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DIFFERENCES IN FRUSTRATION REACTIONS OF A
GROUP OF PRESCHOOL CHILDREN

by
Lorraine Storey

A thesis submitted in partial fulfillment
of the requirements for the degree

of
MASTER OF SCIENCE

in
Child Development

UTAH STATE AGRICULTURAL COLLEGE
Logan, Utah

1956

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TABLE OF CONTENTS

	Page
Introduction	1
Problem	1
Review of literature	4
General discussion	4
Related studies	8
Related methods	11
Hypotheses	14
Method of procedure	17
Procedure	17
Equipment	22
Subjects	23
Location	25
Recorder	25
Method of evaluating responses	25
Findings and discussion	30
Findings	30
Discussion	42
Suggestions for further studies	48
Summary and conclusions	50
Literature cited	53
Appendix	55

LIST OF TABLES

Table	Page
1. Number of children receiving each reaction classification	30
2. Distribution of aggressive and non-aggressive responses compared with different frustration situations	32
3. Distribution of numbers of direct aggressive and indirect aggressive behavior compared to the different frustration situations	32
4. Number of responses occurring in each classification of reactions comparing older and younger groups of children for unit 1 (toy-stick)	34
5. Number of responses occurring in each classification of reactions comparing older and younger groups of children for unit 2 (doll-train)	34
6. Number of responses occurring in each classification of reactions comparing younger and older groups of children for unit 3 (puzzle completion)	35
7. Distribution of aggressive and non-aggressive behavior compared with younger and older groups of children for unit 1 (toy-stick)	35
8. Distribution of aggression and non-aggression behavior compared with younger and older groups of children for unit 2 (doll-train)	35
9. Distribution of aggressive and non-aggressive behavior compared with younger and older groups of children for unit 3 (puzzle completion)	36
10. Number of responses occurring in each classification of reactions comparing boys and girls for unit 1 (toy-stick)	36
11. Number of responses occurring in each classification of reactions comparing boys and girls for unit 2 (doll-train)	37
12. Number of responses occurring in each classification of reactions comparing boys and girls for unit 3 (puzzle completion)	37

LIST OF TABLES (cont.)

Table	Page
13. Distribution of number of aggressive and non-aggressive reactions compared with boys and girls in unit 1 ((toy-stick)	37
14. Distribution of number of aggressive and non-aggressive reactions compared with boys and girls in unit 2 ((doll-train)	38
15. Distribution of number of aggressive and non-aggressive reactions compared with boys and girls in unit 3 (puzzle completion)	38
16. Number of responses in unit 1 (toy-stick) occurring in each classification comparing groups of children with differing amounts of previous experience with the investigator	39
17. Number of responses in unit 2 (doll-train) occurring in each classification comparing groups of children with differing amounts of previous experience with the investigator	40
18. Number of responses in unit 3 (puzzle completion) occurring in each classification comparing groups of children with differing amounts of previous experience with the investigator	40
19. Distribution of number of aggressive and non-aggressive reactions in unit 1 (toy-stick) comparing 2 groups of children with differing amounts of previous experience with the investigator	41
20. Distribution of number of aggressive and non-aggressive reactions in unit 2 (doll-train) comparing 2 groups of children with differing amounts of previous experience with the investigator	41
21. Distribution of number of aggressive and non-aggressive reactions in unit 3 (puzzle completion) comparing 2 groups of children with differing amounts of previous experience with the investigator	41

INTRODUCTION

Problem

In recent years, the concept of frustration has been central in both mental hygiene and social psychology. This is rightfully so. Frustration has been defined as any kind of thwarting or blocking of the motive (4, 7, 14). Any person involved in modern day living is confronted with many types of situations which do actually block or thwart his wishes or drives. A person may be blocked because of conditions existing in the environment, because of personal inadequacies, and because of conflicting drives. Since a person is forced to face so many sources of frustration, the method that he chooses to use in an attempt to adjust has become paramount in importance.

Social scientists have recognized the importance of the problem of frustration adjustment by developing several theories, by performing a number of experiments, and by using the concept of frustration to account for the deviant behavior of persons and social groups. In spite of this extensive interest, many issues relating to the problem of adjusting to frustration remain unresolved.

One important aspect of the problem of adjustment to frustration that remains unresolved is the fact that different individuals choose different modes of behavior in an attempt to adjust. In other words, the same situation may evoke entirely different reactions by 2 separate individuals. One individual may choose a healthy type of behavior reaction while another person may choose a reaction which is unhealthy in that it complicates, rather than solves the problem. The important question,

then, is why do individuals choose different types of reaction to frustration?

A review of the literature indicates that a few investigations have attempted to study the relationship of specific variables to different types of frustration reactions. However, the literature is scarce and the findings of the few investigations are inconclusive. The review of literature indicates a need for further study of this specific problem.

As 1 step toward assisting in clarification of the relation of specific variables to frustration reactions, the investigator presents an exploratory study which deals with the frustration reactions of nursery school children. The justification for studying frustration and its effects in preschool children rests with the assumption that during the preschool period, characteristic patterns of acting and feeling are established. This basic assumption is acknowledged by the clinical study of adult personality disorders and psychosomatic illnesses as they inevitably point back to childhood experiences. Any method which may contribute to added knowledge of children's growth and development during the preschool period merits consideration.

The specific purposes of this study are: (1) To test this particular form of the play-technique as a valid means for studying children's behavior. The present investigation, which is in reality a "test run" for this specific form of the play-technique, should suggest revisions and improvements for the technique for use in further studies. (2) To show the different reactions to frustration which occur most frequently in a preschool group. Aggressive, withdrawal, and substitute reaction will be considered. (3) To compare the types of reactions with variables which might affect the type of reaction used by the children. The variables

considered were the specific frustration situation, age, sex, and previous experience with the authority (investigator). In selecting these variables, the investigator is not assuming that these variables are the only variables which influence reactions to frustrations. The investigator realizes that past experiences, relationships in the home, authority patterns in the home, and probably variables not realized may have a profound influence on the child's reactions to frustration. The 4 variables mentioned were chosen because the review of literature indicates a lack of research concerning these variables and lack of agreement of conclusions even in the few studies which have been presented. Another basic reason was that the preschool laboratory situation and the information available to the investigator were best suited to a study of these specific variables.

The investigator recognizes several limitations in consideration of this study: (1) The dynamic theories and studies presented by the Yale Group (5, 6) and by Lewis and his associates (1, 2) are recognized; however, there will be no attempt to defend or substantiate any 1 of the specific theories. In other words, there will not be an attempt to defend aggression as the only means of reaction to frustration, nor will there be any attempt to defend regression as being linked with frustration. In the present study, the investigator is looking for differences in reactions and will consider all reactions classified under the general categories of withdrawal behavior, aggressive behavior, and substitute behavior.

(2) As has been previously stated, the present study will be a "test run" for this particular form of the play-technique. The investigator will be looking for ways and means to improve the method, as well as looking for results. (3) The small number of subjects did not warrant positive conclusions which could be interpreted for the general population. However,

it is hoped that implication may be indicated by the study which could be utilized for further study. (4) Lack of time and facilities did not enable a complete use of supplementary information. However, again it is hoped that implications may be drawn from the present investigation which may be utilized at a later time with accompanying supplementary information.

The investigation was conducted at the Utah State Agricultural College Preschool Laboratory, winter quarter of 1955. The 27 children enrolled in the laboratory served as subjects for the investigation.

Review of literature

As has been previously stated, the problem of adjusting to frustration has claimed the attention of social scientists. The construction of theories and experiments has resulted from the interest shown in the problem by investigators. Then, in turn, the conclusions and findings of the research have been organized into general discussions to aid in a more complete understanding of frustration and its effects.

General discussion. A general discussion of frustration was presented in the general psychology texts written by Ruch (14) and Hilgard (7). Ruch (14, p. 151) defined frustration when he stated, "The denial or thwarting of a motive by some obstacle which lies between a need and its goal is called frustration." Hilgard (7, p. 45) distinguished between frustration as an event and as a state. "As an event, whatever blocks or interferes with goal-directed activity. As a state, the annoyance, confusion, or anger engendered by being thwarted, disappointed, and defeated."

Both authors suggested that the sources of frustration could be placed into 3 major classifications. Ruch referred to the 3 major sources as environmental, personal, and conflict. Hilgard referred to the 3 major sources as being obstacles, deficiencies, and conflicts. It is evident

that both authors used a similar type of classification but used different words to express their ideas.

