WOLF, RANDYE LOIS

THE EFFECTS OF SUCCESS/FAILURE ON PERSONAL SPACE AND SUBSEQUENT TASK PERFORMANCE ON BLACK AND ON WHITE ELEMENTARY SCHOOL CHILDREN

City University of New York PH.D. 1980

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by

RANDYE LOIS WOLF

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

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April 25, 1980
date

Susan Saegert
Chairman of Examining Committee

April 25 1980
date

Martin L. Hoffman
Executive Officer

Susan Saegert

Irwin Katz

Florence Denmark
Supervisory Committee

The City University of New York

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Abstract

THE EFFECTS OF SUCCESS/FAILURE ON PERSONAL SPACE AND SUBSEQUENT TASK PERFORMANCE ON BLACK AND ON WHITE ELEMENTARY SCHOOL CHILDREN

by

Randye Lois Wolf

Adviser: Professor Susan Saegert

This paper challenged the notion that personal space is the area of space around one's body, or one's personal territory. Personal space was redefined as a self-protective barrier from others, most evident during stressful interactions. An experiment was devised to test the idea that stress frequently leads to an increase in personal space, by means of physical, symbolic, and/or cognitive withdrawal. The stressor used was failure on an academic task by one-half of the subjects, who were elementary school children. The other half of the subjects succeeded on the task. Afterwards, each child was required to choose to sit in one of three chairs which were at different distances from E. Then, a story was read, during which time the child's nonverbal withdrawal behaviors were video-taped. Finally, the child was asked questions about the story, to measure cognitive withdrawal. Results indicated that boys' and girls' behavior was significantly different from each other after experiencing success or failure. Boys withdrew more after success and remembered more of the story after failure than after success.

This pattern was most evident in white boys. In contrast, girls sat further after failure than they did after success, though other results were not significant. Results were felt to reflect sex differences in early socialization for later achievement strivings.

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Chapter I

INTRODUCTION

What is Personal Space?

The notion of personal space has arisen out of the work of zoologists and ethologists on territoriality. This concept has generated many studies, including the one that is now being investigated. Various researchers, such as Tennis and Dabbs (1975), Sommer (1969), Little (1968), Hall (1959, 1964), Guardo (1969), Dosey and Meisels (1969), Horowitz, Duff, and Stratton (1964), and Horowitz (1968) have defined personal space. Though the definitions differ, common to all of them is the notion that personal space is an area. Personal space is considered to be an area of space immediately surrounding one's body that one characteristically places between oneself and others. Personal space varies in different situations, and is determined by measuring the distance between oneself and the other, in these situations.

Leibman (1970) expanded the definition of personal space. Personal space is no longer merely an area, that is, personal space is no longer defined by physical distancing behaviors alone. She believes, as does this investigator, that "physical distance is just one of many interrelated dimensions of personal space" (p. 212) and that "... the amount of physical space between individuals is... a significant but not the exclusive nonverbal response to a situation"

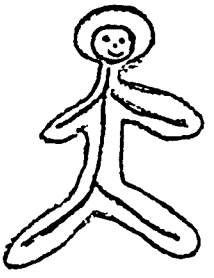
(p. 210). Personal space expresses some desired level of psychological distance. Physical distance "... is the most immediate and most common way to satisfy personal space because it provides a direct translation of psychological distance into physical terms" (p. 212). Whenever physical distancing behaviors are unavailable, such as in a subway or in a doctor's office, she believes that symbolic distancing behaviors will then occur. Symbolic distancing behaviors create a feeling of distance in the absence of actual physical spacing. According to Leibman (1970), symbolic distancing behaviors might include such behaviors as averted eyes, restricted body movements, body facing away from the other, etc. This investigator (Wolf, 1979) suspects that, in addition to, or perhaps reflected by, the symbolic distancing dimension of personal space is another important aspect of personal space: cognitive withdrawal, i.e., inattention and "forgetfulness."

Personal Space: Withdrawal for Self-Protection

Leibman (1970) views symbolic distancing behaviors as themselves creating a feeling of distance. This investigator is uncertain that they in fact create a feeling of distance; perhaps they merely express the feeling of distance that already exists within the person. Either way, within this framework, these behaviors are representations of psychological withdrawal for self-protection. The behaviors all suggest that the person engaged in them is experiencing a lack of involvement or interest in the interaction, and/or is preoccupied with internal stimuli. They imply inattention and "tuning out" which

Horowitz (1968) suggests are common forms of withdrawal used by relatively intact, nonregressed individuals in response to feelings of threat.

The ideas in this paper are more closely in agreement with the formulations of Fisher and Cleveland (1968, 1970) than with those of Horowitz (1965, 1966, 1968), Kinzel (1970), Hall (1959, 1964, 1966), and Leibman (1970). Fisher and Cleveland discuss the body boundary aspect of body image, and the importance of an intact body boundary for one's ability to function well and to cope with stress. Diagramatically the difference between Horowitz' and Fisher and Cleveland's theories might look like this:



Horowitz - Body Buffer Zone Theory

Fisher and Cleveland - Body Boundary Theory

It is suggested here that the boundary aspect of body image, rather rather than the spatial aspect, may be important in understanding why variations in personal space occur. Perhaps self-protective withdrawal phenomena -- physical distancing, symbolic distancing, inattention -- are related to feelings that one's body boundary is threatened. These threats may originate from the environment, or from intrapsychic conflicts. Perhaps those individuals with more definite boundaries are less prone to experience and react to these threats than are others, with less firm boundaries. A brief summary of Fisher and Cleveland's theory might be helpful at this point.

Fisher and Cleveland (1968, 1970) understand body image to be a

psychological experience of one's own body, including one's mental representations of the body and its organs. Body image constitutes the idea of "I" and is of basic importance for the formation of the ego.

At some point individuals become aware that their bodies are something apart from the rest of the world -- they do not extend indefinitely into space. Needing the security of an autonomous body that is not easily open to invasion from the outside, individuals begin to experience their bodies as containers around which are defensive walls or boundaries. The manner in which individuals perceive these walls or boundaries is a significant dimension of body image. People show wide differences in the degree to which they experience their body boundaries as definite and firm versus indefinite and vague. The clarity with which individuals can experience a line of demarcation between their bodies and the world will probably affect how secure they feel about their body's capacity to resist intrusion and damage. In the absence of a body image boundary which is capable of supplying a minimum consistency in new situations, Fisher and Cleveland (1968, 1970) suggest that individuals will find it necessary to create conditions exterior to themselves which will, in an artifical manner, provide a substitute boundary. According to Fisher and Cleveland, "high barrier" individuals experience themselves as protected, even in the midst of danger, and are not likely to be flooded with anxiety. Resilience in the face of stress is, therefore, assumed to be greatest among those who have well-articulated boundaries. They are able to "filter" what impinges on them and to modulate its impact. They are able to be selective about what they

will take in and accept.

This investigator prefers Fisher and Cleveland's theory, which focuses on the importance of an intact body boundary to self-protection, in contrast to that of Horowitz, which focuses on the importance of the space around oneself to self-protection. This writer is not certain whether the space around oneself is in fact a facet of the body image, as Horowitz suggests, and is not convinced of the accuracy of his "body buffer zone" theory, which follows from this spacial conception of body image. Horowitz believes that the area of space surrounding one's body must be protected from penetration from others, and that, for this reason, people physically distance themselves from one another. Conceivably, one might explain physical distancing behaviors with the "body buffer zone" theory; one physically distances from another to protect one's personal territory, the "body buffer zone." Why then, does one <u>symbolically</u> distance from another? Symbolic distancing behaviors may occur in the absence of physical distancing behaviors. In these instances, the body buffer zone may be violated, such as in a subway. Body buffer zone theory does not suffice, since it can not explain symbolic distancing behaviors. Body boundary theory, however, explains both physical and symbolic distancing behaviors, suggesting as it does that physical or symbolic withdrawal may occur in any situation where one experiences threat. People distance to protect their body boundary, the sense of themselves as separate, autonomous entities.

This writer's definition of personal space has evolved from the above considerations. Personal space is defined here as a self-

protective barrier from one's fellows, nearly always present, which may be expressed by physical distancing behaviors, or by symbolic distancing behaviors and/or inattention, and which varies, depending on the nature of the antecedent conditions in the situation such as intrapersonal, interpersonal, environmental and cultural factors.

The Stress/Withdrawal Concept

One of the antecdent conditions which causes personal space to vary is the experience of stress.* Though nearly always present, personal space is probably most evident during stressful interactions. The idea that the experience of stress frequently leads to an increase in personal space, by physical distancing, by symbolic distancing, by inattention, or by some combination of these, is a focal one in this paper. This investigator believes that one of the main contributions of this study is that it views physical distancing, symbolic distancing, and attentional (cognitive) distancing as aspects of personal space, having similar functions, i.e., withdrawal for self-protection, and which may be interrelated in various ways. Furthermore, this study, in contrast to others, measures these three aspects simultaneously, in an attempt to clarify the relationships between them. Do they augment one another or are they used as "trade-offs"? Can there be symbolic distancing without attentional distancing, or, as was previously suggested, is symbolic distancing the behavioral analogue of attentional distancing?

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*To focus on the experience of stress, as this paper does, is not to say that other antecedent conditions, such as coping strategy, or personality style (some people's style involves sitting close to the other, touching, etc.), familial and cultural variations, do not exist.

Review of Stress/Withdrawal and Functional Similarity Literature

Argyle and Dean (1965) developed a theory in which they suggested than an equilibrium develops for intimacy, where intimacy is a joint function of eye contact, physical proximity, intimacy of topic, smiling, etc. If one of the components of intimacy is changed, anxiety will be aroused and one or more of the other components will shift in the reverse direction to maintain the equilibrium and decrease anxiety. Investigators had subjects and confederates interacting at various distances. They found that when physical distance was markedly decreased, subjects responded by attempting to reduce the intimacy via symbolic distancing behaviors, such as reduced eye contact, backward lean, shading eyes, etc. In this study, it can be seen that the particular stress that caused the withdrawal was a shift in the intimacy equilibrium in the direction of more intimacy.

Kleck (1970) found that as interaction distance becomes nearer, there is a corresponding increase in the physiological indicators of arousal. His results lend support to Hutt and Ounstead's study (1966) which suggests that what is most arousing are the eyes of the other individual, since they convey the most information about him or her. Results of Hutt and Ounstead's (1966) studies indicate that the eyes of another are avoided most by autistic children. The investigators contend that gaze aversion functions as a "cut-off" act, cutting off sensory receptors temporarily from the conflict-provoking stimulus, and thus reducing the additional and disturbing arousal that the eye contact would involve for these children.

Sommer (1969), Sundstrom (1975), Bond and Iwata (1976), and Edney,

Walker, and Jordan (1976) stressed subjects by subjecting them to various forms of spatial invasion. Physical distancing by subjects was only one of the ways of handling stress; symbolic distancing behaviors were also quite common indicators of discomfort. Sommer kept the distance between himself and the individual at six inches. He found that, while flight was a gross reaction to intrusion, "flight behaviors" such as facing away, closing eyes, withdrawing chin into chest, etc., were evidenced as well.

Sundstrom (1975) found that subjects who were exposed to confederates who touched them showed relatively low levels of facial regard and eye contact. He felt that these were coping behaviors which amount to partial withdrawal from interaction in an attempt to decrease stress.

Bond and Iwata (1976) studied Japanese subjects and found that subjects felt more fearful, more anxious, more closed, and more introverted when they were interviewed at an intrusive distance in contrast to an appropriate distance. The investigators pointed out that, since escape was impossible, the effects of a thwarted desire to escape were shown in the subjects' nonverbal behaviors, which, they felt, implied a nonverbal expression of withdrawal.

Edney et al. (1976) explored the three psychological variables of control, security, and freedom as they relate to people's reactions to restrictions and invasions in space. Results indicated that, as distances between subjects decreased, they claimed smaller personal space. At the smallest distance, three feet, however, they claimed larger personal space. Edney et al. suggested that subjects at three feet

were reacting to the stress by making larger claims. Furthermore, personality factors appeared to influence how one reacts to spatial invasion: one's feeling of being in control or being controlled by the other is an important determinant of whether or not this experience is felt to be stressful.

In addition to spatial invasions, another stressor that appears to affect personal space behaviors is contact with the stigmatized. Kleck, Buck, Gotter, London, Pfeiffer, and Vukcevic (1968) and Lerner Karabenick, and Meisels (1975a, 1975b) investigated how this variable affected individuals' personal space behavior. Kleck et al. found that, on a figure placement task, and also in actual interaction, subjects kept themselves further from "epileptics" than from normals. Lerner et al. (1975a) found that children in the early grades maintained greater distances with fat than with thin or normal figures which represented children. These results remained stable after one year (1975b) and were replicated with fourth, fifth, and sixth graders, as well.

Hostility or dislike appears to be yet another stressor that affects personal space behavior and can cause withdrawal. King (1966) found that the distance that one kindergarten child will maintain from another was strongly related to the amount of hostility shown to the first by the second child. Sanders (1976) found that subjects wanted to keep a hypothetically disloyal friend further from themselves than one who was imagined to have been friendly or neutral.

Mehrabian (1971) discusses nonverbal signs of withdrawal from a disliked other in a stressful situation where one cannot depart. He

says:

> We are sometimes forced to remain in a situation with someone who is offensive and whose presence becomes nearly intolerable. We avoid his eyes and try not to look in his direction. We may turn to one side and look at various objects in the room or visible through a window, we may take refuge in meditative silence. Here again, turning away and looking away are abbreviations of the movements associated with leaving and they show our negative feelings. Basically, we may be confined for however long with this insufferable person, but our unspoken messages tell of our desire to get away (p. 3).

According to Mehrabian (1971, 1972) we select "more immediate" positions which might involve touching, closer position, forward lean, eye contact, more direct body orientation, with those people that we prefer or like, in order to increase stimulation. We try to shut off stimulation from others via withdrawal behaviors.

In addition to hostility directed toward the individual by someone else, another stressor which may result in withdrawal behavior is one's own hostility. Kinzel (1970), for example, found that violent male prisoners needed to keep four times as much space between themselves and the experimenter, as did nonviolent prisoners. Rubinstein (1975), using female prisoners as subjects, obtained results similar to those of Kinzel; the more violent prisoners kept male and female experimenters at significantly further distances than did those who were less violent. Kinzel's (1970) and Rubinstein's (1975) investigations raise the interesting possibility that, in some cases, violent acting out behavior may initially be preceded by withdrawal. If withdrawal does not alleviate the stress sufficiently, attack may be the next response. Studies of flight and attack distances in animals support this notion.

