

A STUDY OF SOME ENVIRONMENTAL FACTORS AFFECTING  
THE BEHAVIOR OF A NORMAL FOUR YEAR OLD CHILD

by

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B. S., Kansas State Agricultural College, 1912

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A THESIS

submitted in partial fulfillment of the requirements

for the degree of

MASTER OF SCIENCE

KANSAS STATE AGRICULTURAL COLLEGE

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## INTRODUCTION

Many studies have dealt with the abnormal child and his social adjustments. It is probable that more attention should be given to the child who is normal, and the factors that determine his behavior, in order that he may attain the highest type of development possible. Brown of Oxford says: "It is most important to keep the normal distinct from the abnormal; to look toward children so far as possible, from the normal point of view. We look out for deviations from the normal and deal with them, but with the feeling and conviction that as in every child, there is a natural tendency toward health, so in the wider sense, there are tendencies toward goodness, beauty and truth, which may be checked by various difficulties." Study of the normal child serves as a standard for the estimation of the abnormal. With the accumulation of such data, it is reasonable to conclude that many conditions which tend to develop emotional upsets with their resulting undesirable reactions can be prevented.

Since the parent, and especially the mother, comes in closest contact with the child; is able to observe him in more different situations than any other person, it would seem that her unique opportunity places upon her the responsibility of making a valuable contribution to the child's nature and needs. This study was undertaken with the definite purpose

of throwing some light upon the relative importance of various factors in the environment influencing the behavior of a normal four year old child.

The child, Bill B. Snyder, a son of the writer, was fifty-three months of age at the time this study was begun. He was born in Chicago, Illinois. At birth he weighed nine and one-half pounds. He has never had a serious illness, with the exception of measles at eight months of age. He was breast-fed until four months old, when he was put on modified cow's milk. At this time he developed a serious case of eczema which lasted until he was two years old.

The parents are both American, with American ancestry tracing back to the early settlement of this country, from nationalities including German, Scotch Irish, Swiss and French. When Bill was two years old, the death of his father made necessary the removal of the family, including a brother, five years older, and a sister, three and one-half years older, to Manhattan, Kansas, where the residence has since been. The mother taught the following year in the Manhattan High School, and at the present time is doing graduate work at the college.

At the age of forty-three months, Bill entered the nursery school at the college and was still enrolled when this study was undertaken. A medical examination at the time of entrance showed no physical defects, except a slight

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Nursery School

Child's Name Bill Snyder Age 3 years, 9 months

Date of Examination June 25, 1926.

Head Normal

Neck Normal

Chest Normal in shape. Lungs normal. Heart = Aortic regurgitation.

Abdomen Normal

Reflexes Normal

Genitals Normal

Eyes \_\_\_\_\_ Ears Normal Nose Normal

Teeth Good Mouth Normal Throat Normal

Posture Good Arches Normal Adenoids-Small  
Tonsils-Normal  
Thyroid-Normal

General Appearance

Skin Good Bones Good Muscles Good

Nutrition Good Evidence of Rickets None

Laboratory Tests

Urinalysis

Glucose- Negative  
Albumin- Negative  
Specific Gravity - 1018

Blood

Wassermann  
Blood count  
Hemoglobin 90%

Blood Pressure 90 - Systolic. 0 - Diastolic

Vaccination Scar None

Remarks:

Signature of Physician.

B. Belle Little.

aortic murmur. At two subsequent examinations, this was still in evidence. He is well developed physically, and has shown almost steady growth since birth. He has very good muscular coordination. A mental test, given by the class in mental measurements, Department of Psychology, July 1926, showed an intelligence quotient of 130, and one given in May 1927 showed 138.

Bill's home is modern, comfortable and in a neighborhood of Manhattan made up largely of the families of college instructors.

From infancy, Bill has shown a tendency toward negativism probably aggravated by the commands from his older brother and sister, self assertion, and dominance over smaller children with whom he has been associated. He has been meddlesome and more destructive than his brother or sister. He has always been extremely active, and fond of plays involving a large amount of muscular activity. He seems to get much joy from climbing trees and garages. Some of these tendencies, have, no doubt, been exaggerated by his association with an older brother. He has from babyhood kicked, and moved around at night, but does not talk in his sleep, unless ill.

Up to the age of eighteen months, when his father's illness began, his care had been systematic as to food, exercise and sleep. A period of eight months of illness, in

the home, rather upset his usual routine, but since then his care has been fairly well regulated. His food habits have presented some problems which have been helped in the nursery school. He very early evidenced an aversion to eggs which has not been overcome. He has refused, consistently to eat cooked cereal until recently. He now eats cream of wheat with no objection. It might be mentioned that his older brother had the same aversions but had overcome that toward egg, before Bill was old enough for suggestion to have influenced him. Thumb-sucking, has never been a problem. He was three years old before going through the night dry.

The method used in this study is a combination of biographical and experimental. The behavior of the child was recorded day by day, with details of surrounding conditions and circumstances at the time. Note was made of the physical condition, weather, behavior of companions toward Bill, time of day, and type of activity engaged in, as related to specific behavior acts. If we can learn more about the relation between certain situations and certain forms of behavior, it seems reasonable to conclude that many of the behavior problems may be eliminated by controlling the environment.

In the study of children, results gathered from strictly controlled experiments, cannot take the place of observations made on the child in his natural setting. Gesell says: "Now

in the very nature of things; almost every specific bit of behavior in infancy is so complicated by variable and inaccessible factors, that perfect and complete duplication, can scarcely be hoped for, except under very special conditions." "The science of psychology is not yet so refined and organized that we can afford to abandon the natural history approach to our problems," which, he defines as: "an interpretative study of child behavior in its natural or accustomed setting."

The objection, that a mother cannot make an unprejudiced study of her own child, has been eliminated in so far as possible, by the method of recording behavior. Only what was actually observed was recorded with relative factors at a given time. By this method, the notes may be viewed objectively. Gesell says: "One of the most important sources of information in regard to the social behavior of young children is the mother. Direct observation of this kind reinforced by systematic exploration of the psychological questionnaire, may be made to yield data of clinical usefulness." Stern, who with his wife, made prolonged studies of his own children, in regard to method says: "The first place, must of course be given to direct observation of children, by such persons who live with them in a constant relationship of confidence and familiarity. And because no one in the first six years, is nearly so much with the child, sharing its smallest joys and sorrows, as the mother, she it is who seems



destined above all others to do this service to child psychology."

With some scientific training, it is possible to take that which seems commonplace, and apparently known to all, and reveal it in a totally new light. It often proves to be true, that what is commonly looked upon as fact, on investigation proves to be erroneous. A prolonged study of individual children seems the logical one, and admitting its defects, the advantages of studying the child under natural conditions has great value. Written behavior records provide a means of bringing concisely before any one dealing with children, the direct or indirect causes of behavior and the extent to which various methods of dealing with behavior are successful. It enables one to evaluate factors over which there may be control and opens the way for elimination of those which are undesirable. In the case of parents or teachers, it becomes a study of self, as well as of the child.

The controversy among scientists as to the comparative influence of heredity and environment, upon the lives of human beings, is far from settled. There still remains much to be learned about both. It seems necessary to concede that each plays an important part in the possibilities and development of the individual; that each is a complement of the other. While our potentialities may be irrevocably determined, by heredity, it remains for the surrounding influences to

reveal the gifts or capacities of each child. Blanton says: "No single thing the organism does, depends alone upon heredity, or alone upon environment; always both have to be taken into account." The power of environment, is so great that it may possibly outweigh inheritance. A relatively poor inheritance with exceptional surroundings often brings results superior to a good inheritance with poor surroundings. Too much emphasis on heredity may result in a shifting of responsibility. It might lead to withholding praise from those who have labored to uphold ideals, and blame to those who have destroyed them.

Scientific studies of children point to the first five years of life as being the period of greatest plasticity and therefore the period in which bodily, intellectual and emotional habits are largely formed. The long period of infancy in man is the significant factor in his development. It provides a period which makes possible the lasting effects from influences of an extremely varied environment. Even though reared in the same family, the environment of each child is as widely diverse as are his hereditary characteristics. His physical surroundings, family, neighbors, school and even his own personality, which affects others in their reactions toward him, are all part of the forces affecting his development. Each child is a part of the environment of the others. As Ulysses said, "I am a part of all I have met."

The attitudes of parents to each other and to different children in the family, as well as attitudes to problems of life have their marked influence on the small child. Many of these most subtle influences have been overlooked. It has been thought that a reasonably good home, food, sleep and sympathetic attention to physical wants were the sum total of a child's needs; and that most parents were endowed, with instinctive knowledge which would enable them to understand their children's natures and provide their needs. To appreciate the fallacy of this position, one has only to look around at the majority of the homes, which are constructed and equipped almost entirely to meet the requirements of adults.

When a child is born, the essential point to consider, is that he is here, and the results are in the hands of those who are responsible for him. His heredity cannot be changed, but his environment may. Conklin says: "No sort of environment can do more than bring out hereditary possibilities. On the other hand these possibilities must remain latent and undeveloped unless they are stimulated into activity by environment." "In all organisms, the potentialities of development are greater than the actualities."

