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DIFFERENCES UNDER SOCIAL STRESS
BETWEEN ACCEPTED AND REJECTED
CHILDREN DURING THE ADOLESCENT
PHASE OF EGO DEVELOPMENT.**

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DIFFERENCES UNDER SOCIAL STRESS BETWEEN ACCEPTED AND
REJECTED CHILDREN DURING THE ADOLESCENT
PHASE OF EGO DEVELOPMENT

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
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degree of
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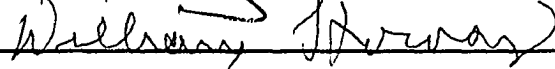
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1969

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APPROVED BY



DISSERTATION COMMITTEE

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CHAPTER I

INTRODUCTION

Freud (1917) had speculated about the effects of early experience upon subsequent development of children as early as 1917, but little rigorous experimentation was attempted until the 1940's. There was much research during that period beginning initially with investigations of Freud's hypothesis that trauma in infancy lead to faulty adjustive patterns in adult life (Freud, 1905). Vigorous activity in the area continued throughout the forties and the fifties up to the present time. Research topics have been generated in such areas as the effects of separation from the mother with subsequent institutionalization, expanded notions of Freud's theories of developmental stages with resulting investigation of the critical period hypothesis, and the effects of stimulus deprivation or stimulus enrichment during infancy.

The following discussion will illustrate the principal themes which have emerged from research in developmental psychology from the 1940's up to the present time.

Effects of Institutionalization

In 1946 Spitz and Wolf investigated the effects of institutionalization on infants. Those children who had been institutionalized at an early age and had been deprived of "Mothering" often developed "anaclitic depression" (Spitz, 1946). This depression was characterized by loss of weight, developmental retardation, and in some extreme cases resulted in death. They, along with Bowlby (1952) and Goldfarb (1955), concluded that institutionally reared children had more physical and psychological problems than home-reared children due to inadequate mothering or lack of mother-object attachment.

Rheingold and Bayley (1959) also studied the effects of institutionalization on infants but arrived at a different explanation of the observed psychological and physical difficulties from that of Bowlby and Goldfarb. They concluded that where the stimulation in institutions was adequate the lack of the mother figure did not have any adverse effect.

Yarrow (1964) suggested a broader conceptualization than that of the simple loss of a significant love object or of stimulus deprivation. The relationship with the mother, along with the varied sensory and social stimulation in scheduling and gratification, should also be considered as instrumental for the proper growth of the developing child.

Yarrow (1964) surveyed the research on the effects of institutionalization on children and made the following conclusions:

First, the age of separation is a critical consideration since separation has its most drastic consequences once a focal relationship with the mother has been established. The most sensitive period for the establishment of this focal relationship is believed to be between six months and two years of age; second, the child who has had a close relationship with the mother may be better equipped to form subsequent relationships than a child who has not had such a relationship; third, permanent intellectual and personality damage may be avoided if there is someone with whom the infant can form an individualized relationship immediately following separation; fourth, the maintenance of a relationship with the parents during a partial separation, such as hospitalization, will reduce the possibility of damage associated with complete termination of the relationship; fifth, the shorter the period of separation, the less serious the effects; sixth, the nature of experiences following separation--such as continual depriving and traumatic experiences--may reinforce or negate the initial stress; finally, congenital factors cannot be completely ignored when one evaluates the effects usually attributed to maternal separation.

In the evaluation of the effects on children of separation from the mother and subsequent institutionalization one must evaluate constitutional factors, lack of social stimulation, the time of separation, critical period considerations, and the nature of the experiences which follow separation and institutionalization.

Animal Research

The interest in critical periods during which significant maturational events occur began with Freud's theories on the psychosexual stages of development. In the area of animal research the interest in critical periods began with the naturalistic observations of Lorenz (1937). He observed in grey-legged geese an early period of specified duration during which the geese attached themselves to some object and subsequently treated the object as the mothering one. This phenomenon he referred to as "imprinting." Hess (1958), in America, experimented with the imprinting phenomenon and added the explanatory principle that the strength of imprinting depended "on the effect exerted by the duckling in following the imprinting object" (p. 16).