An awkward, embarrassing interpersonal encounter may be considered stressful to individuals. Exline (1965) found that subjects who were

given a highly personal interview looked significantly less at the interviewer than did subjects who were given the neutral interview. Luft (1966) placed subjects in a stressful interpersonal encounter with a partner. He found that the more anxious subject in the dyad judged the distance between herself and her partner as significantly closer than did the less anxious subject, and as closer than the actual physical distance. This suggests that distance distortions (and physical distancing behaviors?) are more easily manifested when a subject already has a high level of anxiety; symbolic distancing behaviors, which Luft (1966) mentioned were evidenced by nearly all subjects, are, perhaps, more readily expressed by individuals in response to stress.

Meisels and Cantor (1970) also studied the relationship of an embarrassing personal encounter to personal space. Results did not support two of the hypotheses in the study, one, that subjects in the stress condition would choose the furthest chair, and two, that introverts would sit significantly further than would extroverts. A second study also failed to show that subjects in the stress condition choose the furthest chair significantly more often than do subjects in the nonstress condition. Results of this experiment may have been confounded by the fact that, in the nonstress part of the experiment, the subjects had chosen to sit at a particular distance from the confederate. They may have been embarrassed about suddenly changing to a more distant chair, in the second part of the experiment.

Stress in the form of threats to self-esteem was studied by Dosey and Meisels (1969). In the stress condition, subjects were told that their sexual attractiveness would be rated by others. In the nonstress condition, subjects were given a non-threatening rationale

for the experiment. There was a highly significant main effect, with stress groups staying from 2½ - 3-3/4" further from others than those in the nonstress groups.

Dosey and Meisels (1969), above, studied the relationship of stress, in the form of environmentally induced threats to self-esteem, to personal space. In contrast, other investigators (Frankel & Barrett, 1971; Tolor, Cramer, D'Amico, & O'Marra, 1975) studied the relationship of stress, in the form of intrapsychically acquired low self-esteem, to personal space. In addition to studying the relationship of subjects' self-esteem to their personal space behaviors, Frankel and Barrett (1971) also wanted to examine the relationship of authoritarian characteristics to personal space behaviors. They found that, as predicted, personal space, measured by physical distancing behaviors, increased as self-esteem decreased. An interesting racial result was obtained, with low self-esteem authoritarians (but not low self-esteem low authoritarians) using larger personal space in relation to blacks than in relation to whites. High self-esteem subjects, both low and high authoritarians, displayed a uniform response to black and to white confederates. Perhaps low self-esteem authoritarians were less resistant than were highs to experiencing stress when interacting with blacks, and, therefore, withdrew. High self-esteem authoritarians may have been protected from experiencing threat in that situation by their good feelings about themselves.

Tolor et al. (1975) found no main effect for self-concept and personal space, using the Tennessee Self Concept Scale and a semi-projective measure of personal space. However, <u>females</u> who were high in self-concept placed figures significantly closer to one another than did females who were low in self-concept.

Emotionally disturbed people are usually considered to have low self-esteem, and difficult, unhappy relationships with their mothers. These intrapsychic and interpersonal stressors have been shown to be related to personal space, with more distance used by people with emotional problems. Weinstein (1965), for example, found that disturbed, in contrast to normal children, placed child figures closer to the father figure than to the mother. She suggests that this indicates that emotionally disturbed children have more psychologically distant relationships with their mothers. In another study, Higgins et al.(1969) investigated the personal space of two groups of 25 male undergraduates with good or poor social adjustment, based on a paper and pencil measure. Similar to Weinstein's findings, subjects with poor social adjustment placed the son figure closer to the father, while subjects with good social adjustment placed him closer to the mother. Fisher (1967) also investigated the differences in the physical dimension of personal space, in disturbed (acting out) versus normal children. Fisher found, as hypothesized, that the emotionally disturbed children placed figures further from one another than did the normal children. Fisher also administered five subscales of the Buss-Durkee Hostility Scale to the disturbed boys' mothers, and found that the mothers' assaultiveness and irritability scores were positively correlated with their sons' indicated distances between figures.

Most of the experiments that have been reviewed above appear to support the notion that an experience of stress, which originates either from an environmental or an internal source, will often lead to increased personal space, in the form of physical and/or symbolic

distancing behaviors. However, it has been suggested in this paper that personal space may involve a third dimension: cognitive withdrawal. A study by Dusek, Mergler, and Kermis (1976) supports the notion of cognitive withdrawal. This study examined differences in the deployment of attention by low test anxious and high test anxious children in a learning task. Dusek thought that perhaps high test anxious (HTA) children's attention is divided between task relevant and task irrelevant stimulation in evaluative contexts. An incidental learning paradigm was employed to assess attention deployment differences. Dusek obtained a significant main effect due to test anxiety in the central and incidental learning scores, with HTAs learning higher incidental material, and LTAs learning higher central material, though average total learning was identical for both groups. Dusek postulated an attention focusing problem in HTA children on tests, whereby the task irrelevant stimuli, such as worry and self-stimulation, attract their attention. In the present framework, distracted attention may be thought of as partial withdrawal from the stressful situation, and as, therefore, another aspect of personal space. Horowitz (1968) states that preoccupation with "other" thoughts or sensations is a (cognitive) withdrawal operation.

Statement of the Problem

Up until now, we have been reviewing the work of others in order to show that, (a) a stress experience with another will often result in increased personal space, i.e., withdrawal for self-protection, and that (b), this increased personal space will be manifested by

(functionally similar) physical distancing, symbolic distancing, and attentional distancing, individually or in combination with one another. Now let us turn to the present study, explore its premises, examine the arguments upon which it rests.

This study investigates the effects of success and failure on personal space in black and in white female and male elementary school children. Feelings of failure were chosen for manipulation, rather than other ego threats, for several reasons. Development of competence and the sense of competence is exceedingly important in children. As early as infancy, children are motivated by a feeling of competence to accomplish developmental tasks. Thus, manipulation of success and failure experiences, while probably affecting everyone, should have even more powerful and measurable effects on children. Will this manipulation affect their self-protective withdrawal behaviors, however? An interesting experiment (Katz, 1950) provides strong support for the idea that success and failure experiences should specifically affect individuals' personal space. In this experiment, which supports my stress/withdrawal notion and my notion of the functional similarity of physical and symbolic distancing behaviors, Katz theorized that failure is experienced as a threat to self-esteem, both from the environment, i.e., the experimenter, and from the individual as well. Self-protective (defensive) reactions will then occur. According to Katz, Lewin (1935) believes that, if s/he cannot leave the situation, a child will contract, physically and psychically, and attempt to build a wall between herself or himself and the situation. Katz indicated that this wall is a state of reduced

communication between the person and the environment, i.e., the child is less accessible to external and potentially harmful stimuli, and the child's behavior is less self-revealing. "Covering up" behavior tends to insulate the person from the influence and power of the other.

Katz' actual experiment involved 70 male college students, 35 in the experimental group and 35 in the control condition. They were requested to draw a human face twice. In between the two drawings, the experimental group was subjected to failure on what was described as a "reasoning" task. Katz hypothesized that the second drawing would show, projectively, the drawer's psychological withdrawal from the threatening situation, by showing more "covering up" and less communication with the environment. The changes in the drawings were studied via qualitative analysis and ratings. Results showed post-failure drawings to be more mask-like, distorted, had blank, staring expression, more concealment via beards, eyeglasses, hats, etc. One subject stated afterwards, in an interview, that "I wished I were somewhere else." Katz explained his results as being due to a threat to the ego's security, in the failure situation. Defenses must be established against the threat of further injury, and against feelings of guilt, worthlessness, and inferiority. "Covering up" or self-concealment is suggested to be one aspect of a general reduction in communication with the environment (withdrawal?) so that the person is insulated from further injury. Katz compared reduction in communication to the state of apathy, wherein sensitivity to potentially disruptive internal or external stimuli, such as failure, is reduced.

Katz demonstrated that post-failure drawings are more withdrawn -- "covered up", concealed, blank, staring eyes -- than pre-failure drawings. The present experiment involves post-failure behavior and post-failure cognition: Will post-failure behavior be more withdrawn, physically and/or symbolically, than will post-success behavior? Will post-failure cognition be more withdrawn, as evidenced by inattentiveness after failure?

Let us turn now to the study itself, enumerate and then discuss its problems. There are several problems in this study. The problems are:

1 - to experimentally manipulate a success or a failure experience, so that their supposedly opposite effects on children's personal space could be measured;

2 - to involve the children in a second situation, immediately following the success or failure, and, while they are so involved, to measure the symbolic distancing aspect of personal space during the new situation. This is to be done in order to investigate whether the effects of the success or failure on the children's personal space end after the success or failure evaluation, or carry over to the immediately following situation and continue to be evidenced throughout the new situation.

3 - to measure the children's performance in the new situation, and compare it with their prior success or failure experience and with their physical and symbolic withdrawal behavior, to determine whether relationships exist between physical, symbolic, and cognitive distancing behavior.

Let us now examine each of these problems separately, looking to the literature when necessary for additional information.

PROBLEM I: To measure the effects that a success or a failure experience will have on children's personal space.

The first major problem was to measure the supposedly opposite effects that a success or a failure experience will have on children's personal space. This investigator is suggesting that children will evidence increased withdrawal behaviors after failure, and decreased withdrawal behaviors after success. These effects, then, must be measured. Now then, is there any evidence, in addition to Katz' study reported above, that supports the idea that the experience of success or failure affects children's withdrawal behaviors? And that it affects withdrawal behaviors such that these behaviors increase after failure and decrease after success?

Guardo and Meisels (1971), using 235 boys and 196 girls in grades 3 - 10 as subjects, administered a semi-projective measure of personal space (silhouette placement task). The four stimulus situations consisted of adult figures, two males and two females, described as a mother or father praising or reproving a child. Subjects were requested to place their <u>self</u> figures in some spatial relation to each of these figures. The investigators found that children placed the self figure closer to parents under conditions of praise, and further under conditions of reproof. If praise can be related to success, and reproof to failure, then children who experience success would decrease their withdrawal behavior, in contrast to children who experience failure.

Leipold (1963) conducted an experiment which was designed to create an experience of stress similar to what might obtain in a failure situation. He placed male subjects who had obtained, and were aware that they had obtained, C grades in a particular course, in one of three conditions. In the stress condition subjects were told that "We feel that your course grade is poor.... Mr. Leipold will be in to discuss this with you." In the praise condition subjects were told "Your grades are adequate. Mr. Leipold will be in to discuss this with you." A neutral condition was utilized, as well. Each subject, individually, was told to enter and seat himself in any one of the three chairs which were placed at different distances from the experimenter's desk. After the subject was seated, the experimenter entered, sat down, and asked the subject a set of questions. Results indicated that the praised groups chose the closest chair, with neutral groups further away, and with stressed subjects sitting furthest from the experimenter. Personality factors were also found to be important: extroverts sat closer to the experimenter than did introverts.

In addition to Katz' (1950) work, other research has been done on the actual effect of success and failure experiences upon people. Karabenick and Meisels (1972) measured the distance between 99 male students and their partners (confederates) towards whom they walked, after being given a verbal learning task. After the distance was measured several times, the experiment was "interrupted" by another experimenter who proceeded to apologize and give evaluative feedback to the two "subjects" on the results of the "learning task." One member of the dyad was given strong success evaluation, the other,

strong failure evaluation, in the presence of one another. Then the distancing measure was repeated because of the "interruption". Results indicated that successful subjects came closer to the confederate than did failure subjects. Personality variables were found, too, with high anxious subjects, whether success or failure, keeping greater distances between themselves and the confederate. This only occurred after the situation was defined as evaluative, however.

In another experiment on the effects of success/failure on personal space, Eberts and Lepper (1975) set up a "bowling game" with pre-school children, and artifically manipulated success and failure. Defining personal space in the narrow sense of physical distancing alone, they found no relationship between success or failure and subjects' physical distancing. They suggested that the lack of effect of the success/failure manipulation on subjects' interaction distance might have been due to the non-evaluative nature of the situation, and that a success or failure experience might have affected subjects' physical distancing had they been given or been expecting an evaluation of their performance. According to Saegert (1978), the lack of effect of the success/failure manipulation might have been due to a lack of psychological investment in the game, on the part of the children; winning or losing might have been unimportant to these preschoolers.

An experiment by Bonura (1973) has some important similarities to the one currently being conducted, and supports the notion that failure should increase personal space, and success should decrease it. Bonura used a marble-dropping task to study the effects of success and failure on personal space in 68 Anglo and Mexican-American male sixth

graders. A pre-measure of physical distancing was obtained by having the subjects bring their chairs over to the experimenter, individually, and one at a time. After the experiment, in which success and failure were artifically manipulated, a post-experimental measure of physical distancing was obtained using the same procedure as in the pre-experimental measure. The experimenter was the same person in both conditions, but did not administer the success or failure treatments. Bonura (1973) found that failure on the task increased, and success decreased, the personal space of the children, as measured by their physical distancing.

Bonura's study is an important step in relating success/failure to personal space, and in suggesting that success and failure have opposite effects on children's withdrawal behaviors. It has, however, several serious limitations which I shall attempt to correct in my study. The three most serious limitations are its defining (and measuring) of personal space by physical distancing behaviors alone, its limiting its subject population to males, and its inability to adequately control for socioeconomic status of the Anglo and the Mexican-American children.

So far, then, there is support for the first aspect of this study, which is that children should evidence increased personal space after failure, and decreased personal space after success.

PROBLEMS II & III: To involve subjects in a post-success (or post-failure) situation, measure their cognitive and symbolic withdrawal during the new situation.

The second and third aspects of the study require involving the

children in another situation, immediately following the success or failure, and measuring their symbolic withdrawal (nonverbal behavior) and cognitive withdrawal (performance) while in the new situation. This was done in order to investigate whether the effects of the success or failure on the children's personal space end after the success or failure evaluation, or whether they carry over to the second situation and continue to be evidenced throughout it. Is there any evidence to suggest that success or failure effects might be so strong that they might carry over and influence personal space in a subsequent situation, including, as part of personal space, actual performance in the situation?

