1959, 58, 225-233.

Van Egeren, L. F. Cardiovascular changes during social competition in a mixed motive game. Journal of Personality and Social Psychology, 1979, 37, 858-864.

Van Egeren, L. F. Social interactions, communications, and the coronary prone behavior pattern: A psychophysiological study. Psychosomatic Medicine, 1979, 41, 2-18.

Van Egeren, L. F., Abelson, J. L., and Thornton, D. W. Cardiovascular consequences of expressing anger in a mutually dependent relationship. Journal of Psychosomatic Research, 1978, 22, 537-548.

Vidulich, R. N. and Krevanick, R. W. Racial attitudes and emotional response to visual representations of the Negro. Journal of Social Psychology, 1966, 68, 85-93.

Warr, P. B. and Knapper, C. The perception of people and events. New York: Wiley, 1968.

Zana, M. P. and Hamilton, D. I. Attribute dimensions and patterns of trait inferences. Psychonomic Science, 1972, 27, 353-354.