Some of the first serious studies relating to child care were made by medical men whose profession made it necessary to study the child at birth. Lack of space forbids any

detailed account of such studies, but attention will be called, chiefly to a few who have recognized the importance of environment in the development of the child.

Rousseau, in 1762 in his *Emile* demanded free activity for the child, recognized his personal rights, and placed emphasis on the study of the child as a solution of future problems of man.

Pestalozzi, in 1780 followed and clarified the ideas set forth by Rousseau. He was one of the first to make a study of an individual child and his "Journal of a Father" is an application of the view of the "naturalists", that the character of an individual is shaped by his environment, which, he maintained, should be reduced as nearly as possible to natural conditions.

Froebel, in 1826, continued the main ideas set forth by Rousseau and Pestalozzi in the beginnings of kindergartens which provided environment for "self activity" of the child, to fit the comprehension of the child and keep him happily employed, which was eventually to develop power, cultivate observation and memory, produce accuracy, teach the child to think, in short enable him to educate himself.

Preyer, a German Physiologist, in 1880, wrote "The Soul of a Child", from a study of his own son, who was observed from birth until the end of the third year. His observations were made under exceptionally favorable circumstances for the

child was trained under the Pestalozzian principle of letting alone, with unconscious supervision in the carefully guarded environment, supplying a great number of centers of interest full of indirect suggestion, planned to meet growing needs from the beginning.

The studies of Charles Darwin in 1840 on his own son mark the beginning of study as a basis for scientific generalization.

The work of Millicent Shim, in her "Biography of a Baby", a study of her niece during the first year of life, stands out as a classic of its kind. It shows her realization of the importance of early environment in child development as she says: "leading him to reveal himself without at all meddling with him or marring his simplicity."

Mrs. Penton, from a similar record of her own baby, more recently, has given us, "The Psychology of Babyhood", its aim being to point out the great importance of influences surrounding the first years of life both for the sake of their immediate effects and for the sake of their influence on lifelong mental and emotional habits.

The studies referred to have all used what is known as the biographical method of studying children, that is, recording the child's behavior from day to day and from these records, making generalizations. Different methods of importance have come into use, among which are the questionnaire and experimental, or a combination of two or more

methods.

The studies of G. Stanley Hall, stand out prominently as examples of the use of the questionnaire method. He set his students to work studying the behavior aspects of children through definite questions asked to parents concerning them.

John Watson, has recently done work of importance on the behavior of children by studying them under controlled conditions. His studies on infants at Johns Hopkins University Hospital has been of value in showing just what reactions of children are learned, rather than instinctive, and the bringing to light the importance of the conditioned reflex, in the early training of children. He advocates what is known as the reaction hypothesis, which in substance is this: all forms of human behavior are reactions to definite stimulation which may be simple (as color or sound), or complex (situation) and that the response is usually complex. He has shown how behavior may be studied objectively.

Research centers are being formed in many of our colleges and universities. Parent training courses have taken a definite place in School Curricula. Of great importance is the effort to unite theory and practice through parent study groups all over the United States, and through such work as is done by the American Association of University Women. Its purpose is to awaken college women to a real-

ization of the significance of the preschool age, to guide parents in intensive study, and to contribute through research, information of scientific worth concerning children of preschool age.

This study was begun in February, the beginning of the second college semester and was continued until June the eighth. The behavior of the child was observed, both in the nursery school and at home. In the nursery school, the conditions are somewhat controlled. Many types of activity are possible, with a variety of playthings, and children of nearly the same age. In the home, conditions are more variable. The other members of the family are the mother, sister, brother, and a college girl. Guests have been present on several occasions. The home provides a yard and basement for play and a fair number of playthings. Some control of conditions is possible, in that the mother has used persistent effort to prevent undesirable reactions in the child, from influences due to nervousness and impatience on her own part, or through impositions from brother or sister. The college girl in the home has shown unusual insight in dealing with the child.

In the nursery school, behavior was recorded together with such environmental factors as: physical condition, time of day, type of activity, weather, companions and things said and done. The notes taken in the home, were recorded as soon

as possible after the occurrence of acts, but care was taken to prevent the child from realizing his acts were being described. The same environmental factors were described in the home as in the nursery school.

In order to find some basis for classifying different acts, those acts which are generally praised by adults were placed in one list and those generally condemned, placed in another. It is, of course, understood that acts which are desirable in one case, may be undesirable in another. In such cases, they were listed according to whether they were ordinarily considered by adults as being desirable, or undesirable behavior. Two record sheets of squared paper were kept for each day, one for each class of behavior. On one side were listed undesirable acts. At right angles to this were listed environmental factors which were present. These were checked against the time of day, companions, weather, type of activity, behavior of companions, and physical condition. A chart illustrating this will be shown. Types of activity were classified as follows: (a) exercise, apparently done for enjoyment of the muscular activity involved, (b) imaginary plays, (c) purposive activity (building etc.), (d) routine (eating, dressing), (e) games (f) absence of aim or purpose (nothing to do), (g) miscellaneous, (h) music, (i) stories.

The reader must realize that in this study there are very



definite limitations to conclusions which may be drawn. Only one child is being studied and no two environments are exactly alike. A child is constantly changing with age, and there are individual differences upon which depends their reaction to surroundings. The length of time given to the study is short. In addition, it has been impossible to observe the child, constantly, and in relation to some companions with whom he is quite often associated. The physical condition in most cases has been judged entirely by appearance or definite manifestations of illness. In addition there are always chances for error in classifying behavior or types of activity. For example many activities classed as imaginary may have much that is purposive in them.

#### ACKNOWLEDGMENT

The writer wishes to express to Dr. Helen Ford, Head of the Department of Household Economics, her appreciation for the helpful advice, inspiration and constructive criticism which made this study possible.

#### DISCUSSION

The factors influencing the behavior of the child will be considered under the following heads: (1) physical factors, (2) persons associated with the child, (3) methods of discipline, (4) activities engaged in.

Desirable  
 Behavior  
 Obedience  
 Contented  
 Offers to  
 Help  
 Thought-  
 fulness  
 Dom.  
 Pleasantly  
 Self-  
 Reliance

Relating  
 Factors

Ap. Illness  
 Forced by Brother  
 Forced by Others  
 Too Much Help  
 Shut Inside  
 Teased  
 Hit or Fought  
 No Playmates  
 Cloudy  
 Rainy  
 Sunny  
 Very Warm  
 Very Windy  
 Depressing  
 Brother  
 Sister  
 Mother  
 College Girl  
 Others  
 Suggestions  
 Rest of Activity  
 Opposition  
 Thwarted  
 Time  
 7-9 A.M.  
 9-12A.M.  
 12-3 P.M.  
 3-6 P.M.  
 6-8 P.M.  
 Activity  
 Exercise  
 Routine  
 Imaginative  
 Games  
 Purposive  
 Nothing to do  
 Miscellaneous  
 Music  
 Stories  
 No P. M. Nap

Undesirable Behavior

Disobedience  
 Urged  
 Arguing  
 Destructive  
 Tantrums  
 Irritability  
 Teasing  
 Fighting  
 Quarreling  
 Crying  
 Sulking  
 Excessive Noise  
 Dom. Disagreeably  
 Taking Others  
 Things  
 Restlessness  
 Telling Untruths  
 Hyper-  
 Acidity

Relating  
Factors

Ap. Illness  
 Forced by Brother  
 Forced by Others  
 Too Much Help  
 Shut Inside  
 Teased  
 Hit or Fought  
 No Playmates  
 Cloudy  
 Rainy  
 Sunny  
 Very Warm  
 Very Windy  
 Depressing  
 Brother  
 Sister  
 Mother  
 College Girl  
 Others  
 Suggestions  
 Rest of Activity  
 Opposition  
 Thwarted  
 Time  
   7-9 A.M.  
   9-12A.M.  
   12-3 P.M.  
   3-6 P.M.  
   6-8 P.M.  
 Activity  
   Exercise  
   Routine  
 Imaginative  
   Games  
 Purposive  
 Nothing to Do  
 Miscellaneous  
 Music  
 Stories  
 No P.M. Nap

Many behavior difficulties of children have been attributed to physical conditions, such as fatigue, hunger, and physical defects. There is much said about the effect of fatigue, but just how it effects the behavior of children seems to be obscure. Seaham and Seaham of the University of Minnesota, as a result of their investigations say: "All children are susceptible to fatigue. That child will better withstand the ravages of fatigue who is free from physical defects, free from organic diseases, or some other constitutional inferiority, who has a stable and steady nervous system, who day in and day out, follows in his living the laws of rational hygiene." The signs and symptoms of fatigue vary greatly in different children, due to different underlying causes. A fatigued child is liable to intensified reactions, is fidgety and restless, easily overstimulated, all of which adds to his fatigue and therefore diminishes his desire for sleep and rest. Benjamin C. Gruenberg says: "The mental processes and the emotional states or moods of the child are easily modified by comparatively slight departures from the normal or routine conditions, and they in turn, react vigorously upon the digestion, the circulation, the breathing and the nerves." He adds, "The increased irritability of the fatigued child, the despondency or sulkiness associated with constipation and the sluggishness of the poorly oxygenated organism, illustrate the dependence of essential elements in

behavior upon physical conditions. Fatigue not properly remedied, illustrates the tendency of many sets of reactions to develop into a chronic state, or vicious circle."