Some studies suggest that the effects of a failure experience may last for at least 24 hours. If this is so, then these effects can, conceivably, affect other events in the individual's life which occur during that time. Sarason (1956) divided 180 subjects into 12 groups, representing all combinations of levels of anxiety (high, moderate, low), high and low motivation instructions, and failure and nonfailure. Two lists of 17 nonsense syllables each were presented to subjects. High motivation instructions involved many personal questions and presented the list to the subjects as a "short form intelligence test." After administration, the failure group was told, "You are doing much worse than any other people..." After failure or nonfailure, subjects were given one additional trial, and told to return in 24 hours. At that time they were given six more trials. Sarason found that all groups given the failure feedback performed much worse than those given neutral feedback. In addition, after 24 hours the failure effect was

still evidenced in those subjects who were highly anxious and highly motivated; they still performed worse than the other groups.

Another study (Fry, 1976) also suggests that the effects of failure may last for some time. Subjects were 60 student (30 female, 30 male) teacher trainees. They were told that the study was an attempt to confirm that a significant relationship exists between successful teachers and intellectual abilities. Those who scored highest and those who scored lowest on these tests would be asked to return for second and third sessions. A self-assessment rating scale was administered 24 hours before the first experimental session, immediately preceding it, directly after it, and 24 hours later. After the first "intelligence test," the experimenter generated a (very strong) success or failure experience. Results indicated that successful subjects showed more gains, on the self-assessment rating scale, in variables of self-confidence, self-worth, opportunity and efficacy, than did subjects in failure and in control conditions. Failure subjects made significant gains in the need for isolation, worried or afraid, and need for help. There was no significant change in subjects' scores from the testing immediately after the experimental session to the follow-up testing 24 hours later, although subjects were debriefed after the experimental session. This result suggests that effects induced by a particular (failure) experience may be somewhat lasting, and may carry over, affecting situations in the interim.

Isen (1970) conducted a study which was concerned with how a person's momentary internal affective state, as induced by success or

failure on a series of tasks, might dispose him to perform a generous act to help a stranger. Isen found that, after a success experience, subjects will donate considerably more money to charity and will also help a stranger more, than after a failure experience.

These studies suggest, then, that a success or a failure experience may generate strong feelings which last for some time and which may affect one's perception of and performance in other situations that occur during this time. An individual's personal space behavior may also be affected by success and failure.

PROBLEM IV: To devise and administer three personal space measures, one that would measure physical distancing, another, symbolic distancing, a third, cognitive distancing. For physical distancing, a direct measure was clearly preferable to the semi-projective measures which are often used. Haase and Markey (1973) discuss the extent to which different methodologies yield comparable results in the study of personal space. They indicate that what subjects actually do in the situation is, of course, the best estimate of their personal space behavior. Furthermore, they state that felt board techniques, often used, correlate only .56 with actual behavior. The instructions for direct measurement of personal space have generally been considered too difficult for young children to comprehend, however (Bonura, 1973), and, for this reason, felt board and other semi-projective materials have generally been used with children. The task for this researcher, therefore, was to devise a direct measure of physical distancing that was easy to use with children, and, in addition, that did not make them aware of their distancing behavior. It was felt that they would

behave more naturally if they were unaware of the salience of their distancing behaviors. In order to study the children's symbolic distancing behaviors, it was necessary to devise and administer a symbolic distancing measure. This was done, using several of the behaviors which Leibman felt create a feeling of distance in the absence of actual distancing, as well as the distancing behaviors reported by Mehrabian (1971, 1972); Sommers (1969) and other investigators. The third aspect of personal space, cognitive distancing, was measured by devising a questionnaire to assess how much the children remembered about the new situation in which they were involved. The physical, symbolic, and cognitive distancing measures will be explained more fully in the Procedures section of this paper.

In addition to the four above-mentioned major problems that were investigated in this study, several other issues were examined as well.

PROBLEM V: To investigate whether a relationship exists between children's sex and race and personal space, and to determine whether these interact with success/failure.

Sex differences have fairly consistently been found to be related to personal space, as measured by the actual or semi-projective distances that girls and boys and women and men keep between themselves and a "target." Overall, smaller distances have generally been found to be used by females (Bass & Weinstein, 1968; Pedersen, 1973; Guardo, 1969) than by males, unless the "target" that they are approaching is male; when females approach males, they use larger distances than do males when they approach females or males (Horowitz, Duff, & Stratton,

1964; Dosey & Meisels, 1969; Leibman, 1970; Bailey, Hartnett, & Glover, 1973; Lerner, Karabenick, & Meisels, 1975a, 1975b; Meisels & Guardo, 1969; Lomranz, Shapiro, Chirech, & Gilat, 1975). Females have been found to use greater distances in situations described as involving "someone whom you are afraid of" (Guardo, 1969) and in other negative affect conditions (Meisels & Guardo, 1969). When being approached by others, females allowed greater spatial invasion by both female and male experimenters, but approached less closely than males did (Hartnett, et al., 1970). Only one study was inconsistent; Lerner et al. (1975a) found that children in kindergarten through third grades used greater space with a female than with a male target. Children in higher grades (4, 5, 6 grade) showed the more common pattern wherein females used more space toward male targets. Males in higher grades, however, were found in this study to use more space with female targets than with males, which contrasts with the usual findings.

Several studies have found sex differences in axis, with women relating more directly than men did (Jones, 1971; Jones & Aiello, 1973).

Guardo and Meisels (1971) obtained some interesting sex differences in their study of personal space under conditions of praise and reproof. When praised, girls (and younger boys) were significantly closer to parents than were boys. Under conditions of praise, children are significantly closer to their fathers than to their mothers, and, under conditions of reproof, are significantly more distant from their fathers. If praise and reproof are compared to success and failure, this study raises some interesting possibilities about sex differences under conditions of success and failure. Girls, for example, might

conceivably sit closer to the experimenter after success than would boys. Also, since both the sex of the child and the sex of the parent appear to be important determinants of the child's reaction to praise and reproof, these variables (subject's and experimenter's sex) may interact in interesting and unknown ways in the present study.

Guardo and Meisel's (1971) study, reported above, raises some interesting questions about sex differences in the way that one experiences, interprets, and copes with success and failure. In their study, girls and younger boys were found to stay significantly closer to parents after praise than did older boys. In studies of sex differences, girls, compared to boys, have consistently been found to be more dependent on others for approval, less assertive, and less task, as opposed to socially, oriented. Boys, on the other hand, have been found to be less dependent on others for approval, and to be more task as opposed to socially oriented. Given these well-established sex differences in personality traits, it would not be surprising to find boys and girls differing in the ways that they experience and interpret success and failure. Perhaps success and failure have different meanings for girls and for boys. If, in fact, girls and boys do experience success and failure differently, and/or attach different meanings to the experience, these differences might be reflected in variations in withdrawal behaviors. However, since little is known about this area, no specific hypotheses will be made about sex differences in personal space after experiencing a success or a failure, though sex differences are expected to be evidenced by the children.

In addition to sex differences, racial and cultural differences have also been found to be related to personal space. Unlike the findings regarding sex differences, cultural findings have been rather inconsistent. Hall (1959) has been one of the first to discover cultural differences in personal space, which has been defined as physical distancing behavior. According to Hall, "... space communicates. It is organized differently in each culture. The associations and feelings that are released by a member of one culture almost inevitably mean something else in the next. When we say that foreigners are 'pushy', all this means is that their handling of space releases this association in our minds" (p. 165).

Jones (1971) also decided to test the assumption that minority groups are likely to maintain unique forms of personal space, though within the larger culture. He examined the physical distancing behaviors of several subcultural populations in New York City -- lower income black, Puerto Rican, Italian, and Chinese subcultures. Jones found no differences among cultures on either distance or axis dimensions. He commented that absence of significant differences may have been caused by the lower income status of all the groups -- perhaps poverty subcultures do not have different distance orientation behaviors.

Aiello and Jones (1971) wondered, if poverty were not held constant, would there then be subcultural variations in spatial habits of various populations? They thus studied lower class black and Puerto Rican, and middle class white, children interacting in school playgrounds in same sex, same culture, dyads. Unfortunately, by studying lower class black and Puerto Rican children, and middle class white children, they

confounded cultural and status variables, and therefore, the differential distancing results they found may have been caused by either race or status differences. Aiello and Jones found that white children stand significantly further away than do black and Puerto Rican youngsters, with white males standing significantly further from one another than do white females, who are next in amount of distance maintained from each other.

In 1973, Jones and Aiello decided to test the hypothesis that subcultural spatial differences are established early in childhood development. Again, however, they confounded racial and class variables, by choosing as their subject population upper lower class black and middle-middle class white dyads of youngsters in grades 1, 3, and 5. They replicated their 1971 findings wherein whites stand significantly further away than blacks, but indicated that this was only true for children in the early (first and third) grades, and that the difference disappears with older children, and may even be reversed. Again, one is unable to attribute the differential results to race; they can be related to class, as well.

Baxter (1970) studied interpersonal space behaviors in natural settings using Mexican-American, black, and white adult, adolescent and child dyads, as subjects. He found that Mexicans stand closest, whites next, and blacks furthest, within all age and sex combinations. His findings are thus similar to those of Jones and Aiello, with older children. However, Baxter, also, does not control for possible socio-economic status differences, and thus one cannot with any certainty attribute the differential results to the cultural differences of the subjects.

Tennis and Dabbs (1976) also examined withdrawal behaviors of blacks and whites. Their subjects were black female and white female college students whom they assumed to be of equal SES because of the fact that all were affluent enough to be in college. The experimenters found that blacks tended to interact with each other at greater distances than did whites, though the differences were not significant. Perhaps, when SES is controlled to some extent, personal space differences disappear.

La France and Mayo (1976) looked at a different aspect of personal space in blacks and whites: gaze behavior. They conducted two experiments, and found in both that whites look at others while listening, and look away while speaking, whereas blacks do the opposite. Again, however, social class was uncontrolled, as were other variables such as content of conversation and distance of seating. These results, therefore, though interesting, may be spurious.

Baldassare and Feller (1975) critiqued the issue of cultural variations in personal space, especially Hall's theory. They believe that there are many problems in the cultural studies that have been done, and mentioned as being especially serious the fact that any possible ethnic differences are confounded by not controlling for SES, sex, and age. They also note that, since personal space and situational variables in the studies differ so greatly, it is understandable that results are often contradictory.

Two studies (Scherer, 1974) attempted to disentangle class and race variables when examining personal space in black and in white children. In one experiment, Scherer studied 33 dyads, 13 black, 20

white children from first-fourth grades in a lower SES neighborhood schoolyard in Toronto. A photography technique was used to compare the spatial behavior, which was not significant. In another study, Scherer observed a lower class neighborhood school playground and a middle class school playground, and found that middle class children stand significantly further apart than do lower class children, and that the racial main effect was not significant. He therefore concluded that differences in interaction distance are a function of class rather than of race differences. However, one cannot be certain of these findings, since important variables, such as the content of the verbal interaction, the friendship of the interactants, their age, and the environment, were uncontrolled.

From the above, it appears that the issue of personal space differences between blacks and whites has not been resolved at this time. Results of studies are inconsistent and are often confounded by the (uncontrolled) SES factor. Therefore, besides investigating whether a relationship exists between children's sex and race, and their personal space, a sixth problem will be to attempt to control for SES.

A further question to be examined is the (possible) differential effects of success and failure on children's personal space when academic performance is controlled. Perhaps children who have been consistently successful in school, as determined by their average and above average performance on a standardized school reading test, react differently to a success or a failure experience in terms of their withdrawal behaviors, when compared to children who have been less

successful in school (below average reading grades). Therefore, children's personal space will be studied by examining the subject population as a whole, and also by examining the good and poor readers separately.

The final issue to be explored is whether a relationship exists between children's causal attributions of their success or failure, and their withdrawal behavior. Children who give internal attributions of causality to a success (or a failure) experience may evidence different withdrawal behaviors from those who give external attributions of causality to the experience. These attributions may further affect their personal space in the subsequent situation.

Purpose of Study

A major purpose of this study is to expand the conceptualization of personal space to include its symbolic and cognitive dimensions, as well as its physical distancing aspect. I shall do this by measuring all three aspects, and by demonstrating that they are related.

A further purpose of this study is to demonstrate that success or failure on an academic task will have measurable effects on children's personal space.

Chapter II

METHODS

This study explored the effect of stress (failure) on the various aspects of personal space in children. It also examined the notion that failure in one situation may cause children to behave in ways that will undermine their chances of success in a subsequent situation. A statement of major hypotheses might be helpful at this point:

HYPOTHESES:

I - Children will sit further from the experimenter after failure and sit closer to her after success.

IIa - The effects of the success or failure do not end after the success or failure experience and evaluation, but rather carry over to the immediately following situation, and continue to be evidenced in the children's withdrawal behaviors while in this new situation; after failure, children will engage in symbolic withdrawal during the new situation.

IIb - The effects of the success or failure do not end after the success or failure experience and evaluation, but rather carry over to the immediately following situation and continue to be evidenced in the children's performance in the new situation; after failure, children are expected to engage in cognitive withdrawal (inattention) which will cause them to perform worse in the new situation.

If the effects are so strong that they carry over and affect a

subsequent situation, this will provide concrete evidence for the vicious cycle effect of school failure, showing that failure can breed more failure. It will also provide evidence for the assumption that children will be less amenable to their teacher's positive interventions in the future, because the children are engaged in "tuning out" behavior. One might generalize these findings to a nonacademic situation, wherein children who do not live up to their parents' expectations, or are rejected or treated harshly by them, i.e., are "failures" and are subjected to failure experiences, may withdraw from their parents. Parents may no longer be able to affect these children and they may become what is popularly known as "alienated" youths.

III - Physical, symbolic, and cognitive withdrawal are related.

The literature regarding personal space differences between blacks and whites is inconsistent and confounded by uncontrolled socioeconomic variables. This study will attempt to disentangle personal space differences due to race from those due to SES.

Sex differences in personal space are fairly well established; there is no information, however, about how sex differences are related to personal space and to success/failure. A final purpose of this study will be an attempt to clarify this issue.

The literature indicates that sex differences have regularly been observed in withdrawal behavior. It also suggests that girls and boys may experience success and failure differently, and/or attach different meanings to the experience. Since little is known about the interaction of sex differences, personal space, and success and

failure, this researcher is not making any specific hypotheses about sex differences in personal space after experiencing a success or a failure.

Racial differences in personal space, differences in personal space when reading ability is controlled, and the relationship between personal space, performance, and children's causal attributions of their success or failure, are also examined. Since little is known about these areas, and/or the work that has been done has been inconclusive, no hypotheses will be offered.