The work of Lorenz, Hess and other naturalistic observers led to experimental work such as that of J. P. Scott. Scott (1959) investigated the critical period hypothesis using dogs as subjects. He found at least seven critical stages for the development of socialization in dogs. He theorized that there is a certain critical period when the demands of each developmental stage must be met. If these demands are not met at the critical time the resultant damage is permanent. Similarly, Harlow (1962a) in his experimentation with the affectional systems in monkeys found that social deprivation during infancy markedly damaged their capacity for heterosexual social adjustment. He speaks of a critical period between the third and sixth month of life for socialization in

monkeys and draws a parallel to case studies of children reared in institutions (Harlow, 1962b).

Denenberg (1962), working with rats, also stressed a kind of critical period hypothesis, but disagreed with Scott's extreme position as to the effects of by-passing a critical period. Denenberg concluded that there is a time of maximum sensitivity to stimulation. During this time period the animal's learning potential is maximum. If, however, stimulation is not present and learning is retarded permanent damage may not result. The animal will be able to learn the task at a later date but with more difficulty.

The research findings with animals support to a degree those conclusions of Yarrow that stimulation in infancy is important, and that there are times, or critical periods, when damage can result from inadequate stimulation. There may be, however, some question as to the irreversability of infantile trauma.

A third approach to the effects of stimulation in infancy is advanced by Levine (1960). He takes issue with the theory that trauma in infancy is necessarily bad, and suggests instead that stress in infancy may have advantageous effects in better preparing the infant to deal with stress as an adult. His work was primarily with rats, but he does make an analogy to the human infant.

Almost all experiences of infancy involve some handling by a parent or some other larger and supremely powerful figure. Even the tenderest handling must at times be the occasion of emotional stress. Perhaps the

only children insulated from such experiences are those reared in orphanages or other institutions (Levine, 1960; Coopersmith, 1966, pp. 101).

Levine reasons from the results of his research that even the human infant may be better equipped to deal with stress as an adult if stressed in infancy. Further, since he specifies rearing in institutions as an example of the absence of stimulation, it may also be inferred that such children do not cope as effectively with stress as do other infants not so deprived. Finally, his theory of stimulation in human infants seems to reflect a kind of social stimulation although Levine does not so specify. Salama and Hunt (1964) and Denenberg (1962) also suggest that infants exposed to stressful situations in infancy adapt better to stressful situations as adults.

Ego Theories

Both the theory of critical developmental periods as well as those suggesting the necessity for stimulation, particularly social stimulation, find a place in the writings of ego theorists such as Sherif, Erikson, and Ausubel.

Sherif specified social stimuli as an integral part of those stimuli necessary for developmental advancement of the ego. He suggests that "social stimulus situations" are indispensable for the development of the Ego (Sherif, 1956). "Ego", in clinical terms, is usually associated with the concept of coping behavior in humans, and makes an interesting analogy possible between the findings of Levine and the theorizing of Sherif. They both suggest

that social stimulation in infancy is essential for the development of coping behavior in human infants.

Sherif specifies social stimulus situations as follows:

I. Other People

1. Other individuals as stimuli.
2. Groups as stimuli situations.

II. Cultural Products.

1. Material culture.
2. Nonmaterial culture... (Sherif, 1956, p. 14).

According to Sherif the values and norms of a group or culture are internalized by the individual and provide the basis for the identification process. The process of identification becomes one of identification with groups. It is an ongoing process which continues beyond the childhood ego development phase. Ego formation for Sherif is essentially a product of the socialization of the child.