While physical activity is of great importance, intervals of rest must be supplied to replenish strength. Insufficient sleep is one of the principle factors in breaking down the reserve strength of the child. Studies have shown that loss of sleep causes a decrease in the number of red corpuscles, while the beat of the heart is accelerated to compensate for the poverty of blood. Most authorities agree that the minimum amount of sleep necessary for a four year old child is eleven to twelve hours at night, with an afternoon nap or rest. The afternoon rest is insisted upon, even though the child does not sleep.

There are a great many factors which tend to disturb the sleep of a young child. Of most importance are: lack of a room alone, elder children in the family, muscular fatigue, indigestion, improper ventilation or wrong temperature, excitement and increased daylight in summer. It is not always possible for a room to be set apart for the use of one child. A young child resents being put to bed, when the same procedure is not made obligatory upon brothers and sisters somewhat older. Increased daylight makes the delights of outdoor play seem endless, and is not conducive to sleep. A child may play until he is so fatigued that it is impossible

to go to sleep, or he may be subjected to such exciting surroundings that sleep will not come.

Quiet, a comfortable bed and clothing, proper ventilation and preferably a dark room, are all aids to the sleep of a young child. If he is conditioned to these things and put to bed regularly, the difficulties may be very much decreased. The child in this study has been getting from eleven to twelve hours of sleep at night with usually an afternoon nap or rest. He has slept better in the afternoon in the nursery school than when at home with his brother and sister. Most of the time he has had a quiet place in which to sleep, but has slept at night with his older brother, a factor often causing disturbance. On the days when he had no nap, that fact has been checked against his behavior. The long spring days have made it difficult to get him to bed promptly at eight o'clock, but he has been allowed to sleep as long as he would in the morning. With the exception of a few evenings when guests were present, one evening at a picture show, and two at a school operetta, his evenings have been spent at home quietly with the family.

The proper amount and kind of food, with regularity of meals, is very closely allied with rest and fatigue in the habits of the child. Sesham says: "Irrational dietary habits are undoubtedly amongst the most important causes of chronic fatigue in the school child." B. C. Gruenberg says: "In the

day by day treatment of the child with a view to both present comfort and to future character and happiness, we cannot separate the mind from the body. Attention must accordingly be given from the start to the conditions that insure physical comfort, and these include such things as food, ventilation, etc." The formation of correct physical habits in the child is the basis for character development. Children thrive on routine and when this is disturbed other irregularities follow. A child trained for regular meal times is upset if irregularity occurs. Children are often so interested in play they are reluctant to leave it to eat. It often happens that intervals between lunch and dinner are longer than between breakfast and lunch, causing the child to become hungry.

Bill's meals have been fairly regular. The noon lunch has been taken five days a week at the nursery school. He has had orange juice and cod liver oil in the morning, with a glass of milk following the afternoon nap. The aim has been for the evening meal to be promptly at six o'clock. Some occasions arose when the time was somewhat later. Very frequently he would ask for milk or bread and butter before the meal was ready with the statement that he was hungry. Often he helped himself to food. As to content, his food has fairly well met the most approved requirements for a young child.

As was mentioned, the only physical defect found in this child was a slight aortic heart murmur. Gruenberg (B.C.) in his list of functional sources of irritation gives defects of the heart as one of them. The period of greatest growth of the heart is from two to six years, and because of this, there is great strain and susceptibility to infection. With a heart already defective, the strain might be more intense. It is very difficult to enforce proper care for a weak heart with an active child. We have no way of determining what the effect of the slight defect in this case might be.

In this study since there was no way to determine definitely the fatigue of the child, the method used was to check the time of day with relation to rest and meals against specific behavior acts. High per cents of such acts as crying, fighting, irritability and temper tantrums are found to come near the end of the day. Since the number of times there was no afternoon nap was small, it is difficult to determine the relation. It is noteworthy that of the total number of times listed as good humored and contented, only 3.07 per cent occurred when he had no nap, while of the total number of anger tantrums 9.5 per cent occurred on days with no nap, of crying, 8.56 per cent, irritability 17.94 per cent, and hitting or fighting 6.24 per cent.

Probable hunger has been determined as fatigue by time relation to meals, or by a definite statement of the child.



A large number of cases of irritability are found coming before breakfast and in the late afternoon, indicating probable hunger. In a number of incidents before the dinner hour - six o'clock, he asked for food or helped himself.

Illness in a child makes the nervous system more irritable and over-responsive. Benjamine C. Gruenberg says: "Many physical or emotional disturbances are caused by physical derangements. The body is basic in the sense that upon its health depends the energy and balance of the mind." Bill, at no time during this study has suffered illness, other than a cold, so that there has been only slight opportunity to observe the effect on his behavior. Of the total number of times counted when he was good humored and contented 2.2 per cent was during the periods having a cold. Of the total number of cases of irritability 13.88 per cent occurred when he had a cold, and 3.7 per cent of the cases of crying.

Of great importance in the behavior of a child are his companions or the persons with whom he is associated or comes in contact. The acts, fears, viewpoints, strength and weakness, of those in the environment help to determine certain responses. Blanton says: "Of equal value with the conditioned response in education of the child is his capacity to learn from the muscle tensions of an individual his attitudes toward a given object. This capacity is shown very early in infancy and indeed seems to account for much behavior which is usually

thought of as inherited." He adds, "There seems to be some direct method for the translation of attitudes without the necessity for experiencing them." A possible explanation is, "Through vision and direct contact a mimetic capacity in the individual is stimulated and he takes in his own muscles the postures and tensions of persons observed and translates them in terms of glandular or activity." "It is reasonable to believe that the attitudes and feelings of those around us, must have some method of reaching our minds through the touch and eye." Horsworthy and Whitley say: "The baby by reflex imitation shares the moods and emotional attitudes of those about him; later conscious imitation finds its material in the actions and words of his companions. People tend to grow like those with whom they constantly associate. The more immature the character, the more this is true."

Teasing, fighting, opposition of other children, and thwarting of desire are all factors that have directly relation to the people in the environment. A youngest child in a family is usually the object of a vast amount of teasing from older brothers and sisters, and often adults, as well as petting. Horsworthy and Whitley say: "Teasing in moderation is thought to be good for both the one teased and the one teasing, as it arouses initiative, but if exercised unduly or habitually it is apt to degenerate into bullying." Constant irritation from teasing keeps a child in an emotional tension

with its accompanying irritability and crying. In addition the child is apt to become conditioned against the person who does the teasing, in such a way that he will associate any act of that person with the feelings aroused by the teasing.

Most writers are of the opinion that fighting among children of equal size has its advantages, as well as its dangers. Perhaps the emotion of anger which follows being struck, by another child, should be allowed to work itself off by fighting back. There is a certain "give and take", that a child needs to learn. Earnest Hamlin Abbot, says: "As in walking, so in living with our fellows, some friction is necessary. To deprive a child of friction with other children is to keep him in slippery places. Unless we wish to teach him how to elude his kind, we shall not begrudge him his wholesome contests of skill, of wit, of strength and of temper." The danger to a younger child probably lies in actually physical injuries resulting from his inability to cope with those of greater age, and superior strength, and the accompanying nervous tension, hatred and vindictiveness, along with the establishment of attitudes or values which are on a low plane. It is probable that adults interfere more than is necessary in disagreements among children. This is often due to their dislike of the unpleasantness to themselves which is involved. Often it is impossible to be impartial in judgment. The children are deprived of the very

wholesome training of settling difficulties themselves, a valuable means of attaining control of temper and moods.

Every child has to face opposition of other children and adults as well as thwarting of desire. When he is ready for a certain thing and he is thwarted or "blocked" annoyance is produced, and he responds by fighting or some other means of relieving his feelings. A continual stirring up of emotions opens the channel for the development of the nervous child. On the other hand, as Walsh and Foote say: "The knowledge that one cannot always have his own way and that the world is not always ready to do ones bidding is one that is best learned in childhood, else it may never be acquired or acquired only at the cost of a destructive waste of nervous energy."

In this study, the cases of teasing come almost entirely in relation to the brother and sister, notably the former. Of the total number of times of crying 35.31 per cent were when teased, of the total cases of irritability 20.7 per cent were when teased. In the nursery school very few instances of teasing occurred, probably due to the more nearly equal age of the children. Of the total number of instances of fighting 31.2 per cent occurred when Bill was hit or fought, 62.4 per cent when he was opposed by other children.

Of the cases when he was definitely destructive there was either restraint of activity or thwarted desire.

The disagreements in the nursery school where Bill was in conflict with other small children seemed quickly forgotten. In many cases where fighting occurred with no injury to either child, they were allowed to settle the difficulty without interference. There was a marked difference in the emotional reaction when the persons involved were older. He was at a decided disadvantage in conflicts with his brother or sister, while in the nursery school he had the advantage of being slightly heavier and stronger than any of the children, and possibly at times it would have been beneficial to him to have been thoroughly overcomen by one of the children. He did, in several instances receive some very definite punches with, I believe, a wholesome result.