The environmental or obstacle source of frustration would exist whenever any physical or social obstacles blocked the satisfaction of some need. This source of frustration may be illustrated with an example of a common situation involving a nursery school child. The nursery school is enclosed with a tall, wire fence. Many times a child tries to ride his tricycle outside through the gate of the playground. Perhaps "the grass looks greener on the other side of the fence" or perhaps he does not like the feeling of being restricted. However, the gate is built to discourage any child from opening it, and people who use the gate are instructed to always close it. The child is thus blocked. The fence is an obstacle which blocks the child and his need or drive to leave the playground.

Unit 1 of the present investigation might also serve as an illustration of environmental frustration. The child was allowed to play with toys for a short time. Then the investigator put the toys away, even though the child still wanted to play with them. The child was thwarted because the toys were unavailable. His environment was changed from an interesting one to an uninteresting one devoid of all playthings except an uninteresting stick. The source of frustration in this case, then, was the environment.

Ruch suggested that the second source of frustration was personal. Hilgard suggested that the same type of frustration was caused by deficiencies. Again, using the nursery school child as an illustration, a common situation occurs when a child wishes to show his independence by undressing himself. Many times, however, his fine motor control is inadequate to enable him to accomplish the task. A discussion could be

conducted, at this point, pointing out the tendency of mothers to encourage this type of frustration with small buttons, boots that are too small, and difficult zippers. However, since the purpose of this illustration was only to clarify the concept of personal frustration, perhaps it would be wise to forego any such discussion.

Unit 3 of the present investigation utilized the same principle. The child was given a puzzle and told to finish it. However, 2 pieces of the puzzle would not fit and the child was destined to failure. Since most of the children did not wholly grasp the situation, they were frustrated because they thought they were personally inadequate to finish the puzzle.

When an individual has 2 strong, opposing drives and must choose 1 to satisfy, at the expense of the other, he is faced with the conflict type of frustration. This source of frustration may also be illustrated with the nursery school situation. Many times a child has a drive to strike another child. However, he is aware that that type of behavior is not approved by the teacher. He has conflicting drives--1 to be aggressive and the other is to please the teacher. He cannot do both, and must choose to do 1 at the expense of the other.

Unit 2 of the present investigation may serve as an illustration of conflict frustration. The child was given a train and told to push his train from 1 end of the track to the other. The experimenter then blocked the child's train with her doll. The conflicting drives of the child were to reach the other end of the track or perhaps, more basically, to illustrate his independence or self-assertion as opposed to submitting to the authority. The child has been taught in his culture to do both. The conflicting drives were the source of the frustration.

The general discussions by Ruch and Hilgard grouped the frustration reactions into 3 major categories. Those were aggression, withdrawal, and compromise or substitute behavior. Aggressive behavior involves attack. Withdrawal behavior occurs whenever the goals are forsaken and some type of flight is used. Compromise or substitute behavior occurs when the individual facing the obstacle compromises and gives in, to an extent, but does not entirely relinquish his goals.

Specific theories have been presented which attempt to explain reactions to frustration. One of the best known is the frustration-aggression theory. In terms of the frustration-aggression hypothesis postulated by the Yale Group (5, 6), there is a direct relationship between frustration and patterns of aggression. It was the basic claim in the publications of this group that frustration always leads to aggression. In view of protest voiced by other investigators and in view of later studies, the group revised their basic claim and aggression now occupies only 1 of the positions in the list of possible reactions to frustration.

Another of the well-known dynamic theories is the 1 presented by Lewis and his associates (1). It was the claim of this group that frustration was linked with regression. They conducted an investigation designed to measure the change in the constructiveness of play of some 30 children following a frustration situation (2, p. 31).

The qualitative analysis indicated that the lowering of constructiveness of play is similar in nature to the change in behavior occurring under conditions of high emotionality where restless movements, stereotyped repetitions of sentences, and stuttering are frequent.

The importance of the literature presented which is concerned only with specific theories is that it helps form a more complete picture of the problem of frustration. In other words, its importance, as related

to the present investigation, is that it serves as background information for the whole problem of frustration. The purposes of the present study have not been to attempt to substantiate any of the specific theories.

Rosenzweig (13) developed a picture-association method for appraising a person's reactions to frustration and then discussed reactions to frustration from the viewpoint of what he called "frustration tolerance." Frustration tolerance refers to a person's ability to put up with frustration without resorting to inadequate methods of reactions. In essence, this is the problem as related to frustration. The problem is not that frustration exists, but instead, whether the individual is able to utilize an adequate method or a healthy mode of behavior to adjust to the frustration, or whether the individual chooses an inadequate or unhealthy mode of behavior in an attempt to adjust. The value of Rosenzweig's literature, as related to this investigation, is to be found in his suggestion that different individuals have different levels of tolerance. In other words, different individuals react differently to frustration.

Related studies. The review of literature indicates that there have been a few investigations which have attempted to study some of the specific variables which may be related to the different frustration reactions. Therefore, a review of that literature could orient and classify the existing problem and objectives for this particular investigation.

Research closely related to the variables considered in the hypotheses of the present study may be found in the investigation by Muste and Sharpe (12). The purpose of their investigation, utilizing a group of preschool children, was to analyze aggressive behavior and techniques used to respond to aggression in relation to age and sex differences. They concluded, in relation to sex, that boys tend to make more overt aggressive responses

than girls (12, p. 27).

It may be that these young boys and girls have already been influenced by different standards of expectations and that the distinction in their behavior is a reflection of the cultural pattern, or the difference in the frequencies of aggression may be an early reflection of an innate difference between the sexes.

It was concluded in this same study, in relation to age, younger children depend more upon physical means of aggression.

In an investigation of young children by Jersild and Markey (8), it was found that boys consistently showed a higher number of aggressions than girls. They found an irregular decline in frequency of conflicts with increase in age during the preschool period.

In a pilot study done by Sears (15), using a group of 40 preschool children at the Preschool Laboratory of Iowa Child Welfare Research Station, it was concluded that boys were slightly more aggressive than girls.

Recently McKee and Leader (11), at the University of California, conducted an investigation with preschool children designed to study differences in relation to socio-economic conditions. However, included in the findings of the investigation were findings which were closely related to the subject of the present study. When they compared sex differences with aggression, clear-cut differences in aggression did not appear. These findings do not agree with those stated by the previously mentioned studies. "A last problem has to do with failure to find more aggression among boys. It was suggested that the predominance of verbal responses may have increased the aggression scores for girls." (11, p. 141) McKee and Leader suggested that perhaps girls are as aggressive as boys, but express that aggression in direct methods. They, however, did not support this suggestion with empirical findings.

The review of literature which includes investigations which were concerned with age and sex differences did not indicate clear-cut conclusions. The majority of the investigations concluded that boys tend to express more overt aggression than girls. However, in the most recent study done by McKee and Leader, no clear-cut differences were found in relation to sex differences. Therefore, the present study might be expected to either accept or reject the hypothesis that boys will react differently to frustration than girls. The literature did suggest that differences might be found in the reactions to frustration as related to younger and older children. The literature suggests that younger children utilize more physical means of expressing their reactions to frustration.

The investigator was unable to locate any investigations concerned with reaction differences as related to differences in previous experiences with the authority involved in the frustration situation. Most research studying the influence of authority on the reaction to frustration limit their approach to socio-economic differences in relation to authority.

In a recent pilot study by Body (3) at Ohio State University, utilizing 20 preschool subjects, she concluded that her study pointed to the need for more careful analysis of the situational factors in behavior. She suggested that the specific frustration situation might have influence on the reaction to frustration. She suggested that factors such as age, sex, and relation to authority might be limited factors in the study of reaction difference, and that if the situation in which the frustration took place was analyzed and used as supplementary information with the other factors, more valid conclusions might be reached. This literature supports the hypothesis that the specific frustration situation might be

related to differences in frustration reactions.

Related methods. There is some literature written which presents similar methods to those which were utilized for the present study. A review of that literature might be helpful in presenting a more complete picture of the method used for this investigation. The technique most closely related to the methods used in this study was included in the research done by Dr. Eugene Lerner (10).

The technique devised by Dr. Lerner is a projective method utilizing the play-situation. The play-situation as a valid means of studying behavior of the preschool child was defended by Dr. Lerner (10, p. 165).

As for any qualms about 'real' frustration vs. experimentally-produced frustration in play-situations, we consider that in playing with preschool children we probably approximate 'nearness to life situations' or 'life-likeness' of meaning as closely as we ever do later on when dealing with older personalities. It is not necessary here to analyze the reasons why playing is such a valid medium of self-expression and communication for nursery school children. When spontaneously engrossed and then blocked in game situations, the young child's natural tendency or ability to assert, defend, or otherwise do something about his immediate spheres of influence (ego-spheres) will be surely invoked--a fact equally well known to parents, nursery school teachers, and research observers.