Eriksen (1963). like Sherif, views ego development as related to the socialization process. Unlike Sherif, he includes biological determinants as an indispensable aspect of development. Biological determinants provide the ground-plan out of which developmental stages arise. These stages or "critical periods" are resolved successfully or unsuccessfully depending upon interaction with the social environment. For example, the first critical period (trust vs. mistrust) is determined in part by the extreme biological dependency of the child and in part by the parent's response to the dependency. If these early needs are met in a

warm social atmosphere the child will develop a basic trust of himself and others. This early feeling of basic trust in turn provides the essential core for future development of a sense of identity. This sense of identity becomes crucial during adolescence since personal identity is essential for successful adjustment. Thus, the adolescent's response to the stress and strain of this period of development is determined by the quality of the socialization processes in infancy interacting with the limits of biological development. If the child's early experiences have not been good, he is likely to meet the crisis of identity confusion in adolescence ill prepared to successfully resolve the demands of this particularly difficult period (Erikson, 1953).

Ausubel (1952), as does Erikson, views biological and social factors as interacting in the formulation of the developing ego of the child. He terms this interaction "biosocial interaction" and suggests that the ego unfolds in three distinct stages as a product of this interaction. The developmental stages are the omnipotent stage, the satellization stage, and the desatellization stage. A discussion of each of these stages follows.

The omnipotent stage of ego development is one in which the infant fails to recognize his dependency on his parents. Instead, he sees himself as controlling the relationship with his parents. In essence, he fails to recognize his dependent biosocial status and misinterprets reality to the point of feeling omnipotent and free from external control.

The second stage of ego development is the satellization

stage. During this period the child is forced to abandon his omnipotent position for a more realistic appraisal of himself and of his parents. The ego undergoes a devaluing process, necessitating an acceptance of his dependency upon his parents for love and for approval. Since the stage is a difficult one the attitudes of the parents are most important. The devaluing process cannot occur unless the child can perceive himself as emotionally accepted by his parents, accepted in the sense of being loved for what he is and accepted as he is.

If during the satellization stage the child is rejected or accepted only in terms of the parent's expectations, a non-satellizing identification occurs and the child fails to become dependent on his parents. Instead he continues to operate on the basis of the feelings and attitudes characteristic of the omnipotent stage of ego development. He fails to recognize his own realistic limitations and strives to maintain his inflated sense of independence. In order to maintain this view of himself he is forced to defend against dependency (Brown, 1968), and to be driven constantly to enhance his ego status. This striving for enhancement results in relating to people for what he can obtain without ever becoming emotionally involved with them. Personal recognition is the end goal, and resistance to authority is a continuing state unless it suits his purposes to conform.

The nonsatellizer actively seeks to incorporate the values of another on the basis of their objective capacity to enhance ego status--without forming any

dependent emotional tie to that individual (Ausubel, 1952, pp. 144).

The final stage of ego development is the desatellization stage and is marked by the onset of adolescence. This stage of development is considered to be a difficult stage for any child, but particularly difficult if satellization has not occurred. During this stage the failures of early experiences to provide a sound sense of self as in the case of the non-satellizers pre-disposes such children to excessive strain.

To the individual with a normal history of satellization peer group membership provides derived status and constitutes an intrinsic ego support. He experiences a certain spontaneous joy and enthusiasm in group activity which follows from the 'we feeling' associated with group relatedness. To the non-satellizer on the other hand, the field of interpersonal relations is just another arena in which he contends for extrinsic status and additional ego aggrandizement. There is no identification with or self-subordination to group interests, and no possibility of deriving spontaneous satisfaction out of gregarious activity. Every social move is carefully deliberated for the possible advantage that may accrue from it, and the currency of social interchange is supplied by the synthetic manufacture of attitudes, remarks, and behavior which can be construed as conventionally appropriate for the specifications of a given situation (Ausubel, 1952, pp. 360).

Ausubel (1952) notes that there are deep rooted personality defects in the non-satellizer which become manifest during adolescence. "Rejected, overdominated, overprotected, underdominated, and overvalued children are heir to personality and behavioral traits that make their incorporation into the peer group difficult indeed" p. 360.