Bill has in different instances resented being forced to any action either by his mother or brother. In several cases, when told by his mother to do a definite thing, he would reply, "Don't make me do it. Go away, and I'll do it." The brother provoked many conflicts by his impatient use of force with him. Bill, repeatedly shows irritability when being given help in routine tasks. This may be explained to some extent by the fact that in the nursery school the children have nothing done for them which they can possibly do for themselves. Another possible explanation is the fact that the mother is working under conditions which make the prompt dispatching of all routine imperative and the child cannot always be

allowed sufficient time at home to do these tasks unaided.

Authorities on children are agreed that a young child is most easily influenced by what is termed suggestion.

Burnham uses this definition formulated by Titchener for suggestion: "Any stimulus external or internal that touches off a determining tendency, accompanied or unaccompanied by consciousness." H. Addington Bruce, gives this very simple explanation: "Suggestion properly defined, means nothing more than the intrusion of an idea into the mind in such fashion that it is accepted automatically, overcomes all contrary ideas, and tends to a specific course of action." The influence of persons in the surroundings has already been discussed. Benjamine C. Gruenberg says: "Any sensation or act that impresses the child, whether through its intensity, through its frequency, or through its pleasurable accompaniment will set up a reaction that tends to repeat the sensation or the reflex. From imitating sounds and gestures and movements, the child proceeds to react to suggestions in the form of words, which at first have no meaning except that they are associated with and suggest actions." Burnham makes clear that conditioned stimuli are just as effective in suggestion as the original biologically adequate stimuli. Suggestion, then in plain terms, is used to get a child to do the thing he should do, instead of the thing he should not do. The error of which most parents are guilty - that of giving

negative orders tends to develop the unbalanced child. During this study, many transgressions have occurred, but the aim has been to use the method of positive suggestion as often as possible. To a busy mother the temptation to surround a child with continual "dents" is almost overpowering. It requires the utmost initiative and thought to keep ahead of a busy alert child in thinking up suggestions which will keep him headed in the desired direction. Of the total number of cases of obedience, 56.36 per cent are found to be preceded by definite suggestions in words, 6.46 per cent of the total times of contentment and good humor were a result of suggestion. Two rather interesting incidents will illustrate this. On one occasion, the mother was busy with housework and asked Bill if he would bring some wood from the basement for the fireplace. He replied, "I am busy playing store and do not want to." The suggestion was made, that he sell wood from his store and deliver it. He immediately brought the wood and enjoyed the game at the same time.

A second incident occurred when iodine was to be applied to a cut. He drew away, cried, and said, "I don't want it. It will hurt." The mother said, "All right, let us see what a big boy you are. I'll hold the bottle and you put it on yourself." He responded at once, and afterwards related to several that he could put iodine on his own foot and not cry.

In view of his tendency toward negativism, the mother has

avoided giving any direct commands, but suggests that he might like to do certain things, or help mother. When the response is as desired it is followed by praise. Mothers are prone to taking for granted the good acts, and blaming the bad.

It has been necessary in a number of instances that desires be thwarted and that he be forced to comply with certain demands. Usually in case he became angry and rebellious attracting his attention to something interesting would change his thought and reaction. Often suggesting that he put a smile on his face was sufficient. This would be applying a rule, which the psychologist calls "change of bodily expression". In instances where he stiffened or kicked, he was lifted to the piano where the least move would mean falling - "law of effect". This would bring immediate relaxation. In some cases he was ignored, usually a very effective method. In a few cases he was spanked - "counter irritant or shock", which brought relaxation. The method of spanking has its dangers in that the spanking is apt to be associated in the mind of the child with the giver, rather than the act itself, although some writers still maintain there are times it is the best thing to do.

Chapin says: "By filling life with activities that enlist the interest of the child there will be neither time nor opportunity for the lower traits to develop. Let their



energies be directed toward a constructive and creative outlet." James says: "Every idea tends toward an act." Walsh and Foote, in discussing the nervous child speak of "Short circuited energy", that is, energy with no legitimate channels for outlet resulting in unstable conditions generally termed nervousness. Burnham, in his book, "The Normal Kind", maintains that the whole basis of normality, is a process of integration, from lower to higher levels, of the personality by means of doing things that are significant, or "co-ordinated activity, physical and mental, in the doing of significant tasks." He defends his use of the word "task", as a broader term than project or problem, in that it involves serious, purposeful activity. He says further: "The whole psychology and pedagogy of discipline is bound up with the question of suitable tasks, since with opportunity for suitable tasks, preventative discipline, is likely to be all that is needed; and, as regards discipline of the higher order, nothing can give such training in the development of responsibility, as the doing of a task which the child himself chooses and attempts in his own way a situation where he feels himself personally responsible." He emphasizes for the child the importance of (1) a task (2) a place (3) freedom to take a task or leave it and freedom to form one's own plan.

In this study, activities have been classified into the following groups: (1) purposive as building (2) imaginary as

play house (3) routine - eating and sleeping (4) exercise - for joy of bodily movement (5) non purposive - nothing to do (6) games (7) stories (8) music (9) miscellaneous. Of the total number of cases of crying 20.33 per cent occurred during exercise, 13.91 per cent during purposive activity, 31.03 per cent during routine, 3.21 per cent during imaginative plays, 5.35 per cent nothing to do and 19.26 per cent miscellaneous. In considering the cases of crying either in the purposive or imaginary group, we must take into account that many occurred in the nursery school, where there was opposition of other children and that many imaginary plays, were also somewhat purposive. The rather large percentage coming during routine should be considered in the light of the tiresomeness of routine tasks for a child as well as the fact that routine occupies a large amount of a young child's time.

Of the cases of disagreeable domination, 28.96 per cent occurred during exercise, 18.1 per cent imaginative plays, 39.8 per cent purposive, 7.24 per cent routine. Many of these cases occurred in the nursery school, where there was opposition of other children.

Of the total number of cases of excessive noise, 45.6 per cent occurred during routine and 53.2 per cent when he had nothing definite to do.

Of the cases of definite destructiveness, all occurred

when there was nothing to do, or when there was restraint of activity.

More urging was needed for routine tasks than for others.

Of the total number of anger tantrums, 52.25 per cent occurred during routine(most of them at bed time), 23.75 per cent when there was nothing to do, and 14.25 at miscellaneous times.

Of the total number of cases of hitting or fighting, 34.32 per cent occurred during exercise, 9.36 per cent during imaginative plays, 31.2 per cent during purposive activity, 6.24 per cent nothing to do, 9.36 per cent miscellaneous, 9.36 routine. Again, opposition of other children in the nursery school, and teasing of brother during routine, must be considered.

Of the total number of cases of irritability 26.22 per cent occurred during exercise plays, 6.94 per cent during purposive activity, 57.96 per cent routine(extremes of day), 12.42 per cent nothing to do, 8.42 per cent miscellaneous.

Of the total number of cases of contentment, 19.29 per cent were during exercise, 7.98 per cent imaginary plays, 20.53 per cent purposive activity, 32.53 per cent routine, 2.66 per cent games, 1.91 per cent nothing to do, 9.88 per cent miscellaneous, 1.51 per cent music, 3.41 per cent stories. Here we must consider the fact that there is a

large amount of routine for a four year old, and the mother had more opportunity for observation during those periods. A four year old plays games very little.

During this study, the incidents where activity has been restrained have occurred as punishment for short intervals, at home and in the nursery school, during story periods, naps; when guests were present Bill was or away from home, or on rainy days. He has at no time been wholly without playthings. The equipment for play at home is in no sense as adequate as in the nursery school.

21.5 per cent of the cases of crying occurred during restraint of activity.

In all cases of restlessness there was, in a way, restraint of activity either at the table, guests present, or when he was away from home. Eighty-five and five tenths per cent of the total number of cases of anger tantrums occurred when there was restraint of activity.

Of the total number of cases of running away, all occurred when there were no children to play with and in each case, he went to a home where there were more toys than his own.

Much has been written in regard to play and its importance to childhood. Several outstanding theories have been put forth as to the meaning or purpose of play in the life of the child. None alone are entirely satisfactory, but all

agree that the period of childhood is definitely a part of life and that play is vitally essential to the physical, mental, social and moral development of the child and that it should be graded and suited to the age and capacity of the child. One writer defines play as an incomplected act. Benjamin C. Gruenberg defines it as "impulses to action due to the general complexity and irritability of the organisms, the form of the play being determined by a combination of influences in the materials and processes present in the environment." It seems to combine physical exertion with a feeling of pleasure, giving experiences which react upon his mental processes forming associations, thinking, habits, and developing skill.

Seaham says: "Feed the growing human being with the sort of experiences from which, from year to year, he shows a natural craving and he will develop in adult life a sounder mental and nervous mechanism even though he may seem to be 'wasting' a great deal of his growing time in the eyes of those for whom the one channel of learning are books and verbally communicated information. Do not block his specific impulses and natural desires. The chief education of the young is through his motor faculties."

In this study there has been found no relation between behavior and weather conditions. At no time have there been extremes of weather, and the cases of desirable or undesirable

behavior seem about evenly distributed among cloudy and sunny days.

The method used of classifying behavior into two groups, one desirable and the other undesirable was largely for the purpose of convenience. As regards any conclusions made, it makes no difference into which class a specific act falls, since the essential point is the relation of environmental factors present at a particular time.