Lerner constructed several parts to the play-techniques. The general description of the first part (frustration and hostility games) revealed the method in which a child was presented a series of frustrations (10, p. 166).

The general idea of this play-technique is to give the child successive, various toys with which he can play without interruption but only for a short while. Then proceed progressively to 'intrude,' 'compete,' 'deprive,' and 'exclude.' In addition to going through such series of motions in 7 successive toy-units, E 'insistently' gives the child 1 and the same stick to 'play with' --after arbitrarily 'putting away' the previous toys and before giving the child the next toys. The child thus gets 1 and the same stick (switch-like branch) intermittently no less than 7 times.

Lerner also included specific instructions for the play-technique

(9, p. 166-169). He listed the order and duration of the play units. He presented standard procedures to be followed by the experimenter. It was his contention that the situation could be standardized to a certain extent if the investigator's contacts with the child were standardized as much as possible. However, it was conceded that some children would color the situation with their own interpretation. How the child interpreted the situation would be affected by whether or not he asked questions and what type of question he asked. Dr. Lerner tried to anticipate questions which would be asked and listed standard answers to them. For example, if a child asked many questions about the toys and about what was happening, the investigator was instructed to answer with a counter question such as, "What do you think?" Lerner also presented instruction for the location and for the recorder. A simplified and moderately revised form of his instruction was utilized for the present study, and is described on pages 17-22.

The second part of Lerner's play-technique involved test situations in which the experimenter presented obstructions to the children's play in order to observe their characteristic variations in behavior response. A general description of part 2 was given (10, p. 188).

The general idea is to devise a series of play-situations in which E and child may meet, collide, and otherwise interact. Each has and is represented in such interactions by dolls or 'trains' or 'houses.' In such E-train: S-train interaction, E-doll: S-train interaction, the direction of component and resultant forces is expressed, chiefly or solely in terms of the movement and 'control' of the symbolical ego-toys (doll, trains, houses). There is, then, a certain amount of indirection or behavioral symbolism at play here which we assume to permit the child a rather free expression of congenial ego-drives. Through the maintenance of a field of continuous playing, the opportunity for 'losing oneself' in spontaneous self-expression is likely to be of optimal proportions.

In order to provoke the child's selective-congenial responses

in a more definitive manner, E's part in such interactions is standardized so that the gross circumstances under which the child defines the situation may be held constant.

As in part 1, Lerner included specific experimental instructions for this part of the play-technique (10, p. 188-189). The order of the play units included 9 interactions in which dolls, houses, and trains were utilized. Unit 2 of the recent study utilizes only 1 of the 9 parts suggested by Lerner. Unit 3 involves interaction between the experimenter and the child (E-doll: S-train interaction). Lerner's specific instructions were revised and simplified for unit 2. They are described fully on pages 18-20.

Lerner's play technique is also shown in the film, "Frustration Play Techniques." (18) The same technique is also shown in the film, "This is Robert." (19)

Keister (9) used a different type of procedure to induce reactions to frustration. She used the situation in which personal frustration results. Keister placed the child in a situation in which failure occurred. She introduced a puzzle box to the children and instructed them to place all the pieces back in the box and close the lid. The task was an almost impossible one for the children since the pieces had to be placed in a certain specific pattern to enable the children to close the lid. Although the situation used by Keister was not exactly structured as the situation in unit 3 of the present study, it utilized the same source of frustration. The source of frustration in Keister's investigation and in unit 3 of the present investigation was the deficiency of the self.

The investigator has presented the review of literature utilizing a general discussion of frustration and its effects, and utilizing

specific theories in relation to the reaction to frustration in an attempt to add to the general knowledge about the problem of frustration. A review of the investigations closely related to the specific objectives of the present study has been presented in an attempt to orient and classify the existing problem and objective for this particular investigation. A review of literature which presented methods closely related to the method utilized in this investigation has also been included.

Hypotheses

Body (3) has suggested that the specific frustration situation might have influence on the type of reaction a child might choose in an attempt to adjust to frustration. Therefore, in constructing the hypothesis, it might be expected that when the different frustration situations are compared, differences in the frustration reactions will be found.

The studies conducted by Muste and Sharpe (12) and Jersild and Markey (8) suggested that when younger and older children were compared, differences were found in the frustration reactions of the 2 groups. The experiences the investigator has had with children also have suggested that younger and older children react differently to frustration. Therefore, it might be expected that when younger and older children are compared, differences will be found in the frustration reactions.

The review of literature revealed a conflict in findings as to whether frustration reaction differences were found when boys and girls were compared. The majority of the studies--Muste and Sharpe (12), Jersild and Markey (8), and Sears (15)--suggested that boys were more aggressive than girls. However, the most recent study done by McKee and Leader (11) did not find clear-cut differences. The investigator,

in past experiences with young children, has not noted differences when boys and girls were compared. However, since the findings presented by McKee and Leader were in the minority, and since the experience of the investigator is limited, the hypothesis will be stated in the affirmative. However, it might be expected that differences in frustration reactions might or might not be found when boys and girls are compared.

There have been no previous studies which have been concerned with the children's previous experience with the investigator and reactions to frustration. However, the investigator feels that since the teacher-child contact was very close, a comparison of a group of children who had had previous experience with the investigator and a group of children who had not had any experience with the investigator might yield differences.

The hypotheses to be tested include:

1. Frustration reaction differences will be found when different specific frustration situations are compared.
2. Frustration reaction differences will be found when younger children are compared with older children.
3. Frustration reaction differences will be found when boys are compared with girls.
4. Frustration reaction differences will be found when children who have had previous experience with the investigator are compared with children who have not had previous experience with the investigator.

The experimental design of the study necessitated a statement of the hypotheses in the null form. However, since the contentions of the null form of the hypotheses are not the expected findings for this study,

the null form of the hypotheses will be confined to the statistical analysis.

METHOD OF PROCEDURE

Procedure

The necessary first step was the development of a method which could be adapted to the study of behavior of preschool children. For this investigation, the play-situation technique was utilized. An attempt was made to present the same type of situation to each child. In other words, the aim of the technique was to present standardized situations to the children.

The general idea of this technique was to present a series of play-situations in which different forms of primary frustration could be induced. Three different play-situations (units) were used. The 3 play units were presented to the child in successive order, 3 different times. In other words, the child was presented with 9 successive play units which were in reality 3 different play units utilized 3 times each.

In the first play-situation (unit 1), the child was given a group of toys and was allowed to play with them any way he liked for 40 seconds. The investigator assumed the role of a passive observer while the child was playing. The investigator sat on a small chair outside the child's immediate play area. After 40 seconds had elapsed, the investigator walked over to the child, knelt on the floor, and told the child that it was time for the investigator to play with the toys. The investigator took the toys from the child and manipulated them for several seconds. Then the investigator told the child that it was time to put the toys away, and proceeded to do so.

The investigator next handed a stick to the child and told the child

that he could play with it any way he liked. The investigator then withdrew to the small chair and assumed the role of the passive observer. In all cases, the responses of the child were treated with passive acceptance. The child was allowed to play with the stick for 40 seconds. The investigator then told the child that it was time to put the stick away. None of the children resisted when the investigator reached for the stick.

Whenever the investigator explained the procedure to the child, the investigator was careful to always ask, "All right?" It was assumed that this question might encourage the child to express his feelings concerning the situation.

In the second play-situation (unit 2), the investigator was provided with an opportunity to actually block the child. The investigator took 2 long, wooden blocks, a doll, and a wooden train from the closet. The investigator placed the blocks, end to end, on the floor near the child. The investigator then placed the train in the child's hand and explained that it would be his train. The investigator then held the doll for the child to see, explaining at the same time that the doll would be for the investigator. The child was then told to push his train from his end of the "block track." As the child pushed his train, the investigator pushed the doll into the path of the train, blocking the train. The investigator verbalized the blocking as the blocking was actually taking place. "My doll stops your train. What happens? What shall happen?" The investigator blocked the train as far as the actions of the child allowed. A passive role was assumed by the investigator if the child chose to attack the doll. There were no cases of direct attack against the investigator. This procedure was repeated 2 more times. The investigator then put the equipment away.