Finally,

The rejected child is especially fearful of a repetition of the rejection he experiences at home.... Hence they find it more agreeable and less hazardous (in terms of possible exploitation by others) to curtail their interpersonal relations to a minimum. The social isolation resulting from this withdrawal further limits the possibility of learning realistic social roles...and in the process of utilizing withdrawal as an adjustive technique they usually acquire an habitual introversion which further restricts the scope of their social proclivities [p. 361].

Philosophical Issues

The discussion to this point has been within an essentially deterministic framework. At all times the research attempt has been to establish those particular forces, biological or social, or the stimulus situations, absent or present, which determined subsequent adult or adolescent adjustment. In this attempt, the researchers have been continually frustrated in efforts to finalize any either/or statement. The presentation of this philosophical section may help explain why these efforts have been futile as well as helping explain some of the contradictory findings.

It has been previously noted that while detrimental effects may be observed as a result of separation from the mother or from inadequate stimulation, social or otherwise, certain conditions can exist to avert the effects of the original separation. The most central condition for avoiding these effects was whether or not a relationship was established with the mother, or whether the child was later able to form a close relationship with someone. Similarly, research with animals, while reflecting the importance of the critical period concept, has not universally

demonstrated the irreversibility of the effects of deprivation during these periods. For example, Harlow's monkeys who suffered the effects of social deprivation in infancy were able to make a recovery under additional stimulation from both humans and animals. Poor mothers did better with their second generation, suggesting that they learned from their first children how to be better mothers.

Hunt made the observation that the advent of such concepts as a "curiosity drive (Berlyne), an exploratory drive by Montgomery, and exteroceptive and curiosity drives by Harlow (Hunt, 1961) were evidences of spontaneous behavior, which is unmotivated in the traditional sense" (Hunt, 1960; Gordon, 1965, pp 4). He concludes with the following:

Let us stop with noting that such observations do contradict our assumption that organisms will become inactive unless driven by homeostatic needs and painful stimuli and give up this ancient Greek notion that living matter is inert substance to which motion must be imparted by extrinsic forces. We can then embrace the thermodynamic conception of living things as open systems of energy exchange which exhibit activity intrinsically and upon which stimuli have a modulating effect, but not an initiating effect (Hunt, 1960; Gordon, 1965, pp. 4).

Hunt is suggesting that the old deterministic model may not be applicable to research with human beings except in certain particular areas. Instead, the notion of the organism acting upon his environment may be more relevant.

Similarly, Mowrer notes:

Much of the skepticism concerning the possibility of human 'freedom of choice' comes from stimulus-response

psychology, or Primitive Behaviorism, which held that, given a specific stimulus, S. the organism (be he man or mouse), must respond with whatever R. (response) happens to be most directly 'connected', or 'conditioned', to S. On the basis of evidence which has been reviewed in detail elsewhere..., it can now, with good reason be maintained that stimuli never 'produce' or 'cause' behavioral (as opposed to emotional) responses in the manner implied by S-R connectionism or reflexology... whether or not the individual responds... is dependent on prudential factors (hopes and fears) which are complexly determined by the individual's total life experience, knowledge (including what he has gained vicariously) and objectives---in a word, character (Mowrer, 1965; Spielberger, 1966, pp. 148).

Both Mowrer and Hunt have reflected a philosophical position which helps explain the contradictions evident in the research to date on childhood development. It makes it possible to account for the evidence without being committed to an either/or proposition. Some maladaptive behavior in adults may be the product of stress, or absence of stress, in infancy. On the other hand, some infants subjected to essentially the same conditions may be not so affected as adults. The reason for the discrepancy lies in the active response the infant makes to his environment. Some infants, theoretically, "will not" be deprived while others will. The active organism may overcome the effects of childhood misadventures.