In discussing behavior, all of the acts from both classes have been grouped as follows: (1) those acts which indicate an emotional condition within the child, as: crying, whining, sulking, anger tantrums, irritability and such opposites as: good humor and contentment, (2) those acts which are definitely social in their nature or which affect other persons in the environment as: teasing, dominating disagreeably, taking things belonging to others, definite destructiveness, hitting or fighting, quarreling, arguing, and their opposites as: dominating pleasantly, thoughtfulness for others, volunteering help, and sharing with others. It is, of course, realized that emotion is not absent in this group, (3) those acts which might be distinguished as indicating "short circuited energy" as: excessive noise, restlessness, hyperactivity and running away, (4) those acts which are strongly negative or positive as: definite disobedience, much urging needed to get obedience, with obediences, (5) a miscellaneous group including

acts which could not be included in the groups mentioned as: telling untruths and self reliance.

According to Watson, as a result of his studies on infants, there are but three unlearned or instinctive emotional reactions - fear, rage and love. Other emotional acts are developed from these by conditioning. Stated simple this means, that any stimulus acting simultaneously with a stimulus which will produce one of these original responses, will so affect the nervous system, that the response will occur with the second stimulus alone. In other words, the second stimulus becomes a "conditioned stimulus", which means that these various emotional acts are brought about, by factors in the environment. He says: "Unconditioned stimuli with their relatively simple unconditioned responses are our starting points in building up these complicated conditioned habit patterns, we call our emotions. In other words, emotional reactions are built in and to order, like most of our other reaction patterns. Not only do we get an increase in the number of stimuli, calling out the response, (substitution) through direct conditioning and through transfers (thus enormously widening the stimulus range) but also we get marked additions to the responses and other modifications of them. Another set of factors increasing the complexity of our environmental life must be taken into account. The same object (for example, a person) can become a substitute

stimulus for a fear response, and a little later for a love response, and in another a rage response."

In this study, of the total number of cases of crying, 17 per cent occurred around the period of arising in the morning, three fourths of them before breakfast. Thirty per cent occurred from nine until twelve o'clock, the play period with slightly more than three-fourths of these between 10 and 12 o'clock. Twenty-two per cent occurred in the late afternoon, and 18 per cent near bed time. These figures all indicate a direct relation to fatigue and those occurring before breakfast, in the late forenoon and late afternoon, a relation to hunger. However, it must be remembered that these periods are play periods and the child is reacting to behavior of other children in the nursery school and his brother and sister at home. Watson says: "Crying may be due to organic factors such as sleepiness, hunger, colic, etc. Mrs. Jones, who worked with Watson, found in a study of 70 children, in the Heckscher foundation, that the largest number of cries, probably due to intro-organic causes, occurred between nine and 11 o'clock in the morning. As a result of this finding, the institution placed its rest hours before lunch instead of after, with two rest periods for very young children. This considerably lessened, the amount of crying and disturbed behavior due to these factors. It should be mentioned here, that the nursery school allowed a short rest period just



before the noon meal. This study shows 10.75 per cent of the cases of crying coming at or near the afternoon nap time. This is rather significant since there were only 8.56 per cent of the total number of times when there was no nap.

Other factors of importance in relation to crying are: being teased, being hit or fought, thwarted desire, restraint of activity and types of activity engaged in. Of the total number of cases of crying 35.31 per cent occurred when the child was teased, in most instances by the brother or sister. Older children seem to get an almost fiendish delight from teasing a younger child. It may be that they repeat upon the weaker individual some of the things which have been inflicted upon them. They may be jealous of the attention the younger child receives. In other cases, in fact a very large proportion, the delight seems to arise from the reaction of the child teased. In Bill's case, this seems to be the explanation. He responds immediately and gives a peculiar cry given at no other time. It seems that certain forms of teasing bring a response more quickly than others. For example, he especially dislikes certain little rhymes in which his own name is used: as: "Bill Snyder ate a spider", or "Bill, Bill, took a pill, and then ran down Blument Hill." Another type which he dislikes is having faces made at him. His sister has a peculiar manner of rolling her eyes and puffing out her cheeks which is extremely annoying to him. Other

forms of teasing observed are: playing jokes, pushing and poking, pulling bed covers, calling him, "cry baby;" threatening to do certain things to him, restricting bodily movement, exhibiting superior physical power. All these bring a quick reaction.

It was mentioned that Bill slept with his older brother. This partially explains most of the cases of crying occurring early in the morning. If the brother is awake first, he very frequently pushes Bill or pulls the bed covers, awakening him and causing him to cry. Many of the cases occurring in the late afternoon and near bed time are when with the brother and sister.

In the light of late studies on conditioning it would seem that there is grave danger from teasing. The chances are that harmful results may be lasting in the reactions of the person teased to the one doing the teasing. Not infrequently adults state that the effects of teasing upon them while children have never been overcome, and that they are unable to come in contact with those persons without a feeling of resentment.

Twenty-one per cent of the cases of crying occurred when Bill was hit or fought. This again shows a relation to the large percentage coming during playtime. A younger child is the recipient of many punches and slaps from older children, as well as of those nearer his own age. Crying follows

impositions of those older and stronger more quickly and lasts longer than when in competition with children of the same age. Many of the incidents were attempts on the part of the brother and sister to enforce control over him and a few were the result of the brother's indignation, when some of his "treasures" were confiscated. Older children must at times and rightfully assume responsibility for some of the acts of a younger child. The danger lies in their inability to use any method other than force. It is interesting to note methods of procedure when the younger child has in his possession something desired by the older. The older child will frequently with a very conciliatory manner say "Please dear, let me have it just a minute, I'll give it back." If the desired result is not immediately forthcoming, the object is taken by force and the younger child's only recourse is tears. In any case, the younger child sees no reason for accepting authority from an older brother or sister. The crying resulting from competition with children of the same age was usually short lived.

Twelve per cent of the cases of crying involved thwarted desires, and 20.5 per cent, restraint of activity. The brother, sister and mother appear most often as contributing factors, but some occurred in the nursery school. In these cases, the brother and sister in their desire to dominate, thwarted certain things Bill tried to do or wanted to do, in

their play, and often he was restrained bodily by their superior strength. The mother occasionally found it necessary to restrain certain acts which would be destructive to household equipment or furniture. In a few cases, he was isolated or placed on a chair, as a means of punishment, both at home and in the nursery school. Sometimes this was because of his attempt to impose by force his desires upon other children.

The relation of the type of activity engaged in at the time is of especial interest in the cases of crying. The importance of keeping a child happily employed has been discussed. Of the total number of cases of crying 20.33 per cent occurred during active physical exercise plays, 3.21 per cent during imaginative plays, 13.91 per cent during purposive plays, 31.03 per cent during routine, 5.35 per cent during nothing to do and 19.26 during miscellaneous acts. Again the large number of cases occurring during exercise plays and purposive activity must be considered in relation to companions in play with and their behavior toward him. The small number found in imaginary plays in comparison to purposive may be explained by the fact that they overlap somewhat. The largest number are found to occur during routine. This may be explained by considering that there is much routine for a four year old child, that these periods come largely at extremes of the day when teasing from brother and sister are

frequent.

Sulking so common among children appeared in only two or three cases with Bill. I know no explanation for this. He has never shown this reaction. His anger is short lived and he "makes up" whole heartedly.

Whining and general irritability will be considered together, since no attempt has been made to separate them in the classification. The type of behavior classes as irritability includes such acts as whining, facial expression and tone of voice which are unpleasant, unwillingness to cooperate, and a generally "babyish" manner. Factors significant in relation to irritability are: companions, time of day, type of activity and teasing. Of the total number of cases 20.7 per cent occurred when teased, in most cases by brother or sister, 57.96 per cent during routine, 26.22 per cent during physical exercise plays, none during imaginary plays, 6.94 per cent during purposive activity, 12.42 per cent in periods of nothing to do, 8.42 per cent during miscellaneous activities. In 13.88 per cent of the cases the child had a cold and 17.94 per cent, no nap. The activity showing greatest number of cases, is routine, which again bears a marked relation to extremes of the day, and teasing by brother and sister. The rather large number during active exercise again relates to behavior of other children. Forty-one and sixty-six hundredths per cent of the cases occurred early in the day, one-half

before breakfast, 37.4 per cent at or near bed time, 6.94 per cent around the nap time, 9.66 per cent in the late afternoon, with only 4.14 per cent during the period nine to 12 or the play period. These figures indicate strongly a relation to fatigue.

The factors of importance in relation to anger tantrums are: time of day and type of activity. Of the total 61.42 per cent occurred at or near bed time, 14.28 per cent at nap time, 14.28 per cent in the late afternoon and none in the morning or forenoon, 52.25 per cent occurred during routine, 23.75 per cent when there was nothing to do, 14.25 during miscellaneous activity. In each case the mother was involved. Here the relation to probable fatigue is striking.