In the third play-situation (unit 3), the investigator took a puzzle from the closet and placed it by the child. The child was then instructed, "You may finish the puzzle." If the child was reluctant to start, if the child asked questions, or if the child tried to give the puzzle back to the investigator, the instructor repeated the initial instructions. The investigator again assumed the role of a passive observer and sat on the small chair which was placed on the other side of the experimental area. The child was allowed to keep the puzzle for 40 seconds. After the time lapse, the investigator took the puzzle from the child. If the child was reluctant to relinquish the puzzle, he was asked if he wanted to give the puzzle to the investigator, or would the investigator need to take the puzzle? After the last puzzle unit, the child was asked if he had finished the puzzle, and if not, why?

It was an impossible feat for the child to finish the puzzle because 2 pieces of the puzzle were actually too large and could not be fitted into the puzzle. The type of blocking which occurred in this situation was a type of "self-blocking." The source of frustration was personal. In other words, the frustration was caused by an inadequacy of the self. However, if the child was able to reason that the puzzle was at fault, no frustration occurred. These children simply told the investigator that the "head" and "leg" were too large. One child said, "The head and leg have 'out-grown' this puzzle."

As has been previously stated, sections of the above technique were originally devised by the late Eugene Lerner (10, 17, 18). Unit 1 (toy stick) was constructed as a simplified form of the blocking technique of the frustration and hostility games used by Lerner (p. 166-169). Unit 2 (train-doll) was a simplified form of 1 part of Lerner's blocking technique

with allowed investigator and child interactions (p. 187-189). Unit 3 (puzzle completion) was especially devised for this investigation. However, the general principle involved is not particular to the present study. Keister (9) used the same source of frustration in her investigation. She used the idea of failure as a personal source of frustration.

A pre-test was conducted at the Utah State Agricultural College Co-operative Nursery School to aid in the construction of the technique for the present study. Four of the children enrolled in the nursery school were utilized for the test. It was found in experimentation with these children that a 40-second time interval was sufficient time for the children to become interested in the toys for the toy-stick unit. It was also found that a 40-second time interval was sufficient time for responses during the play with the stick. It was further found that 20 to 40 seconds was sufficient time for the puzzle completion unit.

The standard procedures for the total technique followed by the investigator (I) in contacts with the subjects (S) were as follows:

Unit 1. Blocking Technique (Toy and Stick Play).

A. All toy play.

1. Now you may play with these toys. You may play with them any way you like in here. (Places toys on floor near child and sits about 3 feet away from S. Time - 40 seconds.)
2. Now I'll play with all of them and you watch, all right? (I actually takes toys away from S.)
3. Repetition of statement under 2 above while I is actually playing with toys. (Play of I includes grouping the toys in simple order and inspecting them intently. Time - 10 seconds.)
4. And now I'll put them away, all right? (Immediately after 3.)

B. Stick play.

1. And now you play with the stick instead of the toys. You may play with it any way you like in here. (I hands stick to S. Time - 40 seconds.)
2. And now, I'll put it away, all right? (I takes the stick from S.)

C. Instructions for anticipated verbal and physical responses if S cannot be controlled.

1. Now you may play with these toys. You may play in here. You may play with them any way you like. (If S is in any way concerned about how, what, or where to play after he has been given the initial instructions by I.)
2. You may play with it. (If S is trying to get rid of the stick, offering it to I.)
3. You may play with the stick now. (If S asks for toys during stick period.)
4. Standard answers such as: guess, what do you think, and what does it look like? (If S asks questions which cannot be answered by repetition of initial instructions.)
5. I maintains a firm attitude on instructions. (If S asks to continue play with toys when I is putting them away. Such statements as: will you hand them to me or shall I take them myself, and you may play with the stick now, may be used.)
6. I takes the part of a passive, uncritical observer during the responses of S to the blocking techniques. (If S hits at the toy or hits I, I maintains the attitude of permissiveness as much as possible.)

Unit 2. Block Technique (Doll, Block, Train).

1. This shall be your train and this shall be my doll. The blocks shall be the tracks. You push your train on the track. You come from there. I come with my doll from here. Let's meet in the middle. And my doll stops your train. What happens? What shall happen? (I and S sitting or kneeling on the floor, facing each other. I hands the train to S and places S's hand and train on the track if necessary. I's behavior is subject to S's reaction--maintaining the blocking position insofar as S's reaction permits it.)
2. Now let's do it once more. You come from there with

your train, etc. (Second trial as per above.)

3. And the last time. You come from there with your train, etc. (Third trial.)

(Instructions for uncontrolled reactions by S follow same pattern as those for unit 1.)

Unit 3. Blocking Technique (Puzzle Completion).

1. Now you may finish this puzzle. You can do it yourself. Here are the pieces for you to put in the puzzle--the arm and these pieces. (I places puzzle in front of S and hands S the arm piece as it is named. I places the 2 pieces that will not fit near the puzzle and then sits about 3 feet away from S. Time - 20 to 40 seconds.)
2. And now I'll put it away, all right? (I takes puzzle if S indicates that he is through after 20 seconds. If S continues trying or does not indicate that he is through, he is allowed 40 seconds before I removes the puzzle.)
3. You may finish the puzzle yourself. (If S asks for help.)

(Instructions for uncontrolled reactions by S follow same pattern as those for unit 1 and unit 2.)

Equipment

Toys were chosen for unit 1 which would appeal to a child of nursery school age. The toys were a small garden set consisting of hoe, rake, and shovel; 2 small dump trucks; and 2 four-inch rubber dolls. The sticks used for the game were switch-like branches. They were approximately one-half inch in diameter at the largest point. The child could bend and break the stick easily.

In unit 2, two long, wooden blocks were used for the tracks. The child was given a wooden block train. The investigator used 1 four-inch rubber doll.

The gingerbread boy puzzle used in unit 3 had 5 pieces. The head piece and 1 leg piece were too large on 1 end to fit into the puzzle.

An attempt was made to construct the non-fitting pieces of the puzzle in such a way that the fact that they did not fit would not be apparent by merely looking at the puzzle.

Subjects

The subjects participating in the investigation were 27 white children (14 boys and 13 girls) enrolled in the 2 groups of the Utah State Agricultural College Preschool Laboratory or Nursery School. The age range of the children was from 32 to 56 months. The laboratory is operated by the Utah State Agricultural College Child Development Department. The primary purpose of the nursery is to serve as a laboratory for students enrolled at the college. The observation booths are used by students enrolled in child development, education, and psychology classes for observation of young children. Other students participate in limited supervision of the children. Advanced students complete their practice teaching in the preschool laboratory.

The nursery school can accommodate 2 groups (younger and older). Group 1 meets from 9 A.M. until 11:45 A.M. The general program for the group includes an inspection by a registered nurse, free activity, special organized activities, group activities, and lunch. The afternoon group meets from 1 P.M. until 3:30 P.M. The organization of the program for the afternoon is similar to the morning program with the exclusion of lunch. The level of the afternoon program is planned to meet the needs of the older age range.

The children enrolled in the nursery school are selected from a waiting list. The school is not equipped nor staffed fully enough to enable it to meet the demand of the waiting list. Usually a child's name must be entered at the time of his birth if he is to have a chance to

enter the nursery school. A child may be entered after he has reached the age of 30 months, and until he has reached the age of 60 months. All children who participated in this investigation could be described as "normal" children. The I.Q. for each child was not available.

Since each name has to be entered on the waiting list well in advance of the time of entrance, only children whose parents are stable residents of the community have an opportunity to enter the school. The children of college students are rarely entered because of this factor. The school is located on the college campus. As would be expected, many of the children participating in this investigation had 1 parent who was a professor at the campus. Thirteen of the children had 1 parent who was a professor. All fathers of the children enrolled had attended college. Only 3 had less than a B.S. degree. Only 2 mothers had not attended college. As is evident from this information, this group of children is not a representative sample of all the children of the community. Most of the children enrolled belonged to the lower-upper socio-economic class of the community.

After the investigation started, each child was aware that he would have a turn. Many children asked to participate and seemed anxious to help. The children who were to be involved in the play-technique for the specific day were told upon arrival at the school that the investigator needed a helper to try out some new toys. The child was told, further, that the investigator would be ready for him as soon as the child had finished the inspection. Note that the child was given positive, matter-of-fact statements concerning his participation. He was not given an initial choice as to whether he would or would not participate. The complete investigation period lasted approximately 2 weeks

with 1 or 2 children from each group participating each day.