RESEARCH DESIGN

Briefly, the experiment involved administering an academic-type "test" individually to 64 male and female, black and white, elementary school children. One-half of the children succeeded on the "test"; the other half "failed". After the child received success or failure feedback, the experimenter told her or him that "Now we are going to do something else. So come over here and sit down." The child had a choice of three chairs at different distances from E; the physical distancing aspect of personal space was determined by the chair that the child chose. After the child was seated, the experimenter read a story aloud. The youngster's symbolic distancing behavior while listening to the story was recorded on video-tape and was scored at a later date. After listening to the story, the child was asked a series of questions about the story. The cognitive withdrawal aspect of personal space was determined by how much the child remembered about the story.

To test the main hypotheses, the study employed 2x2x2x2 and 2x2x2

analyses of variance and covariance. ANCOVA was used with all the dependent variables except physical distancing: ANOVA was used here because the sign of the correlation coefficient changed or the slopes were significantly different in one cell.

The major independent variables were Success/Failure, Sex, Race, and Reading Ability. Dependent variables were Physical Distancing, Symbolic Distancing (withdrawal, "pure" withdrawal, and eye contact) and Cognitive Distancing (performance on the story questionnaire). In the covariance analyses, age was the covariate, since the literature suggests that age might be correlated with performance and withdrawal behaviors. In the three-way analyses, the good and poor readers were examined separately; the effects of sex, race, and success/failure on physical distancing, symbolic distancing, and cognitive distancing were studied here.

DATA ANALYSIS

When overall F values were found to be significant, Orthogonal Contrasts were done to compare cell means. Orthogonal contrasts are considered to be more conservative than t tests using relevant cell data only, because they are much more accurate estimates of residual variation.

Two procedures were used to examine the effect of SES. First, ANCOVA was used to control for socio-economic status, with success/failure, sex, race, and reading ability as independent variables. SES was used as the covariate, so that its contribution to the data could be removed first. Then, to assess the effects of SES independently from the other variables, especially from race, multiple regression

(forward selection stepwise regression) was utilized. All the variables with the exception of SES were forced to enter the equation, then SES was permitted to enter last.

Sex differences in attribution of success/failure were studied via Chi Square.

To determine the relationship between children's causal attributions of success/failure, and their distancing behaviors, 3 way, 2 level ANOVAs were utilized, with children separated into Internals and Externals. Success/failure, sex and race were the independent variables; physical distancing, cognitive withdrawal, and the three kinds of symbolic withdrawal were the dependent variables.

Independent Variables

1. Subject Variables. Subjects were 85 female and male third-fifth grade youngsers, aged 8-11, attending a public elementary school in New Jersey. The children were selected with the help of the Educational Coordinator of the school, who was acquainted with every child. Selection was based on reading ability, and on the absence, in each child, of both obvious emotional disturbance and overt or minimal brain dysfunction. A pilot study was conducted with the first 21 subjects. These subjects had to be excluded from the final statistical analysis, as the pilot indicated that changes in the physical distancing measure were required. Thus, 64 subjects remained, 17 black female, 16 white female, 16 black male, 15 white males. Subjects were randomly assigned to conditions, the only limitation being the need for approximately equal numbers of female and male, white and black children in each condition. A video-taping error, however, resulted

in the loss of symbolic distancing data from 21 children. Thus, while the other variables are based on data from 64 children, the symbolic distancing variables of eye contact, withdrawal, and pure withdrawal are based on data from 43 children.

SES: Information about the children's socioeonomic status was obtained by an examination of each child's family history data card, which was supposed to contain highest educational level reached by mother and father, and current job, if any, held by each parent. The information, however, was often incomplete. Thus, SES scores for each child, obtained by getting a mean of the scores given the child by 12 raters, are necessarily gross estimations. The raters, who were white, female and male psychology doctoral students, social workers, and experienced clinical psychologists, were given a questionnaire to fill out. On the questionnaire was listed the child's first name and race, and parents' educational and work information. The rater was requested to rate each child as lower class, lower middle class, or upper middle class. The rating sheet, together with instructions to raters, can be found in the appendix, pages 130-134.

Reading Ability: Selection of children was based partly on reading ability, as measured by the latest school-administered Ginn reading test. The 31 good readers were defined as those children who performed on grade, or who performed one, two, and three levels above grade, on the Ginn test. The 33 poor readers were defined as those children who performed one, two, and three levels below grade on this same test.

Birth Order and Crowding Information: At the end of the

experiment, the child was asked questions about whether s/he shares or has her/his own room, whether the child's home feels crowded. This was done to explore whether crowding is related to personal space. Birth order information was also obtained. Since this variable has been shown to be related to the need for affiliation, it might be related to personal space, as well.

2. Experimental Variables.

Success/Failure: Success/Failure was varied by administering a series of five anagrams of either moderate or great difficulty, to the children, to be completed within a five minute time period. The exact procedure is described in detail in the appendix, pages 75-79. A list of the success and the failure anagrams can be found in the appendix, page 85. Briefly, in the failure condition, the child was given five anagrams, four of very great difficulty, and one relatively easy one. An easy one was given so that the child might think that the task was possible to do, and not give up in disgust. Children were unable to do more than one correctly. At the end of the five minute time period, the experimenter commented to the child, "I see you had some trouble with those words. You got (one right out of five) (or) You couldn't do them." In the success condition, the youngster was given five anagrams of moderate difficulty. When the time was up, or when the child announced that the task was completed, the experimenter looked at the work and commented, "Congratulations! You got every one right! That's terrific! (or, if appropriate) "Congratulations! You got four right out of five! That's terrific!"

To determine whether the success/failure manipulation was

effective, i.e., whether the children felt better after they succeeded than after they failed, a validity of manipulation check was included at the end of the experiment. This check on the efficacy of the success/failure manipulation had been previously used in an unrelated experiment (Cobb, 1977). Slight alterations of the original were made in order for it to be relevant to this study. The version of the success of manipulation check that was used with the children can be found in the Appendix C, page 127.

Attribution Measure: To determine whether distancing behavior, performance, and causal attributions of success and failure were related, an attribution measure was included at the end of the experiment. Before leaving the experimental room, the child was asked why s/he thought s/he did (or did not do) the mixed-up words. The child was shown a list of the four possible reasons, which were read aloud by the experimenter. Did the child do (not do) the mixed-up words because the words were easy (hard), the child is good at (not so good at) mixed-up words, the child was lucky (unlucky), the child tried hard (didn't try hard enough)? See Appendix C, pages 129, 130, for the attribution measure.

Dependent Variables

Personal Space Measures:

Physical Distancing Measure: The original physical distancing measure, used in the pilot study, involved telling the child, immediately after s/he had received the success or failure feedback from the anagrams test, that "...Now we are going to do something different. Please bring your chair over here (E is

already seated when these instructions are given) and sit down." The distance between the closest leg of the child's chair and the closest leg of E's chair was to be measured by a quick look at the masking tape which had been placed at various distances around E's chair before the experiment began. This particular procedure was ineffective, however, because the children often placed their chairs adjacent to rather than opposite E, which rendered measurement of physical and symbolic distancing impossible. Thus, another procedure had to be developed, using stationery chairs. After the success or failure feedback, and while the child was still seated at the desk, E sat down. Directly opposite from E, in the "far" position, was another chair which was 39 inches away. Alternately, on E's right or left, to minimize possible position effects, was the "moderate" chair, 17 inches away, and, on the other side, was the "close" chair, 7 inches away from E's chair. After giving the success or failure feedback, E announced to the child, "Now we are going to do something different. So come over here and sit down." The child then got up and chose one of the three chairs.

Symbolic Distancing Measure: A symbolic distancing measure was developed by using the behaviors that Katz (1950), Argyle and Dean (1965), Exline (1965), Hutt and Ounstead (1966), Leibman (1970), Mehrabian (1971), Sundstrom (1975) and others considered to be "flight behaviors" and indicators of withdrawal. The author used her own clincial observations of withdrawn children, as well.

Items were defined, tested, and revised while the author observed children and adults who were undergoing psychiatric examinations in a psychiatric clinic in New York City. The final scale consisted of the

following items: (1) Head turn away from E; (2) No eye contact for entire five second period; (3) Examining part of body or of an object; (4) turning body away from E; (5) Reclining away from E, even briefly; (6) Arm placed between S and E; (7) Manipulation, stroking, or concealing S's face.

Exact category definitions for each item can be found in the appendix.

a) Video-taping of symbolic distancing behavior: During the time spent pretesting withdrawal behaviors, the investigator decided to hire someone to video-tape children's withdrawal behaviors in the actual experiment; too much vital information was lost by using an on-the-spot scoring system. Video-taping would permit returning to the behavior again and again, so that accurate scoring would be possible. A brief review of the literature uncovered only one study about the effects of video-taping on nonverbal behavior. This study (Bond & Iwata, 1976) indicated that observation anxiety, manipulated by video-taping half of the subjects and telling them that these video-tapes were to be used at some later point, had no effect on subjects' proxemic behavior.

A young woman was hired to do the video-taping. She was introduced to the children when they entered the experimental room. They were told that she would be doing some video-taping. The cameras and much of the equipment were not hidden, but were inconspicuously placed behind some books. The video-person pretended to film the children throughout the experiment, so that they could become accustomed to the procedure and be relatively comfortable with it by the time that the actual video-taping occurred.

b) Scoring the video-tapes of symbolic distancing behavior: The scoring of symbolic distancing was accomplished in the following manner: Twenty 5-second intervals throughout a story, which was read to the children, and during which their behaviors were video-taped, were randomly chosen. Particular words of the story were used to signal the beginning and the end of a 5-second interval. All of the withdrawal behaviors on the checklist, which occurred during each of the twenty 5-second intervals, were scored. Thus, for each subject, there were 20 predetermined 5-second intervals for which withdrawal behavior was scored. These behaviors were scored by examining the video-tape which had been taken several months before, when each child had been listening to the story during the experiment. To prevent unconscious bias, the video-tapes included no information about a child's name or experimental condition. A subject's withdrawal behavior was obtained by a summation of all withdrawal behaviors. Thus, it was conceivable that a child high in withdrawal could obtain a final score of 140 (20 scoring intervals, multiplied by 7 withdrawal behaviors).

Eye contact, heavily emphasized in the literature, was considered to be an especially important behavior. Thus, it was examined in several different ways. First, it was studied alone. A "no eye contact" score was obtained by adding together a subject's scores on the 20 "no eye contact" items. Then, two withdrawal scores were computed for subjects. One withdrawal score included all the withdrawal measures and was obtained by summation of all the items. This was done since eye contact is a nonverbal behavior and therefore

should be examined together with the other nonverbal behaviors. The other score, "pure withdrawal", included all the withdrawal measures except for eye contact, and was obtained by subtracting an individual's "no eye contact" scores from her or his total withdrawal score. This was done because eye contact, though a form of nonverbal behavior, might differ in some important ways from the other, perhaps less directly communicative, nonverbal behaviors. By studying eye contact and the other nonverbal distancing behaviors separately, one might be made aware of differences that might otherwise be obscured.

c) Situation to follow success/failure experience: The investigator decided that a good post-success (or post-failure) situation for the children, would involve their listening to a story. Afterwards, they would be asked questions about the story. Their performance on the story questionnaire would be an indication of their cognitive withdrawal while listening to the story. It was felt that listening to a story is a somewhat nonacademic situation. Some attention to the experimenter would be required, but there might be less pressure to attend than in a testlike situation. The emergence of idiosyncratic behaviors, especially symbolic distancing behaviors and inattention, would, hopefully, be facilitated by the nonacademic format. The children's symbolic distancing behaviors while listening to the story, would be video-taped.

A dull, boring story seemed most suitable for this experiment. The effects that were hoped for, i.e., withdrawal behaviors and inattention, might be overridden by an inherently interesting story. A story was selected (see page 113 of appendix for text of the story).

It was thought that youngsters would find its complex sentences and involved, abstract descriptions rather tiresome.

Cognitive Distancing Measure: A story questionnaire, the Buster Bear Questionnaire, to measure how well the children had attended to the story, and therefore how much of it they had remembered, was developed to measure cognitive withdrawal. (See appendix page 117 for "BBQ" questions.) The story and questions were pretested on the brightest sixth grade class in a public elementary school in New York City. Two questions, that 90% of the children had answered correctly or incorrectly, were changed. The story itself was judged suitable for the study, because the children responded to the question, "How did you feel about the story?" by such (written) comments as "It was a very boring story", "It was a boring story I feel asleep that's how boring it was", "I think it is a little for younger people. I think it's rotten." When the story was read, in the study itself, experimenter bias, in the form of more or less eye contact with subjects, was controlled by having the experimenter glance up at subjects, at pre-arranged points in the story only.

Details of the exact procedure that was used in the experiment, together with a script, can be found in the appendix, pages 75-78.

Chapter 3

RESULTS

Hypothesis I

Children will sit further from the experimenter after failure and sit closer to her after success.

Results showed no main effects for physical distancing and success/failure. However, important interactions did occur. An examination of the data indicated that girls sat significantly closer after success than they did after failure ($F = 6.45$, 1/48 df, $p = .014$). With the exception of the white boys, the other groups also tended to sit closer after success and further after failure (see Table 1). White boys, in contrast to everyone else, sat significantly closer when they failed than when they succeeded ($F = 4.25$, 1/48 df, $p = .044$). Furthermore, white boys, after success, sat further away from the experimenter than any other group in any condition (see Table 1 for comparison of cell means in the success/failure x sex interaction, and in the success/failure x sex x race interaction.

Hypothesis IIa

This hypothesis states that the effects of the success or failure experience will carry over to the immediately following situation and will affect the children's withdrawal behaviors during the new situation; during the new situation the children will symbolically distance* (engage in nonverbal withdrawal behaviors) more after a

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*Test-retest reliability for the symbolic distancing checklist was .87.

Table 1

Orthogonal Contrasts: Physical Distancing

(Chair Chosen): All Ss

	Failure	Success	p
Groups			
Girls	2.0 (16)	1.50 (17)[a]	.04
Whites	2.12 (7)	1.50 (8)	.083
Blacks	1.87 (9)	1.52 (9)	ns
Boys	1.79 (15)	2.14 (16)[b]	ns
Whites	1.62 (7)	2.54 (7)[c]	.015
Blacks	1.96 (8)	1.75 (9)	ns

[a]Cells a and b are significantly different from one another ($p = .01$).

[b]Successful white boys sat significantly further than everyone except white girl failures and black boy failures.

failure than after a success experience. Examination of the data indicated that the effects of the success or failure experience did carry over to the immediately following situation and affect children's symbolic distancing during it. Results, however, were somewhat different from those predicted: The population was found to symbolically distance more after success than after failure ($F = 4.05$, 1/26 df, $p = .054$). See Table 2 for comparisons of cell means in the success/failure main effect.