The notions of Mowrer and Hunt are congruent with the ideas of Oppenheimer, a physicist, in a 1956 address to the American Psychological Association. In that address Oppenheimer said psychology was in error in pursuing the strict deterministic model since the advent of the Heisenberg indeterminacy principle

in 1925-1930 had cast doubt on such a model. He noted that more attention should be paid to the individual, analogous to the fact that "every atomic event is individual. It is not, in its essentials, reproducible." (Oppenheimer, 1955)

The implications of the philosophical issues are that when we study children we are possibly dealing with a more complex phenomenon than simply the effects of any such thing as child care practices, separation from parents, or biological determinants. One must include the adjustments made by the active, seeking organism to its environment.

Dependent and Neglected Children

In various ways dependent and neglected children, as distinguished from delinquent children, could be prototypes of individuals who would reflect the end result of the theories and research related to deprivation in infancy. Many of them have experienced maternal deprivation and stimulus deprivation in infancy, have never had intimate social relationships with adults, and as a consequence of such social deprivation, could be readily described in frameworks such as those of Sherif, Eriksen, and Ausubel.

The present experimenter has made clinical observations which are congruent with both research and theory. For example, dependent and neglected children are often virtual social isolates as infants and grow up having little contact with parents, social organizations, or any other group which might give them the skills to cope adequately with problems. As a consequence

of this social isolation it could be predicted that they would have problems with peers and with adults. Problems with peers can be inferred from their often voiced feelings of rejection by the children of the community, and from the often aggressive unsocialized nature of their involvement with children in the institution.

Dependent children's attachment to adults appears to be shallow, momentary, and characterized by mistrust. The mistrust reflects an underlying core of hostility which threatens to erupt and destroy the relationship. The result in the best clinical fashion is to keep in motion a "vicious circle" (Horney, 1945), of rejection and isolation from the adult community.

Perhaps as a consequence of their lifelong isolation from others, their hostility, and their mistrust, dependent children find it difficult to form dependent attachments to adults. This situation results in a constant theme of wanting to be free and independent. They see the institution as confining and basically against them while failing to recognize their dependence upon it for actual survival. Few children recognize this basic dependence upon the institution until age necessitates leaving and supporting themselves. At this time there is often a display of acting out behavior with the clear psychological message they want to remain in the institution. The typical pattern is to drift through their early adolescent years with few plans for the future despite efforts by schools and vocational rehabilitation counselors to elicit some sincere appraisal of educational or vocational choices. Thus, when they must leave and support themselves they are suddenly

confronted with reality and with their helplessness.

In summary, the historical events in the lives of dependent and neglected children make them excellent prospects for research on the effects of early deprivation, trauma, or any such tragic events which could be said to influence adult coping behavior.

Research on Dependent and Neglected Children

Research on dependent and neglected children has been minimal. One reason for this paucity of research is that few critical differentiations have been made between the various possible classifications of institutionalized children. The usual procedure is to lump psychotic children, dependent and neglected children, and delinquent children under the general classification of "delinquent." Consequently, direct investigation of the dependent and neglected child, as such, has rarely been attempted. Two studies which help clarify some of the personality difficulties of such children do bear on the present research.

Baumberger (1960) compared dependent and neglected children with "normals" during the satellization period of childhood as defined by Ausubel. He found the dependent and neglected children had a less healthy personality structure and exhibited more analytic and independent behavior in perceptual tasks than did normals.

Children who perceived themselves as accepted and intrinsically valued exhibited test behavior

interpreted as more secure, less anxious, more emotionally secure, and less threatened by adults than did children who were rejected and extrinsically valued. In short, children considered as satellizers evinced greater ego strength, and were regarded as possessing a more healthy personality structure than did non-satellizers (Baumberger, 1960, p. 53).

The rejected and extrinsically valued children evidence the following:

Rejected and extrinsically valued children exhibited a primary disturbance of personality organization and functioning. These children can be described as anxiety ridden, lacking affect control, exhibiting impulsive and aggressive behavior, less emotionally mature, more autistic, and experiencing greater conflicts with authority figures than do accepted and intrinsically valued children (Baumberger, 1960, p. 53).