Location

A section of the dining area, 10 feet by 20 feet, in the nursery school was converted into an experimental laboratory. Two large, mobile screens were used as temporary wall partitions. The only furniture in the room was 1 small chair used by the investigator when not in active participation with the child. The built-in shelved closet was used for storage of the play equipment. The 1 wall of the experimental room was a portion of the observation booth. The observation booth is built with a one-way vision screen 4 feet from the floor. The screen serves as a window for anyone on the inside looking out. The lighting against the screen makes it difficult for anyone in the laboratory to see into the booth. Therefore, the children inside the laboratory are usually not aware that someone is watching them. This allowed for excellent observation of the investigation without the recorder actually having to be in the experimental situation.

Recorder

The recorder observed all physical and verbal responses by the child. The responses were recorded by the recorder on a special observation form which had all the standardized reactions of the investigator listed. Therefore, the recorder was only required to record the verbal and physical responses of the child. Samples of the recordings of several children's responses are included in the appendix, p. 55.

Method of evaluating responses

The method used to evaluate the responses was to classify the responses. After the play techniques were recorded, the responses were classified into 3 major categories: (1) Aggressive behavior. This

category was subdivided into direct and indirect aggression. (2) Substitute behavior. (3) Withdrawal behavior. A classification scale for each of the 3 units was set up. The classification for each unit with an example for each classification follows.

Classification scale for unit 1 (toy-stick):

Explanation: Investigator (I), Subjects (S).

Classification

Aggressive

A. Direct

Behavior takes the form of attacking the obstacle which is blocking. In this unit, the obstacle would be the investigator. Attack might be physical, verbal, or both.

Example. Subject 19, girl.
S grabs stick from I. Walks to other side of room. Walks back to I. Walks to other side of room again. Walks back to I. Holds stick with both hands. S hits I on shoulder with the stick. Looks at I. Hits I on head with stick. Hits at I again with more force.

B. Indirect

Behavior takes the form of attacking some substitute for the obstacle which is blocking. In this unit, the substitute for the obstacle might be objects (wall, stick, floor) or other persons. Attack might be verbal, physical, or a combination of both.

Example. Subject 18, boy.
S grasps stick with both hands. Hits at screen. Hits at wall. Hits at floor with rapid, jerky, forceful motions.

Example. Subject 14, girl.
Twists stick in hand. "I give her spanking every time she don't get in bed."
Hits at floor with slow, hard movements.

Substitute

Any behavior which compromises with the obstacle which is blocking, but at the same time does not relinquish goals. In this unit the goal was to play with the toys.

Example. Subject 12, girl.
Takes stick to east wall. Sets stick down on floor. Runs to other wall. Runs back to stick. Resembles stick relay game. Seems to be satisfied to play self-devised game.

Withdrawal

Behavior directly opposed to attack. May take obvious form of actual physical flight or the more subtle form of retreating into a "shell."

Example. Subject 15, boy.
Let's stick fall as I hands stick to him. Looks at stick. Walks away from stick. "Put it away. I'm all through with it." Tries to hand stick back to I. Drops stick by I's feet. Walks to corner. Turns back to stick and I. Stands.

Classification scale for unit 2 (doll-train):

Aggressive

A. Direct

Behavior takes the form of attacking the obstacle blocking. In this unit, I is the obstacle. Attack may be physical, verbal, or both.

Example. None.

B. Indirect

Behavior takes the form of attacking some substitute obstacle. In this unit, that substitute obstacle is the doll which I uses to block S's train. Attack may take form of physical, verbal, or both.

Example. Subject 3, boy.
S moves train quickly to center. Runs train over doll. Smashes doll with an up-and-down motion. Uses much force while smashing doll. "Train smashes doll." Knocks doll off tracks. Places doll back on tracks and continues smashing the doll with great force.

Substitute

Any behavior which compromises with the obstacle blocking, but at the same time does not relinquish goals. In this unit, the goal is to reach the end of the track.

Example. Subject 9, girl.
S pushes train to center. Places doll on

top of train. Continues to push train to end of track with doll on top of the train. "She climbs up on it and it (train) goes ahead."

Withdrawal

Behavior directly opposed to attack. In this unit, flight may take form of withdrawing the train to the S end of the track or may take form of completely withdrawing from the game. May also take the form of retreating into a "shell."

Example. Subject 21, girl.
S pushes train to center easily. Stops. Looks at I. Pulls train to S end of track. "It (train) goes back."

Example. Subject 17, girl.
S pushes train slowly to center and stops before hitting doll. Takes hand from train. Looks at I. Shakes head. "I don't know. I don't know anything." Will not commit self as to what happens.

Classification scale for unit 3 (puzzle completion):

Aggressive

A. Direct

Behavior takes form of attacking the obstacle blocking. In this unit, the obstacle is the inadequacy of self. Therefore, any attack against self would be direct aggression.

Example. Subject 27, boy.
"I just don't know how to do it. It's too hard for me. I just can't do it."

B. Indirect

Behavior takes form of attacking a substitute obstacle. In this unit, the puzzle itself or I would be the substitute obstacle.

Example. Subject 15, girl.
Pounds on puzzle with fists. "This damned puzzle." "It takes too long to finish. It should be a shorter one."

Substitute

Any behavior which compromises with obstacle blocking, but at the same time does not relinquish goals. In this unit, the goal is to finish the puzzle.

Example. Subject 1, girl.

Places pieces on top of the puzzle. "Yah! It's all finished. I've done it!" Hands puzzle to I. Maintains attitude that the puzzle is finished even though she has not finished it.

Withdrawal

Behavior directly opposed to attack. May be either complete physical withdrawal from the situation or withdraws into a "shell."

Example. Subject 11, boy.

S does not attempt to finish puzzle. Tries to hand puzzle back to I. Sits by puzzle. Does not touch puzzle. "I'm all through with it."

No frustration

If S was able to reason that he was not at fault in the puzzle unit and that the puzzle could not be finished, he then removed the obstacle of self-inadequacy. Once this was accomplished there was no frustration to the situation.

Example. Subject 23, boy.

Tries puzzle for a short time. "Hey! This puzzle doesn't fit. You try it." When asked later why he had not finished the puzzle, S replied, "This head and this leg have out-grown this puzzle."

After classification, the responses were analyzed in relation to the significance of the specific frustration, the influence of age, the influence of sex, and the influence of the amount of previous experience the child had had with the investigator. The chi square method was utilized to test the significance of the differences.

FINDINGS AND DISCUSSION

Findings

The purpose of this investigation was to explore the differences in reactions to frustration of a group of preschool children. The behavior reactions of each child were classified into direct aggressive behavior, indirect aggressive behavior, substitute behavior, and withdrawal behavior. A classification for no frustration was included for unit 3 (puzzle completion). The reactions were classified separately for each unit of the play-technique. Therefore, each child had 3 separate classifications, 1 for each unit.

Table 1 shows the distribution of the number of reactions by the children in each classification for all 3 units.

Table 1. Number of children receiving each reaction classification

Units	Responses					Total number of children
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
1 (toy-stick)	3	11	4	9	0	27
2 (doll-train)	0	10	7	10	0	27
3 (puzzle completion)	10	4	2	5	6	27
Total	13	25	13	24	6	81

In unit 1 (toy-stick), more reactions were classified as indirect aggression behavior and withdrawal behavior than direct aggressive and substitute behavior. There were 11 cases of indirect aggression and 9

cases of withdrawal behavior. There were 3 cases of direct aggression and 4 cases of substitute behavior.

In unit 2 (doll-train), all responses occurred in direct aggression, substitute, and withdrawal behavior categories. There were no cases of direct aggression. There were 10 cases of indirect aggression, 7 cases of substitute behavior, and 10 cases of withdrawal behavior.

In unit 3 (puzzle completion), more cases of direct aggression were found than any other type of response. There were 10 cases of direct aggression, 4 cases of indirect aggression, 2 cases of substitute behavior, 5 cases of withdrawal behavior, and 6 cases of no frustration.

One of the purposes of the investigation was to compare the reactions in relation to the specific frustration situation. Unit 1 (toy-stick) and unit 2 (doll-train) represented a similar type of frustration since the blocking obstacle in both cases was the investigator. Unit 3 represented a different type of frustration situation because the obstacle was the inadequacy of the child and his inability to succeed. The differences in the situation of unit 1 and unit 2 as compared to unit 3 provided an excellent opportunity to compare the differences of reaction in relation to the different types of situations. Table 2 shows the distributions of the reactions comparing units 1 and 2 with the reactions for unit 3.