A significant S/F x Sex interation ($F = 5.90$, 1/26 df, $p = .022$) clarifies the above result by showing that the success/failure main effect is due to the boys' behavior: Successful boys symbolically distance the most -- significantly more than any other group. Boys who failed engaged in the fewest withdrawal behaviors of all groups (see Table 2). Results for girls were not significant; girls' scores were similar in success and in failure conditions.

Another significant interaction ($F = 7.68$, 1/46 df, $p = .01$) was that which examined S/F x sex x reading. Successful male good readers withdrew significantly more than anyone else. Male good readers who failed withdrew the least of all the groups (see Table 2).

The results reported above were obtained from the scores on the entire withdrawal scale. The withdrawal scale scores were also examined by subtracting subjects' eye contact scores from their total withdrawal scores, and examining eye contact and "pure withdrawal" (P.W.) separately. These results will now be reported.

There was a tendency for successful children to engage in "P.W." more than children who failed ($F = 2.83$, 1/26 df, $p = .104$), and for

Table 2

Orthogonal Contrasts: Symbolic Distancing Scores: All Ss

	Failure	Success	p
Group			
Everyone	13.01 (22)	22.35 (21)	.039
Girls	15.27 (12)	16.36 (10)[a]	ns
Boys	10.75 (10)	28.34 (11)[b]	.008
Female Good Readers	15.40 (7)	12.20 (5)	ns
Female Poor Readers	15.14 (5)	20.52 (5)	ns
Male Good Readers	6.69 (4)	43.19 (6)	.0003
Male Poor Readers	14.81 (6)	13.50 (5)	ns

Note: Cronbach's coefficient alpha was used as a measure of internal consistency for the 7 item withdrawal scale. Alpha was equal to .66, which, while not high, is considered acceptable given the small number of items.

Note: Higher scores indicate greater withdrawal.

[a]Cells a and b are significantly different from one another ($p = .037$).

[c]Successful male good readers withdrew significantly more than any other group.

successful children to also have less eye contact than did children who failed ($F = 3.34$, 1/26 df, $p = .079$, Type IV sums of squares). See Tables 3 and 4. These results are similar to those reported above, and, again, are due to the boys' behavior. For pure withdrawal, a marginal ($F = 2.94$, 1/26 df, $p = .098$) success/failure x sex interaction indicated that boys tended to engage in pure withdrawal more after success than after failure (see Table 3). Girls' results were not significant.

For eye contact, a significant ($F = 5.04$, 1/26 df, $p = .033$) success/failure x sex interaction showed that boys made significantly less eye contact after success than they did after failure (see Table 4).

A significant ($F = 5.10$, 1/26 df, $p = .032$) S/F x sex x race interaction was obtained for eye contact, wherein white boys, after failure, made the most eye contact of all the groups and, after success, made the least eye contact of all the groups. White girls' score go in the opposite direction from those of everyone else, and show a tendency to make more eye contact after success and less after failure (see Table 4).

A brief summary of the results of Hypothesis IIa is as follows: Children withdraw and engage in pure withdrawal more after success than after failure. They also have less eye contact after success than after failure. Differences between success and failure groups are either significant or marginally significant. The significant S/F x sex interactions indicate that it is the boys who withdraw more and engage in more pure withdrawal and less eye contact after success.

Table 3

Orthogonal Contrasts: Pure Withdrawal Scores: All Ss

	Failure	Success	p
Group			
Everyone	8.84 (22)	14.89 (21)	.119
Girls	8.93 (12)	11.31 (10)	ns
Boys	8.75 (10)	18.46 (11)	.082

Note: Higher scores mean greater withdrawal.

Table 4

Orthogonal Contrasts: Eye Contact Scores: All Ss

	Failure	Success	p
Group			
Everyone	4.16 (22)	7.49 (21)	.079
All Girls	6.33 (12)[a]	5.05 (10)[c]	ns
All Boys	2.00 (10)[b]	9.88 (11)[d]	.005
White Boys	0.87 (2)	11.80 (4)	.02
Black Boys	3.13 (8)	7.96 (7)	.07
White Girls	7.14 (4)	2.26 (4)	ns
Black Girls	5.52 (8)	7.83 (6)	ns

Note: Lower scores indicate more eye contact.

[a]There is a marginally significant difference between cells a and b ($p = .10$).

[c]Cells c and d are significantly different from one another ($p = .043$).

Girls tend to make more eye contact after success. The girls' results, however, were not significant and therefore not clearly interpretable.

Hypothesis IIb

This hypothesis states that the effects of the success or failure experience will carry over to the immediately following situation and will affect children's performance during it; after failure, children are expected to engage in cognitive withdrawal (inattention) which will cause them to perform worse in the new situation.

The effects of the success or failure experience were found to carry over to the immediately following situation, and did affect children's performance in it. Contrary to what was predicted, however, children performed better after failure ($F = 7.94$, 1/46 df, $p = .007$). Again, this result was caused by the boys' performance. When cell means were studied via orthogonal contrasts, and girls' and boys' cognitive distancing scores were examined separately, boys were seen to have performed significantly better after failure. Boys who failed performed significantly better than those who succeeded (see Table 5).

Both black and white boys performed better after failure than after success. This tendency is of only marginal significant for black boys, however (see Table 5).

In addition to sex differences in performance after success and failure, there were other findings which also relate to the cognitive distancing variable. There were race and reading main effects across success and failure, with white performing better than blacks ($\bar{X}$ for 3.33; $F = 13.52$, 1/46 df, $p = .0006$) and better readers performing better ($\bar{X}$ for good readers was 4.75; $\bar{X}$ for poor readers was 3.75, $F = 4.17$, 1/46 df, $p = .046$). See Appendix Table V.

Table 5

Orthogonal Contrasts: Cognitive Distancing Scores:

All Ss

	Failure	Success	p
Group			
Everyone	5.02 (31)	3.49 (32)	.006
Girls	4.66 (16)	3.88 (16)	.306
Whites	5.75 (7)	4.60 (7)	.325
Blacks	3.58 (9)	3.15 (9)	.662
Boys	5.38 (15)	3.09 (16)	.004
Whites	6.57 (7)	4.14 (7)	.051
Blacks	4.25 (8)	2.44 (9)	.107

Note: Lower scores indicate poorer performance (more cognitive distancing).

Hypothesis III

Physical, symbolic, and cognitive withdrawal are related:

Physical, symbolic, and cognitive withdrawal, theoretically related, appear, in the boys' results, to be related to behavior as well. A summary of the results for the main dependent variables for the entire population is presented in Table 6. It can be seen that boys' results tend to be supportive of one another. Thus, after failure, boys have been found to symbolically distance less, to engage in less cognitive distancing as shown by their better performance, after failure, on an attentional measure, to engage in less "pure withdrawal", to make more eye contact, and, in the case of white boys, to sit closer to the person who "failed" them. Girls' results are generally not significant, except that they have been found to sit significantly further after failure than after success. They also evidenced a nonsignificant tendency, which reaches .10 in the case of white girls who are good readers, to make less eye contact after failure than after success.

Internally consistent patterns have begun to emerge, indicating that girls and boys respond very differently to success or failure experiences in terms of their physical, symbolic, and cognitive distancing behaviors. The fact that, for boys, these patterns support one-another theoretically, is evidence for the notion that physical, symbolic, and cognitive withdrawal are related in males. Females' results, for the most part nonsignificant, are not clearly interpretable as supporting or refuting the hypothesis.

Table 6

Summary of Results of Analyses of Variance and Covariance for all Dependent Variables (Physical Distancing, Cognitive Distancing, Symbolic Distancing): Intragroup Comparisons

	Failure	Success	p
Group			
Boys	Withdraw less (10)	Withdraw more (11)	.008
	"Pure Withdraw" less (10)	"Pure Withdraw" more (11)	.082
	More eye contact (10)	Less eye contact (11)	.005
	Less cognitive distancing (15)	More cognitive distancing (16)	.012
White Boys:	Sit closer (4)	Sit further (8)	.015
Black Boy Good Readers:	Sit further (3)	Sit closer (4)	.084
Girls	Sit further (16)	Sit closer (17)	.04

Note: p = probability of significant difference between least square means, failure versus success groups.

Additional Findings

In addition to the three major hypotheses which have already been discussed, this study explored several other issues, as well. These included sex differences in personal space after success or failure; racial differences in personal space; differences in personal space when reading ability is controlled; the relationship between personal space, performance, and children's attributions of their success or failure; birth order, crowding, and personal space; socioeconomic status and personal space. Sex and racial differences in personal space have already been examined and will be discussed further in the next section of this paper.

Let us now explore differences in personal space when reading ability is controlled.

When good and poor readers are studied separately, results for good readers are similar to those of the population as a whole. Several new findings were obtained for good readers that were not observed in the total population, however. First, black children, both boys and girls, who are good readers, sat significantly closer after success than they did after failure ($F = 5.06$, 1/23 df, $p = .034$). See Table 7. Thus, black boys who are good readers tend to behave similarly to the entire population of girls in terms of physical distancing; they sat closer after success and remained further away after failure. Then, a S/F x sex x race interaction ($F = 8.75$, 1/48 df, $p = .007$) shows white boys, after success, sitting significantly further than white girls after success. As in the results for the population as a whole, the white boys who are good readers did the opposite of everyone else by sitting closer after failure and sitting further after success.

Table 7

Orthogonal Contrasts: Physical Distancing: Good Readers

	Failure	Success	p
Group			
Blacks	2.04 (7)	1.37 (8)[a]	.045
Whites	1.75 (8)	2.12 (8)[b]	ns
Boys			
Black Boys	2.33 (3)[c]	1.50 (4)[f]	.084
White Boys	1.25 (4)[d]	2.75 (4)[g]	.001
Girls			
Black Girls	1.75 (4)	1.25 (4)	ns
White Girls	2.25 (4)[e]	1.50 (4)[h]	.092

[a]Cells a and b are significantly different from one another ($p = .02$).

[c]Cells c and d are significantly different from one another ($p = .028$).

[d]Cells d and e are significantly different from one another ($p = .028$).

[f]Cells f and g are significantly different from one another ($p = .007$).

[g]Cells g and h are significantly different from one another ($p = .007$).

An unexpected finding emerged during the examination of the results of good and poor readers separately. The good readers' results, as stated above, differ in only minor ways from those of the population as a whole. In contrast, the poor readers' results rarely reached the acceptable .05 level of significance. Results were rarely of even marginal significance.

Results for socioeconomic status and personal space were not significant. When SES was studied as a covariate, and its contribution to the data was pulled out first, results showed no change with SES removed. SES was also controlled in a second manner, wherein all the variables with the exception of SES were forced to enter the equation first and only afterwards was SES allowed to enter. However, SES did not account for enough unique variance to enter the model. Therefore, it appears that SES was not confounding the results.

Results for attribution and distancing were not significant, perhaps because of problems with the measure. Sex differences in attribution were not significant, though they were in the direction expected from other literature on sex differences in attribution of success and failure (Deaux, 1976; Nicholls, 1975; O'Leary, 1977).

Birth order, crowding, and personal space were also not related to one another.

The experimental treatment itself appeared to be effective; children were significantly more unhappy after failure than they were after success ($\underline{t} = 5.99$, 60 $\underline{df}$, $\underline{p} = .0001$).

Table 8

Attributions by Sex for Success vs. Failure: Failure

Sex	Attributions				Total N
Female	Ability	Effort	Luck	Task Difficulty	
	8 (25.81%)	1 (3.23%)	0	7 (22.58%)	16
Male	5 (16.13%)	4 (12.90%)	1 (3.23%)	5 (16.13%)	15
TOTAL	13	5	1	12	31

$\chi^2 = 3.797$, df = 3, p = .284.

Table 9

Attributions by Sex for Success vs. Failure: Success

	Attributions				
Sex	Ability	Effort	Luck	Task Difficulty	Total N
Female	5 (15.63%)	3 (9.38%)	0	8 (25.00%)	16
Male	8 (25.00%)	4 (12.50%)	1 (3.13%)	3 (9.38%)	16
TOTAL	13	7	1	11	32

$\chi^2 = 4.108$, df = 3, p = .250.

Chapter 4

DISCUSSION

The results of this study did not support Hypothesis I and Hypotheses IIa and IIb, of this study. Hypothesis III was confirmed, in the case of boys. Boys behaved significantly differently from girls. A striking pattern emerged in the boys' results, strongest in the case of white boys, and suggesting that, among boys, physical, symbolic, and cognitive distancing behaviors are related. White boys sat significantly closer after failure than they did after success. All boys, after failure, engaged in significantly less symbolic distancing behavior, made significantly more eye contact, and engaged in significantly less cognitive distancing behavior. No clear pattern was evident in the girls' results. Girls sat significantly further after failure than they did after success. However, their symbolic and cognitive distancing scores were not significant, with the exception of a tendency, on the part of white girls who were good readers, to make more eye contact after success.

The literature on sex differences in socialization for later achievement strivings can help us to understand the unexpected findings.

Boys appear to show more task involvement than girls do, and to exert effort because a task is inherently interesting or challenging to them (Maccoby & Jacklin, 1974; Veroff, 1969). In school, boys have been found to be harder to motivate than girls are, and to do less

well than girls in the early school grades. However, when boys do excel on tasks, their performance has less to do with pleasing others, a motive which is said to drive girls, than because the task is fascinating to them. According to Veroff (1969), boys, as early as second grade, respond to achievement arousal with increased autonomous achievement motivation. Girls, on the other hand, respond with decreased autonomous achievement motivation, as if pushes for achievement increased their anxiety level. It is suggested here that early socialization experiences cause boys and girls to react differently to achievement situations, with boys being challenged, task and mastery oriented, and girls seemingly being anxious and showing decreased achievement motivation.