During the periods of being good humored and contented, type of activity, companions, and time of day show the greatest relation. Of the total number of times 19.39 per cent occurred during active exercise, 7.98 per cent during imaginative plays, 20.53 per cent during purposive activity, 32.33 per cent during routine, 2.66 per cent during games, 1.91 per cent nothing to do, 9.88 per cent during miscellaneous acts. Here is shown the highest percentage during routine. In considering this the fact that there is much time spent in routine must be taken into account, as well as the opportunity for observation during these times. Other types of activity indicate the activity of the child as being a large factor in

his contentment. Twenty-three and nineteen per cent of these periods occurred in the forenoon, 33.08 per cent in the early morning, 5.73 per cent at nap time, 16.26 per cent in the late afternoon, 18.63 per cent at or near bed time, 2.2 per cent when the child had a cold, 3.07 per cent when no nap. The large number of cases coming in the early morning and forenoon, must be considered in relation to fatigue, and opportunities for activity in the nursery school. Teasing, restraint of activity and thwarting of desire are absent.

The second group of behavior acts include those which affect persons in the environment. Ira S. Wile says: "The behavior difficulties of children are symptomatic of disharmonies that arise primarily within their own bodies, or as a result of thwarting factors in their environment. Most of the problems of childhood are conditioned by the behavior of adults, either singly, in groups or as society; the child clashes with the world-as-it-is, makes up his problems as well as that of the community into which he is born." "All children are primarily individualistic undergoing a process of socialization. Their mode of living, the personalities of their parents, and the characteristics of their recreations, homes and environment have particular qualities that need careful study for their effects upon developing characters."

This study shows very few instances of the child teasing, quarreling or arguing. The age may be an explanation. A

four year old child is not generally so apt to tease as an older child. Neither is he so apt to argue. Some incidents of quarreling have probably been listed under dominating disagreeably in the nursery school.

Of the total number of cases of hitting or fighting, 31.2 per cent occurred when Bill was hit and 62.4 per cent occurred when he was opposed by other children. The companions appearing most often, are his brother and sister, and two boys in the nursery school near his own age. Thirty-four and thirty-two hundredths of the cases occurred during active exercise, 9.36 per cent during imaginary plays, 31.2 per cent during purposive activities, 9.36 per cent during routine, 6.24 per cent when there was nothing to do, 9.36 per cent during miscellaneous activities. The rather large number of cases coming during active exercise and purposive activity must be considered in relation to the time; 62 per cent of the cases occurred at the play periods, many of them in the nursery school where there was opposition of other children. Most of the remaining cases occurred near the end of the day.

Of the cases of definite destructiveness, the relating factors were: thwarting of desire and restraint of activity. One case of interest occurred on Sunday. The family were guests at Bill's Aunt's for dinner. Bill protested against going. In this case there were no playthings or small children. He was generally upset, found a hoe and proceeded



to chop down plants in the garden, destroyed a foot ball, and cut down the neighbor's flowers. On another occasion, he was put to bed for his afternoon nap just as his mother went down town. He was disappointed at being left at home and relieved his feelings by cutting off the pulls from window shades and cutting holes in the shades.

Of the cases of taking things belonging to others, most of them occurred before the evening meal, when food was taken from the ice box. In two instances money was taken from the mother's purse to buy sweets. Such acts as these would not be considered as stealing. A child of four has still many lessons to learn regarding mine and thine. In one of these incidents, Bill admitted taking the money. In the other case, no admission was forthcoming. On one occasion he came home from nursery school with his hands full of flowers picked from the college campus, with the explanation that they were given to him by the director of the nursery school. A little questioning brought the admission that he had picked them himself. In neither of these incidents, was any effort made to force admission, and he was not punished when he told his story.

In the nursery school, a great many cases of disagreeable domination of other children occurred. Twenty-eight and ninety-six hundredths per cent of these cases occurred when engaged in active exercise, 18.1 per cent in imaginary plays,

39.8 per cent in purposive activity and 7.24 per cent during routine. It is important to consider that in the home, Bill is dominated by his brother and sister. In the nursery school he attempted to exercise some of the same domination over the children. He was quick to come to the defense of another child if the aggressor happened to be some one else. In difficulties among the children he was very generally called upon by them to punish an offender.

In the nursery school, there occurred many more cases of disagreeable domination, than of pleasant domination. In these cases the same types of activity and time of day are related. During his activities with the children, his manner was dictatorial as shown by facial expression, tone of voice, and definite commands given them. He insisted upon having his own way both in type of activity engaged in and procedure. If results were not to his liking he did not hesitate to push or hit. In other instances he gained his desired by requests with polite words and promises of rewards.

Most of the cases of thoughtfulness for others occurred in the nursery school where he came to the defense of smaller children or volunteered some service. Other cases were little courtesies to the mother in the home, or the nursery school.

The cases of volunteering to help, were mostly instances of helping mother in routine work at home, or going on errands. The time element here has no significance.

Only three instances of sharing with others were recorded. Here, as in all cases, the reader should remember that observations covered only certain times and were in no sense complete for the whole day. Four year old children are in the main selfish.

The third group of behavior acts include those classed as "short circuited energy" as: excessive noise, restlessness, hyper activity, and running away. Most writers on children, stress the fact that modern living conditions tend more and more toward the suppression of wholesome activity and outlet for spirits in the growing child. There are coming to be fewer homes providing a place where a child may let off steam, without interfering with the comfort and peace of adults.

In this study, the cases of excessive noise were about evenly divided between routine acts and periods with nothing to do. The cases of restlessness occurred during meals, when guests were present, when away from home, or in the nursery school when it was necessary to sit quietly. On occasions when guests were present in the home, his behavior consisted of all sorts of bodily contortions and attempts to monopolize conversation apparently for the sake of centering attention upon himself. One explanation of this is that it is an attempt to cover up embarrassment. The instances of hyper activity occurred when there was nothing to do or during routine acts.

The time of day seemed to bear no relation to it. Of the cases of running away, most of them occurred when there were no small children to play with.

The fourth group of acts include those strongly negative or positive as: definite disobedience, obedience after much urging and obedience.

Of the cases of disobedience all but one occurred in relation to the mother. Over half of the cases were when engaged in routine acts. Most of them occurred near the end of the day, at bed time or nap time. The cases where much urging was necessary to get obedience, were in almost all instances in relation to the mother and over half of them occurred during routine acts.

In this study a number of rather interesting incidents occurred, wherein the child was obedient after definitely declaring that he would not do certain things he was asked to do. The rule of allowing a child a reasonable amount of time in which to obey was followed on these occasions. In each case obedience was forthcoming and in several instances he was much pleased, laughed and said, "Mother, I fooled you." Such cases as these indicate a desire on the part of the child to satisfy his love of power, or it may be just a general spirit of playfulness. Matters might have been forced, antagonism aroused or too much attention given to it might suggest to the child undue importance to his actions. Those

who observe children find them very frequently pretending to refuse other children certain things, and then actually giving them willingly.

In the cases of obedience over half were the result of definite suggestions, usually from the mother. In other cases the child obeyed with nothing more than a request.

The last or miscellaneous group of acts includes: telling untruths and acts showing self-reliance. Only three cases of failure to tell the truth were recorded. The child frequently made statements which were known to be untrue, but usually with a little questioning he would tell it as it was. Most cases of untruthfulness were denials and while some were rather lengthy fabrications showing some imagination. Denials seem to be fear of punishment or to avoid responsibility. The incident previously related in regard to taking the flowers from the college campus illustrates the imaginative type.

The cases of self reliance were largely in doing routine acts and come largely at the beginning and the end of the day. On several occasions, Bill went to the store, two blocks from his home, on errands for his mother. He was proud of his ability to be of help and was praised for helping.

TABLE I  
SHOWING ENVIRONMENTAL FACTORS RELATED TO BEHAVIOR IN PER CENTS

Environmental Factors	Behavior						
	E.N.*	D.U.*	T.T.*	R*	H.A.**	R.A.**	O*
App. Illness							5.44
Fatigue							
Hunger							
Forced by Brother							
Forced by Others							
Too much Help							
Shut inside							
Teased							
Hit or Fought							
No Other Children	7.60		3.84			80.00	
No Playthings	7.60						
Cloudy or Rainy	22.80	28.51	7.68				7.27
Sunny		12.92	11.34				10.88
Very Warm							
Very Windy	7.60						
Depressing							
Brother	45.60						10.88
Sister	45.60						9.09
Mother	60.80						43.81
Linnea	45.60	5.43					20.00
Phillip	30.40	38.01					
Others		12.72					9.09
Sug. by Others	7.60	1.81					58.36
Rest of Activity				100.00			
Opposition							
Thwarted							
Activity							
Exercise		28.96					10.88
Imaginative		18.10	3.84				
Purposive		39.80	11.34				14.54
Routine	45.60	7.24			79.41	28.57	54.54
Games					20.59		
Nothing to do	53.20		53.76		20.59		5.44
Miscellaneous		3.62	11.34			71.42	14.54
Stories							
Music							3.63
No Nap			11.34				
Time							
7-9 A.M.	15.46						32.72
9-12 A.M.	40.92	9.09	9.52				25.45
12-3 P.M.	7.73		9.52				9.09
3-6 P.M.	46.38		71.42		79.64	90.00	10.88
6-8 P.M.							21.72
TOTAL NO. OF CASES	13	55	21	34	7	10	55