The chi square method was used to determine the existence of relationships which cannot be accounted for by chance. The reactions found to be associated with the specific frustration situation at the level of probability beyond the .01 were considered to be relationships which could not be accounted for by chance. The probability is that a distribution of the kind indicated by Table 2 occurs in $>.75$ of the random

samples. Since the level of probability of .01 is required, the probability that a distribution of this kind would be due to factors other than chance is remote.

Table 2. Distribution of aggressive and non-aggressive responses compared with different frustration situations

Units	Responses		Total number of responses
	Aggressive	Non-aggressive	
1 (toy-stick) and 2 (doll-train)	24	30	54
3 (puzzle completion)	14	13	27
Total	38	43	81
$\chi^2 = .06$	$P > .75$		$df = 1$

Table 3 shows the distribution of the numbers of reactions in only the direct aggression and indirect aggression classifications compared with the 2 types of frustration situations.

Table 3. Distribution of numbers of direct aggressive and indirect aggressive behavior compared to the different frustration situations

Units	Direct aggression	Indirect aggression	Total number of responses
1 (toy-stick) and 2 (doll-train)	3	21	24
3 (puzzle completion)	10	4	14
Total	13	25	38
$\chi^2 = 6.74$	$P < .01$		$df = 1$

When Yates' (17) corrective method for small cells was used to enable

application of the chi square method for statistical testing of the findings listed in Table 3, it was found that the probability is that a distribution of this kind will occur in $< .01$ of the random samples. Since the level of probability of $.01$ is required, the probability that a distribution of this kind would be due to chance is remote.

The findings as indicated in Table 3 support the hypothesis that differences will occur in the reactions when 2 different frustration situations are compared. Although no significant differences were found when aggressive and non-aggressive reactions were compared with the situation, significant differences were found when only the 2 types of aggressive behavior were compared with the specific frustration situation.

Another of the purposes of the investigation was to compare the different frustration reactions in relation to the age of the children. The experimental group was divided into 2 groups. The younger group had an age range from 32 months to 44 months. The older group had an age range from 45 months to 56 months. Tables 4, 5, and 6 show the distributions of the numbers of different types of reactions for units 1 (toy-stick), 2 (doll-train), and 3 (puzzle completion) compared with the age groups.

As indicated by Table 4, the only cases of direct aggression in unit 1 occurred in the younger group. The older group expressed more indirect aggression than did the younger group.

As indicated by Table 5, there were not any noticeable differences in the reactions when the younger and older groups were compared for unit 2 (doll-train).

In unit 3, there were more cases of withdrawal behavior for the

Table 4. Number of responses occurring in each classification of reactions comparing older and younger groups of children for unit 1 (toy-stick)

Age group	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Younger	3	3	1	4	0	11
Older	0	8	3	5	0	16
Total	3	11	4	9	0	27

Table 5. Number of responses occurring in each classification of reactions comparing older and younger groups of children for unit 2 (doll-train)

Age group	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Younger	0	4	2	5	0	11
Older	0	6	5	5	0	16
Total	0	10	7	10	0	27

younger group. In this unit, it was found that no cases of no-frustration were found in the younger group. Only children in the older group expressed this type of reaction.

Again, to enable the investigator to utilize the chi square method for statistical testing, the reactions had to be grouped into aggressive and non-aggressive behavior. Tables 7, 8, and 9 show the distribution of the numbers of aggressive and non-aggressive reactions comparing younger and older children.

The probability is that a distribution of the kind found in Tables

Table 6. Number of responses occurring in each classification of reactions comparing younger and older groups of children for unit 3 (puzzle completion)

Age group	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Younger	5	1	1	4	0	11
Older	5	4	1	1	5	16
Total	10	5	2	5	5	27

Table 7. Distribution of aggressive and non-aggressive behavior compared with younger and older groups of children for unit 1 (toy-stick)

Age group	Responses		Total number of responses
	Aggressive	Non-aggressive	
Younger	6	5	11
Older	8	8	16
Total	14	13	27
$\chi^2 = .54$		$P > .90$	$df = 1$

Table 8. Distribution of aggression and non-aggression behavior compared with younger and older groups of children for unit 2 (doll-train)

Age group	Responses		Total number of responses
	Aggressive	Non-aggressive	
Younger	4	7	11
Older	6	10	16
Total	10	17	27
$\chi^2 = .005$		$P > .90$	$df = 1$

7, 8, and 9 will occur in $> .90$ of the samples. Since the level of probability of .01 is required, the probability that a distribution of

Table 9. Distribution of aggressive and non-aggressive behavior compared with younger and older groups of children for unit 3 (puzzle completion)

Age group	Responses		Total number of responses
	Aggressive	Non-aggressive	
Younger	6	5	11
Older	9	7	16
Total	15	12	27
$\chi^2 = .001$	$P > .90$		$df = 1$

this kind would be due to factor other than chance is close to an impossibility. The hypothesis that differences in reactions when compared with age will be found, is not supported by these statistical findings.

Another purpose of the investigation was to compare the differences in reactions in relation to sex. Tables 10, 11, and 12 show the distribution of the numbers of reactions in each reaction classification for units 1, 2, and 3.

Table 10. Number of responses occurring in each classification of reactions comparing boys and girls for unit 1 (toy-stick)

Sex	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Boys	1	7	2	4	0	14
Girls	2	4	2	5	0	13
Total	3	11	4	9	0	27

No apparent differences were found in any of the units of the play-technique when the reactions of boys were compared with girls.

Tables 13, 14, and 15 show the distribution of the number of

Table 11. Number of responses occurring in each classification of reactions comparing boys and girls for unit 2 (doll-train)

Sex	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Boys	0	6	4	4	0	14
Girls	0	4	3	6	0	13
Total	0	10	7	10	0	27

Table 12. Number of responses occurring in each classification of reactions comparing boys and girls for unit 3 (puzzle completion)

Sex	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Boys	6	2	1	3	2	14
Girls	4	2	1	2	4	13
Total	10	4	2	5	6	27

Table 13. Distribution of number of aggressive and non-aggressive reactions compared with boys and girls in unit 1 (toy-stick)

Sex	Responses		Total number of responses
	Aggressive	Non-aggressive	
Boys	8	6	14
Girls	6	7	13
Total	14	13	27

$X^2 = .236$
 $P > .50$
 $df = 1$

aggressive and non-aggressive reactions when the reactions of boys were compared with girls.

The probability is that a distribution of the kind found in Tables

13, 14, and 15 will occur in $> .50$ of the samples. Since the level of probability of .01 is required, the probability that a distribution of this kind would be due to factors other than chance is remote. The findings indicated in Tables 13, 14, and 15 do not support the hypothesis that frustration reaction differences will be found when boys and girls are compared.

Table 14. Distribution of number of aggressive and non-aggressive reactions compared with boys and girls in unit 2 (doll-train)

Sex	Responses		Total number of responses
	Aggressive	Non-aggressive	
Boys	6	8	14
Girls	4	9	13
Total	10	17	27
$\chi^2 = .4$		$P > .50$	$df = 1$

Table 15. Distribution of number of aggressive and non-aggressive reactions compared with boys and girls in unit 3 (puzzle completion)

Sex	Responses		Total number of responses
	Aggressive	Non-aggressive	
Boys	8	6	14
Girls	6	7	13
Total	14	13	27
$\chi^2 = .236$		$P > .50$	$df = 1$

Another purpose of the investigation was to compare the differences in reactions in relation to the previous contact the children had had with the authority (investigator). This variable was suggested because approximately half of the children had had the investigator as a teacher

for the previous 1 or 2 quarters in the nursery school, while the remainder of the children had had no contact with the investigator outside of perhaps seeing her.

The contact of the teacher and child in the nursery school is very close. The teacher is with the children every day. The nursery school program is planned to allow the teacher to give much individual attention to each child. The child knows the type of behavior the teacher expects and at the same time is encouraged and has opportunities to feel free to express feeling to the teacher.

It was expected that those children who did know the investigator as a teacher might interpret the play-technique situation differently than those children who had not known the investigator previous to the experiment. It was expected that those children with previous experience with the investigator might feel more free to express their feelings. It was also thought that their reactions might be influenced by their knowing that the teacher expected definite types of behavior.

Table 16. Number of responses in unit 1 (toy-stick) occurring in each classification comparing groups of children with differing amounts of previous experience with the investigator

Previous experience with investigator	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Experience	1	6	2	4	0	13
No experience	2	5	2	5	0	14
Total	3	11	4	9	0	27

Tables 16, 17, and 18 show the number of responses occurring in each

classification of reactions comparing children who had had previous experience with the investigator and those children who had not had previous experience with the investigator.