It would appear that a boy is expected to pursue interests and to develop the kinds of personality traits that will enable him to one day have a successful career and to support a family. The importance which is put on competition and success, and the frequency with which boys encounter competitive situations probably force the young boy to cope with failure at an early age, and, in addition, to learn strategies with which to deal with it to hopefully prevent its recurrence. Two related strategies that boys appear to utilize are overestimation of performance, and unwillingness to absorb negative feedback about their own performance (Maccoby & Jacklin, 1974). Studies show that boys have higher expectations for success than do girls (O'Leary, 1977; Parsons & Ruble, 1977; Dweck & Gilliard, 1975; Nicholls, 1975; Crandall, 1969; Smith, 1969). Furthermore, girls expect to do worse, and boys expect to do better, than their actual

performance (Parsons & Ruble, 1977; Crandall, 1969). Also, after an actual failure experience, girls' expectancies dropped more than boys' expectancies (Parsons & Ruble, 1977). In addition, after failure, men are much less likely than women to downgrade their performance (Deaux, 1976). Boys, unlike girls, rarely attribute failure to poor ability more than success to good ability (Nicholls, 1975). Boys, more often than girls, attribute failure to bad luck or to other external sources. It is speculated here that boys' unwillingness to absorb negative evaluations, perhaps by refusing to take individual responsibility for the defeat and instead, projecting it onto an external source, and, also, overestimation of actual performance, are unconscious strategies that boys have learned to use in achievement situations to cope with competition and failure, and that these strategies serve important purposes. These strategies render the individual less anxious in achievement situations, and, especially, less vulnerable to feelings of discouragement and despair, and, therefore, more able and willing to persevere in the face of failure. Unwilling to accept or to admit defeat, the boy may keep trying, and, in so doing, may actually improve his performance. According to Crandall (1969), elementary school boys', but not girls', expectancy estimates of success in intellectual situations bore a significant relationship to their interest in and to the intensity of their efforts in intellectual activities. Furthermore, Crandall indicated that expectancy of success in school was more predictive of school achievement among whites than any of the other variables studied. Nicholls (1975) has found that boys spend more time working on a task when failing than when

succeeding. There was no significant difference in the time spent by girls under the two conditions. The results of this study suggest that boys do in fact persevere in the face of failure, probably with the hope of eventually succeeding.

Males appear to be optimistic and persevering in achievement situations. Success by men is expected; they are believed to be more competent (Deaux, 1976). Studies have shown that performance which is attributed to a woman is given a consistently lower score, by both women and men, than the identical performance which is attributed to a man (O'Leary, 1977; Deaux, 1976). Another study (Deaux & Emswiller, 1974) indicated that a man student's good performance on a masculine task is considered to have been due to skill. Despite identical evidence about her performance, a woman student's good performance on that same task is considered to have been due to luck. The results for a feminine task were <u>not</u> the opposite, i.e., men's good performance was not necessarily attributed to luck, nor women's good performance, to skill. To summarize briefly, it appears that men are expected to succeed, they are believed to be more competent than women, and, when they do succeed, they are rated more highly than a woman who succeeds. When they fail, however, males are rated more negatively than females. Boys soon learn strategies which enable them to cope effectively with the stress of failure and to minimize its recurrence. According to Mead (1949) to the American boy, "...failure is considered as a temporary setback, obstacles are made to be overcome, only a sissy takes defeat as anything but a stimulus to trying harder" (p. 310).

Boys, therefore, expected by themselves and others to succeed,

spend much of their early lives training, intellectually and psychologically, for a successful career. Their preparation involves, in part, encouragement in independence strivings, and frequent exposure to achievement-related situations, where they soon learn strategies which are designed to minimize the frequency and the stress of failure.

Now let us focus on girls' socialization for achievement strivings: How have girls learned to experience and to cope with achievement situations? We have already learned that girls respond to achievement situations with anxiety, self-deprecation, and discouragement. Girls indicate feeling worse than boys do when they are told that they are about to do an important abilities test (Nicholls, 1975); they have lower expectations for success than boys do; they expect to do worse than their actual performance; after a failure, girls' expectancies for future success drop significantly more than boys do; after a failure, they tend to downgrade their performance and, unlike the boys, often accept responsibility for their failures by attributing the failure to poor ability. Furthermore, studies have found that girls spend no more time working on a task after a failure than after a success -- they probably feel that further effort is useless!

Investigators believe that women's early socialization experiences contribute to their difficulties in coping with achievement-related situations and to their resultant inability to live up to their potential. According to Hoffman (1972), girls, unlike boys, are not adequately encouraged to be independent. Therefore, they do not achieve an autonomous identity as completely as boys do.

Instead, girls retain a permanent tie to their mothers. Infantile fears of abandonment remain. Girls do not develop sufficient confidence in their ability to cope independently with the environment. Instead, girls learn that safety and effectiveness lie in affective ties and in getting help from others. They work for love, acceptance, and approval rather than for the intrinsic value of achievement (Williams, 1977).

Women's difficulties with achievement situations are exacerbated by societal stereotypes. Men, and their products, are valued more highly than women, and theirs (Deaux, 1976; O'Leary, 1977). Males are considered to be more competent than females and are given more encouragement for intellectual strivings. Females are usually not trained nor encouraged to cope with achievement situations.

It appears, from the literature on sex differences in socialization for later achievement strivings, that girls and boys experience and cope with achievement situations in very different ways. Boys are characteristically optimistic about their chances for success, even after failure, and have learned strategies to handle failure and to minimize its recurrence. Girls, on the other hand, are characteristically anxious and self-deprecating in achievement situations; they do not expect to achieve success, and have not learned strategies to minimize their failures. They are usually more concerned about getting approval than they are about mastering tasks. In the light of these sex differences in achievement situations, the results of the present study become clearer. Futhermore, it is also now possible to understand why boys did not distance, physically,

symbolically, and/or cognitively, after failure and come closer after success, as hypothesized.

It is suggested here that the key to understanding the results of the present study lies in the fact that the children's distancing behaviors were not merely a reaction to a prior success or failure: the children's personal space behaviors were reactions to a second, albeit implicit, demand for achievement behavior, given immediately after the child had either succeeded at or failed on the prior achievement task. It is proposed here that, when the experimenter told the children, after they had just succeeded at or failed on the anagrams test, that "Now we are going to do something different. So come over here and sit down" the children reacted as if they were now going to be placed in another achievement situation. How did each sex handle the (second) achievement demand?

Boys, unlike girls, and unlike boys in previous personal space experiments, did not simply react to the stress of failure by withdrawal. In the present experiment, with its added component of an implicit demand for a second achievement, boys reacted quite differently: after failing the anagrams test, boys seemed to react strongly to the failure, but in a characteristically masculine manner: they were determined to avoid failure in the second situation. The behaviors that boys evidenced after failure were therefore not simple stress reactions to failure, as was expected, but were rather strategies to minimize the possibility of a second failure. Refusing to withdraw, and thus surrender to the failure-induced anxiety, the boys attempted to actively cope with and to master the second achievement situation. White boys, perhaps even more pressured to

achieve success than blacks, sat significantly closer after failure than they did after success, as if sitting closer could help them to pay better attention and not miss anything. Boys, after failure, did in fact seem to pay careful attention to the experimenter: they engaged in very little symbolic withdrawal behavior, and evidenced much eye contact. Their lack of cognitive withdrawal after failure was evidenced by their performance: boys who failed performed significantly better than boys who succeeded. Thus, their attempts to avoid a second failure were successful. It therefore appears that, under certain conditions, failure can mobilize boys' efforts and cause them to do better. It appears necessary for the failure to be relatively mild, however; Sarason (1956) subjected people to a harsh failure experience. Twenty-four hours later, those individuals still performed worse than those who were given neutral feedback.

Boys, therefore, seem to try harder when they fail, and, in fact, appear able to successfully mobilize themselves and thus avoid another failure. Now then, how can their reactions to success be explained? Is the answer merely that, having just succeeded, they now feel overconfident, less motivated, and, for this reason, "tune out" and engage in withdrawal behaviors, and therefore do poorly on the second task? This possibility cannot be dismissed. Maccoby and Jacklin (1974), on the basis of various studies that they reviewed, concluded that it takes stronger efforts to motivate boys, and that they show a higher need for achievement only under arousing conditions. Failure might therefore be considered just such an arousing condition. However, while it is certainly possible to explain the boys' behavior under the success conditions as due to lack of motivation, one of the

results does not quite fit this theory: the (white) boys, after success, chose the far chair more often than any of the other groups. Why? If they were so comfortable in the situation, so sure of success, why the need to distance from the experimenter more than the other groups did? It is speculated here that the white boys, perhaps more pressured than blacks by family and school to succeed, may have been reacting to the second demand in part with overconfidence, but also in part with resentment, as if they were saying, "Now what do you want from me? I did it, I performed, succeeded, now leave me alone!" The withdrawal may therefore have been a partial expression of overconfidence, disinterest, but also resentment at having to perform again. Under the failure condition, any resentment would have been camouflaged by the stronger need to succeed and to avoid another failure, and thus was not overtly evidenced. "Machismo" may have also influenced the white boys' physical distancing behavior after success. Feeling proud, successful, and sure of himself, the white boy can symbolically "go out into the world", move away, and leave the mother/teacher figure, secure in the knowledge that he can take care of himself. Conversely, physical closeness after failure, in addition to having been a way of avoiding missing any important information, may have also been an attempt to gain some closeness to and reassurance from the mother/teacher figure.

Now let us turn to the girls' results. How did they react to success and failure?

Girls, after failing the anagrams test, seemed to react directly and immediately to the stress of the first failure, and to their (characteristic) expectations of both rejection and also another

failure: they distanced themselves from the experimenter and thus, in some sense, "left the field." The stress-withdrawal hypothesis, described earlier in this paper, appears to have been operating for girls, to some extent. In agreement with this notion, Crandall, Katcovsky, and Preston (1960) believe that if a child has high expectations of failure but also has high attainment values, that child is likely to leave the field. Similarly, Heckhausen (1967), holds that conflict-prone expectations of failure lead to less appropriate attempts to solve the problem, specifically, various forms of withdrawal. The girls who might have been thought of as feeling the most conflict in the situation because first, being white females they may have unconsciously identified the experimenter as mother/teacher and, second, they were highly motivated to succeed (good readers), engaged in an additional form of leaving the field: they tended to have less eye contact after failure. For most girls, however, physical distancing was sufficient; there was, therefore, no significant difference in the amounts of symbolic and cognitive withdrawal behavior utilized by girls who succeeded in comparison to girls who failed. It seems, therefore, that girls' behavior after success or failure reflects the way in which they experience and handle achievement situations. Girls seem vulnerable to failure. After failure, they may respond to a new achievement situation with conflict and anxiety, evidenced perhaps by their physical withdrawal. Some tend to make less eye contact after failure, which one might speculate is related to further withdrawal and perhaps, in addition, a feeling of shame. Furthermore, girls do not feel so confident after a success that they expect to succeed again and mobilize themselves to effect

that end. Nor are girls able to mobilize their resources so that they can improve their performance after a failure and avoid a second failure; they do no better after failure than after success.

It appears, from the above, that the physical, symbolic, and cognitive distancing behaviors of girls and boys reflect their unique ways of experiencing and handling situations. Rather than being related to one another in a particular manner, the various personal space behaviors may instead reflect dimensions of various patterns of experiencing and relating to situations. Boys, for example, seem to experience situations in ways that quickly bring forth a marked achievement pattern; for white boys, after failure, the personal space dimension of that pattern involved physical closeness, symbolic and cognitive "tuning in", presumably to avoid another failure. The results for girls were unclear. They withdrew physically after failure and came closer after success, but evidenced no significant differences in their symbolic and attentional distancing. Perhaps girls and boys are utilizing entirely different patterns in relating to situations. A task-oriented achievement pattern may be at the top of boys' response hierarchies. Girls, on the other hand, may show a more undifferentiated, less tightly focused pattern, which may include some achievement dimensions and some social-emotional dimensions as well. Of course, this is a post-hoc explanation of unexpected findings, but seems to make sense in light of the research findings, presented above, in sex differences in socialization, in achievement behaviors, and, according to Messick (1972), in cognitive style as well.

Let us now examine and discuss some issues that were raised

earlier in this study. The issue of personal space differences between blacks and whites was explored. Results for black children were generally not significantly different from those of white children. However, on the physical distancing measure, black boys who were good readers behaved in the same manner as all the girls did, i.e., they sat significantly closer to the experimenter after success than they did after failure. This behavior was opposite to what the white boys did, and raises the interesting question of whether the "cultural minority" status of blacks and women is responsible for this similarity.

This study also explored the differences in personal space with reading ability controlled. It was found that the entire group of subjects, and the good readers when studied separately, behaved similarly. However, the poor readers, when studied separately, showed practically no significant results. A possible explanation for this puzzling finding is that there are many etiological variables which are involved in poor reading, such as low intelligence, subtle emotional, neurological, and learning disorders. These "extraneous" or "noise" variables may have also been at work during the experiment; their contribution may have been so great that they overshadowed the patterns that were observed in the other groups. The fact that a pattern was evidenced when the entire group of good and poor readers was studied together, supports this explanation.

Among other issues that were raised earlier in this paper was the stress withdrawal hypothesis. The stress withdrawal concept was considered to be of considerable importance in this paper. The

stress withdrawal hypothesis received partial support. Stress appears to lead to withdrawal sometimes. Behavior which, for self-protection, increases the real or experienced distance between people is one means of handling stress. The study showed that people may also utilize another method of handling stress -- active, aggressive attempts to cope with that stress, wherein the real or experienced distance is reduced rather than increased.

A major purpose of this study was to expand the conceptualization of personal space to include symbolic and cognitive as well as physical distancing behaviors. This was done by showing that physical, symbolic, and cognitive distancing behaviors are related, and appear to be functionally similar, at least among boys, in situations that call forth boys' achievement-oriented pattern of responses. This investigator believes that it is important, in doing research in personal space, to be aware that physical distancing is only one aspect of proxemic behavior, to be studied as only one among several indicators. In addition, one should also be aware that physical, symbolic, and cognitive distancing behaviors will not always be seen together. As Horowitz (1968) notes, what may appear as physical distancing behavior at one time may be evidenced as cognitive or perceptual withdrawal at another time. As has been suggested above, the situations that one enters call forth various patterns of responses. This investigator believes that these patterns play a role in determining which aspects of the personal space dimension will be manifested.

APPENDIX A

Script and Procedure

SCRIPT AND PROCEDURE

"Hi! My name is Ms. Wolf, and I'm doing a project. You are one of the children who is going to be helping me with my project. I'm interested in learning more about children -- what they are interested in, what they think and feel, what kinds of things stick in their minds. This is (introduced child and video-person). She is going to be helping me with my project by doing some video-taping. You can sit over here." (The child was led to a desk and chair in the back of the room, facing the back wall. On the desk was a yellow pad and several pencils.) E then said...)

"The first thing I'm interested in today is how good kids your age are at doing mixed-up words. Suppose I showed you these letters" (showed practice word), "and asked you to mix them up and make a word. What word would you get?" (Waited for child to do and then said...) "Good. Now suppose I showed you these letters. What would you get?" (Waited for child to do it.) "Very good. And these? Fine. Now I have some that I would like you to do on your own. So write your name at the top of the page, and number 1-5. You will have five minutes to do these words. Tell me when you are done. If you have trouble with any of them, skip it and go on to the next one. You can go back to it later. Ready? Go!" (E conspicuously pressed button of stop watch.)