Brown compared dependent and neglected girls with normals during the adolescent period of adjustment. She suggested that dependent and neglected girls defend against satellization with its attendant dependency and identification. The failure to satellize theoretically results in a "false facade of independence. Their judgment, integration of new experiences, and coping ability are severely affected due to their limited experience with broader emotional relationships" (Brown, 1968). She also described them as being superficially social but retaining an underlying core of hostility.

Statement of the Problem

The purpose of the present experiment is to explore the possibility that dependent and neglected children will perform less efficiently under conditions of social stress than will normals. It is the theoretical assumption that social stress in

infancy, involvement with parents and other social groups, and identification with parents has better prepared "normals" to function more efficiently under social stress conditions than children, such as the dependent and neglected, who have had limited experience with such preparatory experiences.

In effect, the virtual social abandonment of dependent and neglected children constitutes a social isolation condition which, if theory holds, will lead to inefficient coping behavior when presented with a social stress situation.

A second concern of theoretical importance is the groups to be tested. Both Erikson and Ausubel suggest that beginning adolescence is the period of most severe emotional upheaval. It is also their observation that adolescence is the time when successful ego development becomes of primary importance. Faulty ego development is dramatically reflected in faulty social adjustment.

The rejected child is especially fearful of a repetition of the rejection he experiences at home.... Hence they find it more agreeable and less hazardous (in terms of possible exploitation by others) to curtail their interpersonal relations to a minimum. The social isolation resulting from this withdrawal further limits the possibility of learning realistic social roles.... And in the process of utilizing withdrawal as an adjustive technique they usually acquire an habitual introversion which further restricts their scope of social proclivities (Ausubel, 1954, p. 361)

Since adolescent dependent and neglected children may be expected to cope less efficiently than normals under a social stress condition the following hypotheses are given.

Hypothesis I. Dependent and neglected children will perform less efficiently than normal children on a verbal learning task as a function of social stress.

Hypothesis II. There will be mean score differences between the groups as a function of sex.

Hypothesis III. There will be mean score differences between the groups as a function of the order of presentation of two paired-associate verbal learning lists.

Hypothesis IV. All subjects (whether dependent or normal) will perform less efficiently under social stress than under minimal stress.

Hypothesis V. There will be mean score differences between the groups as a function of stress and order of presentation of paired-associate verbal learning lists.

CHAPTER II

METHOD

Setting of the Study

The present study was conducted in a midwestern state at various homes for dependent and neglected children. The population of these homes is comprised principally of children from large cities throughout the state. The control group was selected from the student body of a metropolitan junior high school.

The institutions in question are for children who have been declared by the courts to be dependent and neglected as opposed to being declared delinquent. Such children may have engaged in antisocial activity, but the activity is of a nature to be considered situational. Because they do not evidence chronic anti-social behavior they are considered to be in need of supervision. The homes do not have a formal treatment program and are in no way equipped to deal with delinquent children.

A junior high school representative of a socio-economic level similar to that of most dependent and neglected children was chosen to provide the control group. The fact that most dependent and neglected children come from a large city area was a further consideration in choosing a metropolitan school.

Selection of Subjects

Dependent and neglected subjects were selected on the basis of severity of neglect and the absence of chronic delinquent behavior. Case histories were taken into account along with the judgment of a person, such as a psychologist or social worker, who knew the children personally and had considerable knowledge of the home situation. Non-delinquency was determined on the basis of behavior since being referred by the courts. Children who had any consistent pattern of disruptive behavior either at the children's home or at school were not used in the study. All children had to be making passing grades in school. Neglect was defined in terms of abandonment, physical and psychological abuse since infancy, and a feeling of being neglected on the part of the child.