Table 17. Number of responses in unit 2 (doll-train) occurring in each classification comparing groups of children with differing amounts of previous experience with the investigator

Previous experience with investigator	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Experience	0	5	2	6	0	13
No experience	0	5	5	4	0	14
Total	0	10	7	10	0	27

Table 18. Number of responses in unit 3 (puzzle completion) occurring in each classification comparing groups of children with differing amounts of previous experience with the investigator

Previous experience with investigator	Responses					Total number of responses
	Direct aggression	Indirect aggression	Substitute	Withdrawal	No frustration	
Experience	6	1	1	2	3	13
No experience	4	3	1	3	3	14
Total	10	4	2	5	6	27

As indicated by Tables 16, 17, and 18, there were no apparent differences in the reactions when 2 groups of children who had had different amounts of experience with the investigator were compared.

Tables 19, 20, and 21 show the distribution of numbers of aggressive and non-aggressive behavior comparing 2 groups of children with differing amounts of previous experience with the investigator.

Table 19. Distribution of number of aggressive and non-aggressive reactions in unit 1 (toy-stick) comparing 2 groups of children with differing amounts of previous experience with the investigator

Previous experience with investigator	Responses		Total number of responses
	Aggressive	Non-aggressive	
Experience	7	6	13
No experience	7	7	14
Total	14	13	27
$\chi^2 = .039$	P > .50		df = 1

Table 20. Distribution of number of aggressive and non-aggressive reactions in unit 2 (doll-train) comparing 2 groups of children with differing amounts of previous experience with the investigator

Previous experience with investigator	Responses		Total number of responses
	Aggressive	Non-aggressive	
Experience	5	8	13
No experience	5	9	14
Total	10	17	27
$\chi^2 = .022$	P > .50		df = 1

Table 21. Distribution of number of aggressive and non-aggressive reactions in unit 3 (puzzle completion) comparing 2 groups of children with differing amounts of previous experience with the investigator

Previous experience with investigator	Responses		Total number of responses
	Aggressive	Non-aggressive	
Experience	7	6	13
No experience	7	7	14
Total	14	13	27
$\chi^2 = .039$	P > .50		df = 1

The probability is that a distribution of this kind would occur in > .50 of the samples. Since the level of probability of .01 is required, the probability that the differences shown in Tables 19, 20, and 21 would be due to factors other than chance is remote. The statistical findings, then, do not support the hypothesis that differences will be found when children who have had previous experience with the authority are compared with children who have not had previous experience with the authority.

Discussion

The interpretations of findings based on data from 1 group of pre-school children and only 27 subjects has many limitations. The investigator feels, however, that the investigation produced many implications which were not evidenced by the statistical analysis alone. Wert (16) has suggested that with a small number of cases it is extremely difficult to demonstrate significant departures from the null hypothesis even though departures from expected frequencies are proportionately quite extreme. The investigator feels there were many factors which were impossible to subject to statistical analysis which should be discussed. Therefore, this section is included as a part of the treatment of the data.

One of the purposes of the investigation was that it serve as a trial for this particular form of the play-technique. The reactions shown illustrated a variation in the types of reactions evoked by the technique. The variations not only occurred when different children were compared, but also occurred in the total behavior of individual children. The fact that the technique evoked differences is a value in itself. The investigator feels that the technique proved itself to be comparatively simple and convenient to utilize. Acknowledging that the technique evoked differences and was convenient to utilize prompts the

investigator to recommend the technique as an acceptable method for further research.

The statistical analysis did support the hypothesis that frustration differences will be found when different frustration situations are compared. When the reactions were grouped into aggressive and non-aggressive responses, significant statistical differences were not found. However, when the 2 different types of aggressive behavior were compared with the different frustration situations, the differences were statistically significant. It was found that this group of children would tend to use direct aggression when the obstacle for attack was the self. Very few children expressed direct aggression when the attack had to be directed against the investigator, who represented the authority. In unit 3 (puzzle completion), the children were free to express attack against the self when unable to finish the puzzle. Expressions such as "I can't do it!" and "I don't know how to do it!" were expressed frequently. There were very few attacks against the puzzle, which was the indirect object. In unit 1 (toy-stick), the most frequent attack was directed against indirect objects such as the wall, floor, and the stick. Only 3 children expressed attack against the investigator, who was the blocking obstacle. In unit 2 (train-doll), the attack was directed against the doll. There were no directed attacks against the investigator.

From these findings it was indicated that the specific frustration situation influenced the method this group of children chose to attempt to adjust to frustration. If a child has been taught that the authority must be respected, he will probably choose other methods of adjustment rather than direct attack against the authority.

In unit 1 (toy-stick) and unit 2 (doll-train), the children chose to attack objects. In unit 3 (puzzle completion), the element of failure was involved. It was interesting to note that none of the children chose to attack the authority and only 2 children chose to attack objects. The most frequent attack was directed against the self in this unit. It might be suspected from these findings that this group of children had been taught that it was acceptable to attack the self, acceptable in some cases to attack objects, and almost never acceptable to attack an authority.

The statistical findings of the present study did not show any significant differences when comparing younger and older children. However, the data had to be grouped to enable statistical treatment. The method of grouping did not show that all cases of direct aggression in the older group were directed against the self, for example. The only examples of direct attack against the investigator occurred in the younger group.

It was also found that more examples of indirect aggression occurred in the older group of children. These findings support the conclusions reached by Muste and Sharpe (12) that younger children tend to use more direct physical aggression than older children. The investigator feels that this implies that this group of children have been taught not to direct attack against someone else, especially authority. The older a child is, the more opportunity he has had to experience that direct attack is frowned upon. He then learns to express his attack in methods which society will accept.

Another difference found when younger and older children were compared was that the only examples of no-frustration behavior expressed in the puzzle completion unit were expressed by children in the older age group. They were able to reason that they were not at fault, and thus

removed the frustration obstacle (inadequacy of self). These children simply told the investigator that the head and leg were too big for the puzzle. This finding indicates that younger and older children interpret frustration situations differently because of the ability of the older children to do more effective reasoning, in some cases.

The investigator also realizes that the small age range utilized in this present study would tend to minimize the differences of the age groups. Anyone acquainted with child growth and development knows that chronological age is not a true indicator of growth and development. It is known that a comparison of a group of 4-year-olds may indicate an extensive range in maturity levels. Some children develop much faster than others. Therefore, in an age range as small as the one utilized in this study, there was not a true comparison of "younger" and "older" children.

When a comparison was made of the 3 youngest children and 3 of the oldest children picked from the group investigated, thus extending the differences in the ages, differences were shown. In unit 1 (toy-stick), the 3 youngest children used direct attack against the investigator. The older children expressed substitute behavior and indirect attack. In unit 2 (doll-train), the children in the younger group expressed indirect attack and withdrawal behavior. All 3 of the older children expressed substitute behavior. In unit 3 (puzzle completion), all 3 younger children withdrew when they found they were unable to finish the puzzle. The 3 older children all realized that the head and leg pieces of the puzzle did not fit. In all 3 units, there were no instances when the younger and older groups used the same type of behavior for the unit involved.

Because of the implications which could not be statistically tested, and because of the limitations caused by the small age range, even though

the statistical analysis showed no statistical differences, the hypothesis that frustration reaction differences will be found when younger and older children are compared cannot be neglected. Further research would be needed to either accept or reject the hypothesis.

The hypothesis that frustration reaction differences will be found when comparing boys and girls was not supported by the findings of this study. There were no significant differences in the reactions when boys and girls were compared; neither were there any apparent differences shown when the distribution of the numbers of responses occurring in each reaction classification was compared. These findings do not agree with the conclusions presented by several previous investigations reported in the review of literature (8, 12, 15). The findings of these studies indicated that boys express more direct aggression behavior than girls. However, a more recent study conducted by McKee and Leader (1) did not find differences when boys and girls were compared.

The investigator suspects that when the frustration situation is controlled, frustration reaction differences will not be found for young boys and young girls. However, the investigator realizes that boys may perhaps be subject to more frustration situations which encourage direct aggression responses than girls. Then too, boys are expected to be physically aggressive in our culture while girls are taught to be more subtle in expressing attack. The same type of behavior may be interpreted differently, depending on whether a boy or a girl expresses that behavior. If a boy hits another child, especially another boy, the response by on-lookers is usually, "He's all boy!" However, if a girl hits another child she is told, "That's not nice. Nice little girls don't do that." The younger a child is, the less experiences that child has had in "social

rightness." Therefore, the investigator was not surprised that, in this investigation, 2 of the 3 direct aggressive responses were expressed by younger girls.