SUCCESS CONDITION: (Child had been given easier words.) "Congratulations! You got every one right!" (or, if appropriate...) "Congratulations! You got four right out of five! That's terrific!

You did very well!"

(E then left S, and sat down. E's chair was directly in line with the child's chair, about two feet away. The chairs were back to back. Once seated, E told S...)

"But now we are going to do something different. So come over here and sit down." (E examined work in her lap in order to avoid looking up and thereby possibly suggesting to S which chair to choose. The child had a choice of three chairs. The "far" chair was opposite E, 39 inches away. Stickers had been placed on the floor under the chair legs, in case the chairs were moved. This never occurred, however. Alternately, on E's right or left (to minimize position effects), was the "moderate" chair, 17 inches away, and, on the other side, was the "close" chair, seven inches away from E's chair. All three chairs were identical. If the child asked where to sit, E responded, without looking up, "Wherever you are comfortable." After the child was seated, E looked up, and said...)

"This is not a test. What it is, is a story. I want to find out what kids your age think about this story, how they feel about it, what kinds of things about it stick in their minds, and if it's suitable for kids your age. So I'm going to read it to you. It's called..."

FAILURE CONDITION: (Child had been given hard words.) "I see you had some trouble with those words. You got one right out of five." (or) "I see you had some trouble with those words. You couldn't do them."

(E then left S, and sat down. The rest of the procedures are identical to those in the success condition.)

(While the children were listening to the story, their behaviors were being video-taped. However, in an attempt to familiarize them with being video-taped, the camera person had been pretending to video-tape them throughout the experiment. The story was approximately five minutes long. To maintain consistent eye contact with each child, E looked at the child at pre-arranged intervals in the story, that is, when she reached a word that had been previously underlined. After reading the story, E said...)

"As I said before" (said child's name), "I want to know what kids your age think about this story, what kinds of things about it stick in their minds, and if it's a good story for people of your age. So I'm going to ask you some questions about it." (Did so and wrote down child's responses. Then E said...)

"Remember those mixed-up words we did before, Well, see these faces? I want you to put an X under the face that best shows how you felt right after we did those mixed-up words. Then I'd like you to take this paper with the faces, and put it in that envelope on the desk over there. O.K.? " (E showed the child the validity of manipulation sheet, on which there were four faces. The first face was grinning broadly. Underneath it was the word "HAPPY". The next face was smiling a little. The words beneath it said, "A LITTLE HAPPY." The third face was frowing a little. Underneath it were the words, "A LITTLE SAD." The last face was frowning. Below it was the word, "SAD." After this was done, E asked S...)

"Why do you think you were able to do (you had trouble with) those mixed up words? Was it because the words were easy (hard), or because you tried hard (didn't try hard enough) or because you were lucky (unlucky) or because you're good at (not so good at) doing mixed-up words? Which reason do you think it was?" (E showed child the list of the four reasons. S placed an X alongside the correct reason. When this was completed, E asked the child if s/he was an only child, or was the oldest or youngest child in the family. E also asked if the child shared a bedroom with anyone, or had her/his own room. Finally, the child was asked if her/his home felt crowded. E recorded the child's responses. E then told the child...)

SUCCESS CONDITION: "Now we're all finished with the project. And I'd like to thank you for helping me with it. And I'd also like to ask you not to say anything about it to the other kids, because I will be seeing them, and I need to tell them myself what it's about. Can we keep it a secret? Good."

FAILURE CONDITION: "You know (named child), those words we did are just too hard for children your age. I've given the words to a lot of kids, and no one can do them. So the words are too difficult. But I did find some other words, that I think are much better for kids your age, and I'd like to give you those. OK?" (E gave child same exact instructions, five minute time limit, and the SUCCESS words. When child successfully completed words, s/he was congratulated, thanked for participating in the study, and secrecy was requested.

APPENDIX B

Dependent Measures

PRACTICE WORDS FOR ANAGRAMS TEST

The following two words were used as practice words, to show the children how to do anagrams. Two additional practice words (pp. 83-84) were given to all the children who were reading below their grade level.

ATC

UNR

LCKYU

TRCKI

"SUCCESS" ANAGRAMS

The following five pages of anagrams (pp. 86-90) were used as the "success" anagrams with all children who were reading on or above grade level. With the exception of the fifth anagram (THEER) which was added by this experimenter, these anagrams were used in an experiment by McMahon (1972). The next five pages of anagrams (pp. 91-95) were used as the "success" anagrams with older children, aged 10 and 11, who were reading one and two levels below their grade level, and with younger children who were reading one level below grade. These anagrams were developed by the author in consultation with the school's remedial reading specialist. A third group of anagrams (pp. 96-100) was used as the "success" anagrams with older children, aged 10 and 11, who were reading three or more levels below grade, and with younger children who were reading two or more levels below grade. These anagrams were also developed by the author in consultation with the school's remedial reading specialist.

CHIAR

MSUIC

CHBEA

FRTUI

THEER

CHIAR

MSUIC

TRCKU

THEES

THEER

STCKI

TRCKI

TRCKU

GRENE

BRCKI

"FAILURE" ANAGRAMS

The following five pages of anagrams (pages 102-106) were used as the "failure" anagrams with all children who were reading on or above grade level. These anagrams were used as "failure" anagrams in an experiment by McMahon (1972), with the exception of the fourth anagram (CHIAR) which he used as a "success" anagram. This easy anagram was given to the children along with the hard ones so that they might think that the task was possible to do, and not give up in disgust. The next five pages of anagrams (pp. 107-111) were used as "failure" anagrams with all the children who were reading below their grade level. These anagrams were also used in McMahon's experiment.

JUDEG

SPEUA

OCBNA

CHIAR

GSRUA

JUDEG

MSUIC

CHBEA

FRTUI

THEER

Story

THE CROOKED LITTLE PATH*

The crooked little path begins at the edge of the woods and winds among the trees far into the Green Forest to the Great Mountain...

Stout oak trees drop acorns in it, and the sweet three-sided little beechnuts hide under its carpet of fallen leaves. Madam Orb the Spider spreads her wondrous net of shining silk across it to be filled with sun-jeweled drops of dew in the early morning and later catch a heedless fly. The Black Shadows coming out from the Purple Hills veil it in soft dusk in the early evening. Later moonbeams coming down between the treetops search for it and find it in places to lose it again as clouds bring drifting interference...

It could tell if it would of funny things and wonderful things and beautiful things and dreadful things that it has known. It has seen many come and many go, some never to return. It welcomes the stranger and it speeds him on his way. So the Crooked Little Path shows the way to all who live in or visit the Green Forest and is beloved by them.

Perhaps that is why Buster Bear, roaming restlessly on the Great Mountain, remembered the Crooked Little Path and wondered if it might lead him to a place he must find soon wherein to sleep through the winter. He started down for that part of the Green Forest through which the Crooked Little Path shows the way. He had found no place in the Great Mountain to suit him.

---

*Underlined words indicate that E should make eye contact with S.

Buster has no real home unless you call his winter den where he sleeps through the cold weather his home. In the summer and fall he roams about looking for food and he knows all the best places for long distances round about. None knows better than he where the berries are biggest and sweetest and most plentiful. None knows better than he where acorns and beechnuts will be most abundant when Jack Frost and the Merry Little Breezes shake them loose to drop and hide under the fallen leaves. Some of these places are very far apart but Buster doesn't mind. He is a great traveler, is Buster Bear. That is why he has no real home.

Sometimes he spends the winter in a neighborhood where he has been all summer. Other times he migrates. To migrate is simply to leave a neighborhood where you have been living to go to another place, usually a long distance away. Buster doesn't go from the Far North to the sunny South like so many of the feathered folk. Of course not. But he does sometimes travel farther than you might think in search of a place in which to spend a comfortable winter.

"Having to go to sleep for the winter is a nuisance. Yes, sir, it is a nuisance. I don't like it," grumbled Buster as he made his way down the Great Mountain.

"Then why do you do it?" asked Flathorns the Moose, who happened to be near enough to overhear him."

"Because I must or starve to death," growled Buster.

"I don't go to sleep for the winter and I don't starve to death, yet I am bigger than you. If you would eat what I eat you wouldn't have to go to sleep. It is plain, simple food, but there is plenty of

it," replied Flathorns.

"I can't; that's why," growled Buster.

"I don't see why not. It is here for the taking," retorted Flathorns. "What is the trouble?"

"Call it stomach trouble, for that is what it is," growled Buster. "I guess our stomachs are different. They must be. I would starve to death on what you eat. Besides, I wouldn't like it. Probably you would starve to death on what I eat and must have. So I guess our stomachs are different" -- which was a very good guess on Buster's part.

"So you let your stomach put you to sleep for the winter," grunted Flathorns. "I eat what I like but I don't let my stomach tell me what I shall or shall not eat."

"Huh!" growled Buster Bear. "Do you eat what you don't like?"

"Of course I don't!" snorted Flathorns.

"You don't eat what you don't like and you don't like what your stomach can't use, so it is your stomach that decides what you shall or shall not eat. I guess it is the same way with everybody. I can't eat what you eat and so I have to do to bed when there is nothing more to be found that I can eat. Then I sleep until the time when there is some chance of finding things that my stomach approves," replied Buster in his grumbly, rumbly voice.

"And what is your stomach saying now?" asked Flathorns. "That I better be looking for more to put in it or else hunt a place to go to sleep, and that is what I am doing," growled Buster. He shuffled along the Crooked Little Path into the Green Forest.

Cognitive Distancing Questionnaire

COGNITIVE DISTANCING QUESTIONNAIRE*

1 - What does Buster Bear do in summer and fall?

(Roams about looking for food)

2 - Why doesn't he have a home?

(He travels a lot- travels about looking for food;

Because he has to look for food)

3 - Why does he have to go to sleep in winter?

(Can't find any food;

Will starve to death otherwise)

4 - What is Flathorns?

(Moose)

5 - What does he tell Buster to do?

(Eat what he eats)

6 - Why can't Buster eat Flathorns' food?

(Different stomachs;

He would starve to death on Flathorns' food;

It wouldn't agree with his stomach)

7 - Does Flathorns' stomach tell him what to eat? How do you know?

(Yes:

Buster said so;

Flathorns doesn't eat what he doesn't like;

Flathorns doesn't eat what he doesn't like, and doesn't like what his stomach can't use, so it is his stomach that decides what he eats.)

---

*Questions 1-9 were scored either 1 or 0.

8 - Where does the little path go?

(Woods;

Forest;

Mountains)

9 - Who is Madam Orb?

(Spider)

10 - How did you feel about this story?

Symbolic Distancing Checklist

GREAT MT ··· SWEET 1

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed, etc. ____

Manipulate, comfort, conceal Face ____

PERHAPS ··· GREAT MT.

120

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc. ____

Manipulate, comfort, conceal Face ____

SILK ··· DEW 2

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc. ____

Manipulate, comfort, conceal Face ____

PLACE ··· STARTED

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc. ____

Manipulate, comfort, conceal Face ____

FLY ··· HILLS 3

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc ____

Manipulate, comfort, conceal Face ____

HOME ··· WEATHER

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc. ____

Manipulate, comfort, conceal Face ____

CLOUDS ··· FUNNY THINGS 4

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc ____

Manipulate, comfort, conceal Face ____

DISTANCES ··· WHERE

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc. ____

Manipulate, comfort, conceal Face ____

KNOWN ··· RETURN 5

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc ____

Manipulate, comfort, conceal Face ____

BREEZES ··· LEAVES 1

Fa M:

Fa M: Head turns ____

Eyes: No E.C. ____
Scanning ____

Body M: Turns ____ Reclined ____

Arm M: Arm or arms crossed etc. ____

Manipulate, comfort, conceal Face ____

11

THAT ... NEIGHBORHOOD

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed, etc. ____

Manipulate, comfrt, conceal: Face ____

16

BUSTER ... MUST BE

121

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc. ____

Manipulate, comfrt, conceal: Face ____

12

BUSTER ... FEATHERED

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc. ____

Manipulate, comfrt, conceal Face ____

1

I EAT + MUST HAVE ... SO GUESS

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc. ____

Manipulate, comfrt, conceal Face ____

13

SPEND ... SIR

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc ____

Manipulate, comfrt, conceal Face ____

1

I SHALL ... DO YOU EAT

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc. ____

Manipulate, comfrt, conceal Face ____

14

STARVE ... DON'T STARVE

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc ____

Manipulate, comfrt, conceal Face ____ Face ____

1c

THAT DECIDES ... WHAT YOU SHALL

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc. ____

Manipulate, comfrt, conceal: Face ____

15

EAT ... PLENTY

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc ____

Manipulate, comfrt, conceal: Face ____

30

TIME ... STOMACH APPROVES

Fa M: Head turns ____

Eyes: No E.C. ____
Examining ____

Body M: Turns ____ Reclined ____

Arm M: Arm a arms crossed etc. ____

Manipulate, comfrt, conceal: Face ____

Category Definitions for Symbolic Distancing Checklist

CATEGORY DEFINITIONS FOR SYMBOLIC DISTANCING CHECKLIST

1 - Facial Movement:	Head turn away from E (definite movement). If for entire 5 second interval, score no eye contact and head turn.
2 - Eyes:	1. No eye contact for entire 5 second period. If clearly examining for 5 seconds, score no eye contact and examining. If unclear if examining or no eye contact, score no eye contact. If unclear if examining or head turn, score head turn.
	2. Examining one part of body or examining object. If clearly examining briefly, score head turn and examining.
3 - Body Movement:	1. Turn (Away from E)
	2. Recline (Away from E, even if briefly)
4 - Arm Movement:	Arm barrier (one across midline of body, or two forming protective circle between S and E); arm or arms crossed or clasped. Do not score if hands are folded in a relaxed manner on lap.

5 - Manipulate, comfort, conceal face:	Patting, rubbing, stroking, sucking, etc.; Leaning on hand or arm; also concealing part of face with hand. In general, this category refers to touching, rubbing, stroking, etc. face with another part of the body, usually the hand. Also refers to rhythmic motion as well.

APPENDIX C

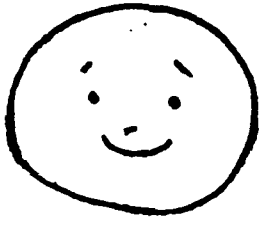
Independent Measures

Validity of Manipulation Check

PLEASE PUT AN X UNDER THE FACE THAT BEST SHOWS HOW YOU FELT RIGHT AFTER YOU DID THE MIXED-UP WORDS:

HAPPY

_____



A LITTLE HAPPY

_____

A LITTLE SAD

_____

SAD

_____

Attribution Questions

WHY DO YOU THINK YOU WERE ABLE TO DO THE MIXED-UP WORDS?