TABLE I (CONTINUED)  
SHOWING ENVIRONMENTAL FACTORS RELATED TO BEHAVIOR IN PER CENTS

Environmental Factors	Behavior						
	I*	H.P.*	C*	A.T.*	D.D.*	D.D.*	M.U.O*
App. Illness	13.88		3.20				
Fatigue							
Hunger							
Forced by Brother	15.18	3.12	4.28	4.75			
Forced by Others	4.14	6.24	1.07	4.75			
Too much Help	5.52			9.50			
Shut Inside							
Teased	20.70		35.31	9.50			
Hit or Fought	2.76	31.20	32.47	4.75			
No Other Children							
No Playthings							
Cloudy or Rainy	22.08	12.48	7.49				
Sunny	12.42	9.36	4.49	4.75			
Very Warm							
Very Windy	4.14						
Depressing							
Brother	37.26	15.60	18.19	28.50			
Sister	20.70	15.60	17.12	14.25			
Mother	30.36		10.70	100.0	90.90		92.30
Linnea	8.28		1.07				
Phillip	8.28	40.56	25.68				
Others	1.38	24.96	3.21				
Sug. by Others							
Rest of Activity		3.12	21.50	85.50		28.51	
Opposition	1.38	62.40	7.49				
Thwarted	4.14		12.84			42.85	
Activity							
Exercise	26.22	34.32	20.35		9.09		
Imagination		9.36	3.21				
Purposive	6.94	31.20	13.91	4.75	9.09		15.38
Routine	57.96	9.36	31.03	52.25	54.54		61.46
Games							
Nothing to do	12.42	6.24	5.35	23.75			15.38
Miscellaneous	8.42	9.36	19.26	14.25	27.27		
Stories							
Music							
No Nap	17.94	6.24	8.56	9.50			
Time							
7-9 A.M.	41.66		1.71		18.18		23.07
9-12 A.M.	4.14	62.00	30.10	9.52			15.38
12-3 P.M.	6.94		10.75	14.28			7.69
3-6 P.M.	9.66		23.65	14.28	36.36		23.07
6-8 P.M.	37.40	25.00	18.28	61.42	45.40		30.76
TOTAL NO. OF CASES	72	32	93	21	11	47	13

TABLE I (CONTINUED)  
SHOWING ENVIRONMENTAL FACTORS RELATED TO BEHAVIOR IN PER CENTS

Environmental Factors	Behavior			
	T.	O†	V. H†	S. R† G. C. †
App Illness				2.20
Fatigue				
Hunger				
Forced by Brother				
Forced by Others				
Too Much Help				
Shut Inside				
Teased				
Hit or Fought				
No Other Children				
No Playthings				
Cloudy or Rainy				16.35
Sunny	6.89			19.39
Very Warm				
Windy	3.44			2.66
Depressing				
Brother		15.00		45.24
Sister				53.99
Mother	24.96	70.00		50.96
Linnea	10.32			29.65
Phillip				24.71
Others	58.48	15.00		26.63
Sug. by Others				6.46
Rest of Activity				
Opposition				
Thwarted				
Activity				
Exercise	37.84	10.00		19.39
Imaginative	3.44			7.98
Purposive	13.76	45.00	9.61	20.53
Routine	6.88	45.00	80.64	32.33
Games				2.66
Nothing to do	3.44			1.91
Miscellaneous	24.08			9.88
Stories	3.44			1.51
Music				3.41
No Nap				3.07
Time				
7-9 A.M.			55.55	33.08
9-12 A.M.	89.65	40.00		23.19
12-3 P.M.				5.73
3-6 P.M.	10.35	60.00	32.69	16.26
6-8 P.M.			11.53	18.63
TOTAL NO. OF CASES	29	20	52	263



- E. N.\* - Excessive Noise
- D. U.\* - Dominating Unpleasantly
- T. T.\* - Taking Others Things
- R.\* - Restlessness
- H. A.\* - Hyper Activity
- R. A.\* - Running Away
- O.\* - Obedience
- I.\* - Irritability
- H. F.\* - Hitting or Fighting
- C.\* - Crying
- A. T.\* - Anger Tantrums
- D. D.\* - Definite Disobedience
- D. D.\* - Definite Destructive
- M.U.O.\*- Much Urging to get Obedience
- T. O.\* - Thoughtfulness for Others
- V. H.\* - Volunteers to Help
- S. R. \*- Self Reliance
- G. C.\* - Good Humored and Contented.

## SUMMARY AND CONCLUSIONS

The results of this study seem to indicate that the behavior of this child is probably closely related to the following factors: the behavior of persons with whom the child comes in contact, time of day, with probable relation to fatigue and hunger, and type of activity engaged in. The behavior of persons in the environment seems to be the factor of greatest significance and very definite types of behavior on the part of other persons called forth a high proportion of undesirable reactions. Table II shows the significant factors in relation to different types of behavior of the child, in order of significance. A high proportion of cases of crying and irritability occurred when the child was teased, while being hit or fought and being forced, or thwarted are also important factors. Anger tantrums are most directly related to restraint of activity, and fighting to opposition of other children or being fought by others. Many cases of obedience are the result of direct suggestion in words.

Cases of irritability seem closely related to fatigue and hunger coming most often at extremes of the day, and before meal time. A child is probably most sensitive to outside influences in the early morning. Most cases of crying occurred during the forenoon play period, where aside from

the probability of hunger or fatigue, the relation of the behavior of other persons toward the child must be considered. Anger tantrums were nearly all at or near bed time where both probable fatigue and behavior of others must be considered. While the total number of times when there was no nap was small, they figure proportionally high in relation to crying, irritability, and temper tantrums.

Most cases of both good humor and undesirable behavior come during routine activity. Here must be considered the amount of time spent in routine, the fact that the mother was able to observe much of this time, and the relation of the behavior of brother and sister during these periods. Purposive activity seems to be most closely related to desirable behavior as fewer cases of undesirable behavior come at these periods. A high percentage of good humor and contentment come during purposive activity. This agrees with Burnham's thesis on the importance of the task for the child. The early morning shows the highest number of cases of good humor and contentment with the forenoon play period following.

From these figures it is impossible to evaluate exactly the importance of any one factor, since they work together to produce certain results. In other words the child is responding to a number of different stimuli at the same time. The indications are, that for this child, fatigue and hunger probably play a large part as causative factors in his

behavior. If a child is hungry or fatigued, he is less able to withstand the strain of ill treatment from others. The high proportion of instances of good humor during forenoon periods indicate that with teasing and some other undesirable factors absent, there would be little crying or irritability. With thought in giving proper suggestions, it is probable there would be few cases of disobedience.

This all points to the importance of environment in relation to a child's behavior. The fatigue or hunger of a child, as well as much of the behavior of others toward him are within the control of those responsible for him. The majority of parents take for granted that just so much crying and irritability is necessary to a child's development and growth. This feeling is a close parallel to the old idea that children must go through a seige of measles, mumps, etc. Parents are especially likely to see the irritability of some member of the family cropping out. Little effort is made to analyze situations, to see just what are the reasons underlying a child's behavior while there is much to be learned about the effect of emotional strain upon children; most studies point to unstable emotional factors during childhood as the chief factor in developing unstable adults. A young child conditioned to strain and stress is unable to become a calm and happy adult. The writer would not minimize the duties devolving upon a busy mother or father. Life as

lived now is very complex for both parent and child. The child has to learn to adjust to this complexity, and it is the duty of parents to make every effort possible, to prevent surroundings from being too difficult for or harmful to the child. The genuinely conscientious parent will throw aside preconceived notions, try to understand the child, and accept what scientific study has to offer in the way of help. There are few homes which can not, with sufficient thought and effort, provide the essential conditions for normal growth and development of children.

Wile says: "Emotional activity constitutes a large measure of the child's self revelation through conduct. It is more difficult to distinguish the effect of any one emotion than to observe their fused influence in concrete behavior. The difficulty in studying them lies in the fact that despite the objectivity of expression they are essentially subjective phenomena. The basic nature of two persons is never identical and reactions are likely to be dissimilar. Hence emotions are studied mainly in terms of conduct that results from their activity. Whether the grief, fear, anxiety or rage is due to internal secretion processes or whether it induces them is highly problematical, so far as definite scientific experiment has been able to determine."

Terman says: "The child's life should be one of fairly even tenor at least until character and personality have had

time to set. Children's emotions are more compelling than our own; their sorrows are the most real there are. The child lives in the present and his griefs unlike those of men and women, are little mitigated by the memory of former joys or by the hope of others yet to come." Seaham says: "In the child the threshold of resistance to emotional stimuli lies on a much lower level than the adult. He is readily upset and incidents overlooked and made light of by us are apt to make a deep impression upon his mind. He gives way easily to his feelings, crying and laughing coming on at the slightest provocation. There is a definite and deep interrelation between the expression of the emotions, and the workings of the body as a whole." Brown observes that, "The parent should see as far as possible fear and pain do not enter into the life of the child. There is no reason why a child's life should be miserable. Let him be happy. Let him be encouraged into free self expression so long as this does not interfere with the claims of those around him."

Watson in writing of crying says: "It is conceivable that some day we may be able to bring up the human young through infancy and childhood without their crying or showing fear reactions except when in the presence of unconditioned stimuli (pain, noxious stimuli, loud sounds, etc.) calling out these responses, since these unconditioned stimuli are rarely present, children ought practically never

to cry. And yet look at them - morning, noon and night they are at it. Owing to our unsatisfactory training methods in the home, we spoil the emotional make up of each child as rapidly as the twig can be bent."