The findings did not show any statistical differences occurring in this group in relation to previous experience with the investigator. The findings support the hypothesis that frustration reaction differences will not be found when children who have had previous experience with the investigator are compared with children who have not had previous experience with the investigator. The investigator does not wish to imply that experience with authority does not have influence on reaction to frustration. In the present study, authority patterns at home and previous experience with all authority were not taken into account. These factors probably have much influence upon the method a child chooses to express his reactions to frustration. A study which could utilize these factors would be of much value.

This investigation did show differences in the types of reactions of children in interactions with the authority. Many children were "cold in the situation" and did not dare commit themselves to verbalizing their reactions until they had tested the investigator. Some children asked the investigator to make their decision for them. One child, while playing in unit 2, withdrew her train at each contact with the investigator's doll. At 1 point in the game, the investigator had to turn her back on the child and the train and doll. The child hurriedly knocked the investigator's doll over and then hurriedly pushed her train on to her goal. Some children would attack the doll physically, but would not verbalize their action when the investigator asked them to tell about what was happening.

Suggestions for further studies

From this research, the investigator feels there are several ways this method could be adapted to yield further data. Some suggestions are:

1. The findings in the present study show the need for extension of the number of subjects to test implications produced by the study.
2. A revision of the technique designed to probe more into the feelings of the child as he reacts might produce valuable results. This could be accomplished by asking the child more questions and encouraging verbalization about his reactions as they are taking place.
3. A study of the subsequent reactions of the children in the nursery school might yield useful data. It was noted that some children who were usually cooperative in the nursery school were extremely negative after they had participated in the play-technique.
4. A more complete recording could be made of the situation with the use of a tape recorder.

From this research the investigator feels there are several implications which warrant further study. Some suggestions for further research are:

1. Supplementary information concerning home experience, evaluation of total nursery school behavior, child-adult interaction, and child-child interaction would be of much value in studying a child's behavior in relation to frustration.
2. A study of differences in frustration reactions in relation to sex compared with older and younger children might be fruitful.
3. A study of differences in frustration reaction utilizing an extensive range might be profitable.
4. Utilization of the technique as a method for intermittent study

of the individual child's growth and development extended over several years might be of value.

SUMMARY AND CONCLUSIONS

To determine the frustration reaction differences of a group of preschool children, the present exploratory study was conducted. The purposes of the study were: (1) To test this particular form of the play-technique used in this study. (2) To show the different frustration reactions which occur most frequently in a preschool group of children. (3) To compare the types of frustration reactions with variables which might affect the types of reactions used by the children. The variables considered were: the specific frustration situation, age, sex, and previous experience with the authority (investigator).

The data were obtained from the recordings of a play-technique which utilized nursery school children as subjects. The play-technique was structured with games which were designed to evoke frustration and reactions to that frustration. Two parts of the play-technique were simplified forms of the play-technique devised by Dr. Eugene Lerner (10). The third part of the technique was structured around the child's failure. Keister (9) had previously used a similar idea.

After the responses evoked during the play-technique were recorded, the responses were classified into direct aggression, indirect aggression, substitute, and withdrawal behavior. It was found when the responses were classified that examples of each response had occurred.

It was further found that in a situation in which the investigator was the blocking obstacle (unit 1, toy-stick; and unit 2, doll-train), the children showed few cases of direct aggression against the blocking obstacle

(investigator). There were only 3 cases of attack against the investigator. There were more cases of attack against objects. Twenty-one cases showed attack against objects (floor, wall, and stick). In these same situations, there were 11 cases of substitute behavior and 19 cases of withdrawal behavior.

In a different type of situation (unit 3, puzzle completion), when the blocking obstacle was the self, more cases of direct aggression were shown. There were 10 cases of attack against the self. In this situation, there were only 2 cases of attack against objects. Two cases of substitute behavior and 5 cases of withdrawal behavior were also shown in this situation. Another type of response was found in unit 3. Five of the children were not frustrated because they were able to reason that the puzzle was impossible to complete.

When the specific frustration situation was compared with the frustration reactions, it was found that there were differences. As has been pointed out, less cases of direct aggression were found in unit 1 and unit 2 than in unit 3. There were more cases of indirect aggression found in unit 3 than in unit 1 and unit 2. These differences were found to be significant at the .01 level. It is concluded from this finding that in this group of preschool children, different frustration situations influence the different frustration reactions. Further study is needed before this finding could be applied to the general population.

When younger and older children were compared with frustration reactions, more cases of direct aggression were found in the younger group than in the older group. There were fewer cases of substitute behavior in the younger group than in the older group. However, these differences were not found to be statistically significant.

When boys and girls were compared with the frustration reactions, there were no apparent differences nor were there any statistical differences found. It is concluded from these findings that in this group of preschool children, boys and girls did not respond differently to frustration. There is need for further study before this conclusion could be applied to the general population.

When children who had had previous experience with the investigator were compared with children who had not had previous experience with the investigator, no apparent nor statistical differences were found. It is concluded from this finding that this isolated factor is not sufficient in itself to cause differences.

Briefly summarized, the conclusions of this investigation are:

1. The play-technique utilized in this study evoked different responses and was convenient to utilize.
2. A wide variety of reactions to frustration occurred in this group of preschool children.
3. When attack was used by this group of preschool children, the method of attack was influenced by the specific frustration situation.
4. The influence of sex as a biological determinant of reaction to frustration was not substantiated in this study.

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Films

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- (2) This is Robert. New York University Film Library, 26 Washington Place, New York 3, N.U.

APPENDIX

SAMPLE RECORDINGS OF PLAY TECHNIQUE

Unit 1. Subject 14, girl.

Behavior, withdrawal

- I "Now you may play with these toys. You may play with them any way you like in here."
- S Stands in corner. Puts hands behind back. "I don't want to play! Wanna play outside." Backs up against the wall. "I'm through!" Uses high-pitched voice. "No! Wanna go out! Wanna play outside. Wanna play outside. Don't want to play. Don't want to play." Stands in corner.
- I "Now I'll play with all of them and you watch, all right?" Manipulates the toys.
- S Turns back to I. "I'm not gonna watch."
- I Repetition of previous statement. Still manipulates the toys.
- S Stands with back to I. No verbal response.
- I "And now I'll put them away, all right?" Puts toys in closet.
- S Stands in corner with back to I. No verbal response.
- I "And now you may play with the stick instead of the toys. You may play with it any way you like in here." I attempts to hand the stick to S.
- S Turns around but still stands in the corner. Does not pick up the stick. "I don't want to play! Don't want to play with nothing!" Repeats 6 times. Still stands in corner.
- I "And now I'll put it away, all right?"
- S Still standing in corner. "I don't wanna play with nothing."

Unit 2. Subject 15, boy.

Behavior, indirect aggression

- I "This shall be your train and this shall be my doll. The blocks shall be the tracks. You push your train on the track. You come from there. I come with my doll from here. Let's meet in the middle. My doll stops your train. What happens? What shall happen?"
- S Pushes train to center. "Bzzzzzzzzzzzzzzzzzzzz." Shoves the doll with his train. Knocks the doll over with the train. "It have wreck. Go to police station."
- I "Now let's do it once more. You come from there with your train, etc." Same as first trial.
- S "O.K." Pushes train to center. "Bzzzzzzzzzzzzzzzzzzzz." Runs the train into the doll. Uses strong force to push the doll backward. Knocks the doll off the tracks with the train. "It have wreck."
- I "And the last time. You come from there with your train, etc." Same as last 2 trials.
- S Pushes train to center. "Bzzzzzzzzzzzzzzzzzzzz." Knocks the doll over. Squashes the doll with the train. Knocks the doll off tracks. Looks up at I. "It have wreck. Has to go home to her mother."
- I "Now I'll put it away, all right?"
- S Helps hand equipment to I. "What we gonna do now?" Walks with I to the closet.

Unit 3. Subject 1, girl.

Behavior, substitute

- I "Now you may finish this puzzle. You can do it yourself. Here are the pieces for you to put in the puzzle." Places the puzzle by the child and sits about 3 feet away from S.
- S Places all fitting pieces in the correct positions in the puzzle. Lays head piece which does not fit on top of the puzzle. "This goes there!" Takes leg piece and places on top of puzzle. "This goes here!" Emphatic. Turns to I. "I made it."
- I "Did you finish the puzzle?"
- S "Yah! It fits."
- I "And now, I'll put it away, all right?"
- S Nods head in agreement.