IS IT

1. BECAUSE YOU WERE LUCKY? _____
2. BECAUSE YOU ARE GOOD AT DOING MIXED-UP WORDS? ____
3. BECAUSE YOU TRIED HARD? ____
4. BECAUSE THE WORDS WERE EASY? ____

PLEASE PUT AN X AFTER THE REASON YOU THINK YOU DID WELL.

WHY DO YOU THINK YOU HAD TROUBLE WITH THE MIXED-UP WORDS? IS IT

1. BECAUSE YOU WERE UNLUCKY? ____
2. BECAUSE YOU ARE NOT SO GOOD AT DOING MIXED-UP WORDS? ____
3. BECAUSE YOU DIDN"T TRY HARD ENOUGH? ____
4. BECAUSE THE WORDS WERE HARD? ____

PLEASE PUT AN X AFTER THE REASON YOU THINK YOU HAD TROUBLE.

Socioeconomic Status Information

The following pages list children's names, their parents' occupations and/or education. I would very much appreciate your help in determining the social status of these children. Please read each child's name, her/his parents' occupation and/or educational background, and then quickly and without pondering over it, write the letters LC (lower class) or MC (middle class) or UMC (upper middle class) in the space next to the child's name. The socio-economic status information provided is, unfortunately, incomplete; do the best you can and don't worry about whether it is "right" or "wrong".

Thank you very much for your help. Please return the completed form to may mail box.

Carolyn L. Wall

Black Children

Lee - Fa 10th grade, machine operator. Mo 11th gr., nurses' aide. _____
Hamp - Mo domestic _____
Derrick - Mo H.S. Grad, dispatching clerk _____
Dietrick - Mo. elementary schl. _____
Marc - Mo program coordinator _____
Vincent - Fa. H.S. Grad, upholstery. Mo H.S. Grad. _____
Fred - Fa cab driver. Mo assistant xray technician _____
Brian - Fa H.S. Grad, unemployed. Mo some college _____
Richie - Mo 8th grade _____
Torrance - Fa H.S. grad. Mo H.S. grad _____
Andrea - Fa 12th grade _____
Valerie - Fa 10th grade, truck driver. Mo 8th grade, housewife _____
Jennifer - Fa H.S. grad, taxi driver. Mo 12th grade _____
Jacqueline - Fa 10th grade, landscaping. Mo H.S. grad _____
Monique - Fa 7th grade, own business. Mo 11th grade _____
Tammy - Fa 8th grade, truck driver. Mo 6th grade _____
Yolanda - Mo H.S. grad, key punch operator _____
Mershan - Fa owns bar, Mo nurses' aide ____
Cynthia - Fa truck driver. Mo factory work _____
Jackie - Fa works for Greyhoud. Mo - hospital work _____
Sherwin - Fa H.S. grad, supervisor electronics, Mo H.S. grad, factory work _____
Monica - Fa truck driver. Mo M.S.W. Social Worker _____
Tia - Fa H.S. Grad, Operating Room technician. Mo H.S. Grad, R.N. _____
Robert - Fa H.S. Grad, Motorman T.A. Mo H.S. Grad, Clerk T.A. _____
Sharon - Fa B.S. + grad. Schl., Supervisor Dept. Soc. Svss. Mo H.S. Grad _____
Kim - Fa B.S. Meter reader supervisor. Mo 2 years college, medical techn. _____
Elizabeth - Fa. Assistant Principal. Mo B,A,, grad schl., teacher _____
Kevin - Fa 5 years college, senior accountant. Mo one year coll. _____
Sharon - Fa 10th grade, assembly line. Mo 11th grade _____
Jill - Fa B.S., Industrial Design. Mo H.S. grad, Prac. Nurse _____
Tracy - Mo H.S., secretary _____
Lisa - Mo H.S. grad, camera operator _____
Douglas - Mo H.S. grad, nurse _____
Chris - Fa H.S. grad, janitor _____
Hope - Fa 2 years college, systems analyst. Mo 3 years college _____
Rachel - Fa H.S. grad, assembler. Mo H.S. grad _____
Steven - Mo 10th grade _____
Shain - Fa 2 years college, photographer. Mo 3 years coll., teachers aide _____
Mathews - Fa office manager. Mo R.N. _____

White Children

Robert - Fa H.S. Grad, Butcher. Mo H.S. Grad _____
Robert T - Fa H.S. grad, owns repair shop. Mo H.S. Business Schl. _____
Kenneth - Fa Ph.D. +, Professor. Mo B.S.
Gary - Fa 2 years college, mechanic. Mo H.S. Grad. _____
Greg - Fa. B.A., actor. Mo H.S. Grad _____
Bernadette - Fa 8th grade, construction worker. Mo housewife _____
Lori - Fa 2 years college, electrician. Mo H.S. Grad. _____
Maren - Fa. B.A., N.Y. Times newspaperman. Mo H.S. Grad. _____
Martia - Fa. Masters Electrical Engineering (research) Mo R.N. _____
Michele - Fa H.S. grad, Fireman. Mo H.S. Grad. _____
Darin - Fa. H.S. Grad, table cloth manufacturer. Mo H.S. grad. _____
Richard - Fa. Masters Degree, minister. Mo R.N. _____
Rosemary - Fa. H.S. Grad, Stone Mason. Mo H.S. grad, works in deli. _____
Debbie - Fa Ph.D., Professor Electrical Engineering, Mo Masters _____
Andrew - Fa Ph.D., program officer. Mo 2 years coll., volunteer _____
Courtney - Fa Masters Fine Arts, advertising manager. Mo B.A. _____
Carol - Fa B.A., Buyer for Macy's. Mo 2 years coll. _____
Jennifer - Fa d.k. Mo 2 years coll., secretary _____
Roxanne - Fa H.S. Grad, painter. Mo H.S. grad, school aide _____
Ernest - Fa B.A. - director of credit (hotels) Mo Masters, teacher _____
Charles - Fa 2 years coll. plumber. Mo one year coll. _____
Peter - Fa H.S. Grad, accountant. Mo H.S. grad _____
Stanley - Fa some college, salesman. Mo secretary _____
Jason - Fa Ph.D., acting college president. Mo B.A. _____
Elise - Fa Ph.D., college prof. Mo Masters, teacher _____
Anna - Fa some college, gymnastics teacher. Mo saleswoman _____
Victoria - Fa truck driver, M babysitter _____
Jack - Fa B.A., systems analyst. Mo 3 years college _____
Eric - Fa L.L.B., lawyer
Elvia - Fa H.S. Grad, assembler. Mo H.S. grad, operator _____
Celeste - Fa Masters, teacher. Mo H.S. grad, optician _____
Peter - Fa Ph.D. Program Officer. Mo 2 years coll, schl aide _____
Adam - Fa Ph.D., Professor. Mo H.S. grad. _____
Kim - Fa. H.S. Grad, clerk Mo 11th grade _____
Peter - Fa Ph.D., psychologist. Mo psychologist _____
Sandra - Fa 3 years college, bartender Mo business school _____
Adam - Fa. Ph.D. psychologist. Mo Masters Degree _____
Keith - Fa. B.S., insurance supervisor. Mo H.S. Grad. _____
Julie - Fa. one year college, mechanic. Mo H.S. Grad., Babysitter _____

APPENDIX D

Analyses of Variance and Covariance Tables

Table I

Analysis of Variance: Physical Distancing

Variable Name	MS	df	F	p
Success/Failure (A)	0.04453812	1	0.10	0.757
Sex (B)	0.50622019	1	1.10	0.299
Race (C)	0.47953599	1	1.04	0.312
Reading (D)	0.17500100	1	0.38	0.540
A x B	2.96811423	1	6.45*	0.014
A x C	0.54451295	1	1.18	0.282
A x D	0.14647744	1	0.32	0.575
B x C	0.11154475	1	0.24	0.624
B x D	0.06173898	1	0.13	0.715
A x B x C	1.95565282	1	4.25*	0.044
A x B x D	0.01690361	1	0.04	0.848
B x C x D	0.56128497	1	1.22	0.274
A x B x C x D	1.33608871	1	2.90	0.094
			SS	
Error	0.46006944	48	22.08333333	

*$p \leq .05$

Table II

Analysis of Covariance: Symbolic Distancing

Variable Name	MS	df	SS	F	p
Age (covariate)	762.4197115	1		5.75*	.023
Success/Failure	537.28807272	1		4.05*	.054
Sex (B)	56.65591768	1		.43	.519
Race (C)	23.53010774	1		.18	.677
Reading (D)	100.71173056	1		.76	.391
A x B	782.21221869	1		5.90*	.022
A x C	59.55449021	1		.45	.508
A x D	328.43546500	1		2.48	.127
B x C	448.31423465	1		3.38	.077
B x D	479.45610694	1		3.62	.068
A x B x C	268.64117254	1		2.03	.166
A x B x D	1017.89534945	1		7.68*	.010
B x C x D	.00125892	1		.00	.997
A x B x C x D	55.26753138	1		.42	.524
Error	132.54867366	26	3446.26551504		

*$p \leq .05$

Table III

Analysis of Covariance: "Pure Withdrawal"

Variable Name	MS	df	F	p
Age (covariate)	563.12839228	1	5.62*	.025
Success/Failure (A)	282.96772812	1	2.93	.109
Sex (B)	82.70040604	1	.83	.371
Race (C)	29.83064889	1	.30	.589
Reading (D)	100.95033211	1	1.01	.324
A x B	294.62540812	1	2.94	.098
A x C	98.70861312	1	.99	.330
A x D	207.59090694	1	2.07	.161
B x C	256.44190991	1	2.56	.121
B x D	243.81026172	1	2.43	.130
A x B x C	30.40355676	1	.30	.586
A x B x D	646.20022723	1	6.45*	.017
B x C x D	34.24201821	1	.34	.563
A x B x C x D	85.75046673	1	.86	.363
			SS	
Error	100.15438752	26	2604.01407550	

*$p \leq .05$

Table IV

Analysis of Covariance: Eye Contact

Variable Name	MS	df	F	p
Age (covariate)	15.06699150	1	.65	.427
Success/Failure (A)	40.42201013	1	1.74	.198
Sex (B)	2.45537563	1	0.11	0.747
Race (C)	0.37327198	1	0.02	0.900
Reading (D)	0.00014104	1	0.00	0.998
A x B	116.71348032	1	5.04*	0.033
A x C	4.91981350	1	0.21	0.648
A x D	13.79953980	1	0.60	0.447
B x C	26.62176680	1	1.15	0.293
B x D	39.46429520	1	1.70	0.203
A x B x C	118.29465724	1	5.10*	0.032
A x B x D	42.04230245	1	1.81	0.189
B x C x D	33.82802745	1	1.46	0.237
A x B x C x D	3.33406135	1	0.14	0.707
			SS	
Error	23.17242482	26	602.48304543	

*$p \leq .05$

Table V

Analysis of Covariance: Cognitive Distancing Questionnaire

Variable Name	MS	df	F	p
Age (covariate)	5.28074322	1	1.25	0.268
Success/Failure (A)	33.44618160	1	7.94*	0.007
Sex (B)	0.17515324	1	0.04	0.839
Race (C)	56.70108094	1	13.74*	0.0006
Reading (D)	17.57383580	1	4.17*	0.046
A x B	7.35666476	1	1.75	0.192
A x C	1.62834815	1	0.39	0.537
A x D	1.76392601	1	0.42	0.520
B x C	0.00191257	1	0.00	0.983
B x D	4.79414374	1	1.14	0.291
A x B x C	0.00598175	1	0.00	0.970
A x B x D	1.14102983	1	0.27	0.605
B x C x D	56.90461099	1	13.52*	0.0006
A x B x C x D	4.05388381	1	0.96	0.331
			SS	
Error	4.20987908	46	193.65443767	

*$p \leq .05$

Table VI

Analysis of Variance for Physical Distancing: Good Readers

Variable Names	MS	df	F	p
Success/Failure (A)	0.10537634	1	0.29	0.596
Sex (B)	0.48333333	1	1.32	0.263
Race (C)	0.59523810	1	1.63	0.214
A x B	2.07142857	1	5.66*	0.0260
A x C	1.85256410	1	5.06*	0.0343
B x C	0.11076923	1	0.30	0.587
A x B x C	3.20333333	1	8.75*	0.007
		SS		
Error	0.36594203	23	8.4166667	

*$p \leq .05$

Table VII

Analysis of Covariance for Cognitive Distancing Questionnaire:

Poor Readers

Variable Name	MS	df	F	p
Age (Covariate)	12.72338862	1	3.04	0.094
Success/Failure (A)	5.73793305	1	1.37	0.253
Sex (B)	5.62903609	1	1.35	0.257
Race (C)	30.78259179	1	7.36*	0.012
A x B	5.49016658	1	1.31	0.263
A x C	10.67653645	1	2.55	0.123
B x C	22.94313223	1	5.48*	0.027
A x B x C	1.79338763	1	0.43	0.518
Error	4.18356870	24	100.40564872	

*$p \leq .05$

Table VIII

Analysis of Covariance for Cognitive Distancing Questionnaire:

Boys Only

Variable Name	MS	df	F	p
Age (Covariate)	1.43955686	1	0.32	0.575
Success/Failure (A)	35.96021893	1	8.08*	0.009
Race (B)	29.21477483	1	6.57*	0.017
Reading (C)	1.71200008	1	0.38	0.541
A x B	0.62849252	1	0.14	0.710
A x C	0.00443140	1	0.00	0.975
B x C	25.64651474	1	5.76*	0.025
A x B x C	8.93295422	1	2.01	0.170
			SS	
Error	4.44910960	22	97.88041126	

*$p \leq .05$

Table IX

Analysis of Covariance for Cognitive Distancing Questionnaire:

Girls Only

Variable Name	MS	df	F	p
Age (Covariate)	3.78592259	1	0.91	0.348
Success/Failure (A)	5.15786936	1	1.25	0.275
Race (B)	27.29610885	1	6.60*	0.017
Reading (C)	20.47997256	1	4.95*	0.036
A x B	0.78889487	1	0.19	0.666
A x C	3.26682166	1	0.79	0.383
B x C	37.43964786	1	9.05*	0.006
A x B x C	0.48543004	1	0.12	0.735
			SS	
Error	4.13801444	23	95.17433222	

*$p \leq .05$

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