From all this, the conclusion should not be drawn that children's emotions should be eliminated. Without emotion, life would be robbed of much that is worth while and beautiful. It would be drab and colorless. What we should do is to attach emotions to things which are desirable. Fear and anger should be attached to things which are dangerous and wrong. Things which are desirable should be made pleasant, and things which are undesirable should be made unpleasant.

After observing Bill in the nursery school where disagreements were with children near his own age, the writer is of the opinion that such opposition can have but a wholesome effect in the training the child receives in adjustment to the group. The emotion aroused by opposition of older children seems much more poignant and lasting and is probably harmful.

For Bill, a much better environment is possible, one which is conceivable to believe would alter his behavior in such a way that he might enjoy a most wholesome and happy childhood. Absolute regularity of meals and rest periods with family routine more nearly conforming to the needs of a

four year old. Considering the slight heart leakage, it is probable that frequent short rests would be beneficial. Better management of brother and sister who are the chief offenders in their treatment of him, by providing suitable activities for outlet for their energy. A bed separate from his brothers' would eliminate much teasing at extremes of the day. Additional equipment for definite types of activity both inside and outside the house would help to keep him happily employed.

It would be unfair in concluding this discussion to omit the possible result upon the emotional behavior of the child of the effect of his mother as a contributing factor toward his behavior. Realizing that such a discussion is subjective in nature and that there is no method by which the attitudes or nervous condition of the mother may be measured, no attempt was made to record anything in the notes in regard to this. The records show only definite things said or done by her. Managing a home alone in all its details, keeping three children in school, and carrying full graduate work, is a task that taxes the strength to its utmost. The mother has often been extremely fatigued both mentally and physically. In the writer's opinion, this has been the pivot on which the behavior of the three children has many times hinged, and she is in hearty agreement with the following from Cameron: "The mother's conduct to the child, her actions



and words, tone of voice, even in the thoughts passing through her mind, which show themselves plainly to that marvelously acute intuition and which divines what she has not spoken." "Parents are at their worst when tired and worried and tone as well as what is said, reacts on the child - the child has no knowledge of the mood of parents, though responding with uncanny certainty parents loose the power of exercising a quiet control." Seaham says: "The best vehicle for the proper control of the emotions is the personal example of elders." Blanton and Blanton state that, "A normal happy family life will best fit the child to make proper adjustments to varying later environment."

That there were certain definite limitations to drawing conclusions from this study has been mentioned. The writer feels that chief of these is the length of time given to the study and the fact that there could not be constant observation. It is regretted that the study could not have been longer and more intensive, so that additional information might have been obtained. However, the reader will realize that even these results show how very important environment is to a young child, and how care in regulating surroundings of a normal child will bring results that are well worth while. The mother is fully aware of very definite improvement in the behavior of the child, as a result of her efforts to keep surroundings more nearly ideal. The most

outstanding fact of all, is that such a large proportion of undesirable factors are possible to control, and that they are things within the power of any mother in simple surroundings. When more mothers, and especially educated mothers or others in a position to make such studies, are brought to realize the significance of the very early training of children, they will be willing to give time and efforts to studies of their own children or others which will have inestimable value. If many studies begun like that of Millicent Shinn, and continued through the pre-school period upon children in different environments were made there could be accumulated a vast amount of valuable information which would throw much light upon just what are the proper surroundings in which a child should be reared.

TABLE II  
A SUMMARY OF MOST SIGNIFICANT FACTORS RELATING TO BEHAVIOR IN ORDER OF IMPORTANCE.

Behavior	Per cent	Relating Factors : those which are: Those which are: : Controllable : not controllable:	Suggestions for Controlling
<b>IRRITABILITY</b>			
Time of Day (Probable relation to fatigue and hunger)	41.66, 7-9 A.M. 37.40, 6-8 P.M. 9.66, 5-6 P.M. 6.94, 12-3 P.M. 6.14, 9-12A.M.	*	Rigid adherence to rest and meal periods. Meal schedule more nearly fitting the needs of a four year old.
Behavior of Other Persons	20.70 19.32 37.26 30.56 20.70		Separate beds, or better separate rooms for brothers. Better regu- lation of activities for the children. Better self-control on mother's part, indirectly af- fecting all three children. Elimination of impatient commands by older brother and sister
Activity	57.96 26.22 12.42 8.28 6.94		Elimination of teasing during routine. Better provision for activity outside, play equipment and tools to use in yard and inside, to keep Bill happily employed.

TABLE II (CONTINUED)

Behavior	Per cent	Relating Factors : These which are: Those which are : : Controllable : not Controllable:	Suggestions for Controlling
No Nap	17.94	♦	Rigid adherence to afternoon nap periods with quiet surroundings. General hygienic care.
Apparent illness	13.00	_____	
<b>CRYING</b>			
Time of Day	30.10, 9-12 A.M. 23.65, 3-6 P.M. 18.28, 6-8 P.M. 17.10, 7-9 A.M. 10.75, 12-3 P.M.	♦	Rest as under heading "Irritability". Short rest before lunch.
Behavior of Others			
Teasing	35.31		Better provision for activity of brother and sister.
Being hit	22.47		Separate sleeping quarters for brothers.
Restraint of act	21.50		Elimination of unjust restraint and opposition by brother and sister. If desires must be thwarted they should be replaced by something desirable.
Thwarted	12.84		See suggestions for brother and sister.
Opposition of other children	7.49		Less impatience on the part of the mother.
Forced	5.35		
Brother	18.19		
Sister	17.12		
Mother	10.70		

TABLE II (CONTINUED)

Behavior	Per cent	Relating Factors : Those which are: Those which are : : Controllable : not Controllable:	Suggestions for Controlling
Activity			
Routine	31.03		Elimination of teasing during routine.
Active Exercise	20.33		Better provision for play, especially toys which enable the child exercise actively and play purposively.
Miscellaneous	19.26		Rigid adherence to nap periods with quiet.
Purposive	13.91		General care.
Nothing to do	5.35		
Imaginative			
plays	3.21		
No nap	8.56		
Apparent illness	3.21		
<b>FIGHTING</b>			
Time of Day	62.00, 9-12 A.M. 25.00, 6-8 P.M.		Rest controlled as suggested above.
Behavior of Others			
Opposition	62.40		Better control of brother and sister by providing suitable activities, self-control of mother with suitable suggestions and guidance of older children
Fought	31.20		
Forced	9.36		
Other Children	65.52		
Brother	15.60		
Sister	15.60		
Activity			
Exercise	34.32		Better control of brother and sister at home. With children of same age, unless there is real danger fighting should be ignored
Purposive	31.20		
Imaginative	9.36		
Routine	9.36		
Miscellaneous	9.36		
Nothing to do	6.24		

TABLE II (CONTINUED)

Behavior	Per cent	Relating Factors : those which are those which are : Controllable :not Controllable:	Suggestion for Controlling
No Nap	6.24		Rigid adherence to nap periods
<b>ANGER TANTRUMS</b>			
Time of Day	61.42, 6-8 P.M. 14.28, 3-6 P.M. 14.28, 12-3 P.M. 9.52, 7-9 A.M.	♦	Regularity of rest periods
Behavior of Others			
Rest of activity	85.50		More time and patience allowed for child to do routine acts unaided.
Forced	9.50		Better management on the part of the mother, that is self-control and handling of situations, as well as foresight in preventing situations. (The thesis tells in detail how these situations were handled. Most of them might be prevented).
Too much help	9.50		
Teased	9.50		
Fought	4.75		
Mother	100.00		
Brother	28.50		
Sister	14.25		
No Nap	9.50	♦	Rest periods as suggested above.
<b>DOMINATING DISAGREABLY</b>			
Time of Day	90.9, 9-12 A.M.	♦	Better supervision when with other children. Not allowed to domineer over other children. Opportunities provided for the child to play with young children his own age who
Other children in Nursery School	90.9		

TABLE II (CONTINUED)

Behavior	Per cent	Relating Factors : those which are : : Controllable :not Controllable:	Suggestions for Controlling
Activity			are able to exercise some domination over him.
Purposive	39.80		
Exercise	28.96		
Imaginative	18.10		
OBEDIENCE			
No time significance			
Behavior of Others			
Suggestions by others	56.36	♦	Keeping ahead of the child in thinking and being ready with things which suggest obedience to the child. Avoiding direct commands. Suggesting that the child may like to do certain things. Following desired results with praise.
Mother	43.61		
Nursery school director	16.32	♦	
GOOD HUMORED AND CONTENTED			
Time of Day	55.08, 7-9 A.M.		
	25.19, 9-12 A.M.		
	18.63, 6-8 P.M.		
	16.26, 3-6 P.M.		
	5.73, 12-3 P.M.	♦	See above

TABLE II (CONTINUED)

Behavior	Per cent	Relating Factors : whose which are: those which are :	Suggestions for Controlling
Activity		Controllable : not Controllable:	
Routine	32.33		Elimination of teasing at extremes of day during routine would increase good humor during these periods. Better provision for beneficial activity which allows physical exercise plays and purposeive plays especially See as above
Purposeive	20.53		
Exercise	19.39		
Miscellaneous	9.88		
Imaginative	7.98		
Nothing to do	1.91		
No Map	3.07	♦	
Illness	2.20		Better hygienic care.



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