The child's feeling of neglect was deemed an important differentiating point. Most neglected children do not consciously perceive themselves as being neglected and will characteristically defend their parents despite the most obvious mistreatment and neglect. Consequently, in the opinion of the authorities of all the children's homes visited, the admission of neglect by a child signals the deepest and most primitive level of parental neglect.

In order to differentiate the children who felt neglected from those who did not, the Parent Attitude Rating scale (Appendix III) as utilized by Baumberger (1960) was adopted for

the purpose of this study. Since the scale is simple and easily faked it was felt that any child who readily admitted to the items on the test must experience neglect consciously. A minimum cut-off point of ten items answered in the direction of neglect was set. The scale is comprised of a total of thirty-six items. Following the testing procedure the experimenter consulted with someone who knew each child in order to evaluate whether the child had answered honestly in terms of his perception of his home situation.

Baumberger (1960) adapted the scale from the Parent Attitude Rating Scale used by Ausubel in a previous study (Ausubel, 1954). Ausubel had found correlations between high scores on the scale and certain ego variables. Although the correlations were not high (r range of .36 to -.53) Ausubel felt the scale could be used to differentiate satellizers from non-satellizers. No such correlational assumptions are made by the present study since the scale was used to gain from the children an admission of neglect.

In terms of the criteria set down only thirty-six out of an original one hundred who might have qualified were selected to form a subject pool. From this subject pool twelve boys and twelve girls were randomly selected for the present study.

The control group consisted of twelve boys and twelve girls randomly selected from a pool of subjects meeting the following criteria: raised in lower-middle socio-economic level; have never come to the attention of the courts; appear to relate well to adults and peers; have no noticeable disturbances in family relationships; and are members of several social groups in

which they are active participants. The selection of students was on a school wide basis with the principal, counselors, and teachers participating in the selection of students according to the above criteria. The final pool of subjects came from those students who had been mentioned, independently, by at least three teachers. Further screening was done by the principal and by the counselors.

The "normal" subjects used in the study were allowed a maximum of three items answered in the direction of neglect on the Parent Attitude Rating scale.

Testing of Subjects

Each subject was asked to learn two paired-associate lists of words from a standard memory drum. They were told immediately that they would be asked to learn two lists of eight words from the memory drum in front of them, and on completion of the experiment they would be told the nature of the experiment. They were then read the following instructions:

You will be asked to learn a list of eight words. The words you are to learn will appear in the little open window of the machine in front of you.

First in the window you will see letters which do not make a word.

Next in the window you will see the same letters with a word beside it.

Watch and I'll show you what I mean.

First the letters ____ which do not make a word, then the letters and a word. (Repeat through practice list).

Notice there are eight words.

Now, here's how I want you to learn the words: I want you to look at the letters which do not make a word then

tell me the word that goes with the letters. Tell me the word just as soon as you see the letters before the word shows in the window.

Like this: Look at the letters ____ now showing in the window. Do you remember the word that went with those letters? No? Let's take a look. The word is ____.

Look again. See the letters now showing in the window. Can you remember the word that went with the letters. No? Let's take a look. The word is ____.

Don't feel bad because you don't remember the word that goes with the letters. You may have to go through the list of words many times before you do remember.

O.K., now I will start the machine running and will not stop it until you remember some of the words which go with the letters.

This is a practice list.

One other thing, don't try to learn all the words at once. As soon as you recognize a word which goes with the letters tell me... Don't wait until you know them all.

After the instructions were read the children were then given one practice list for a series of six trials. Following this the first experimental list was presented. One practice trial was given on each experimental list. A social stress condition was introduced on either the first list presentation or the second list presentation depending upon the subject's position within the total design. The social stress condition consisted of the examiner saying, "Excuse me, I have brought a teacher and a counselor with me who will watch you learn this list of words." Two people, a man and a woman, were ushered in and sat down behind the subject but within range of the subject's peripheral vision. The observers had been warned ahead of time to give no social recognition response to the subject as they entered the room.

When the subject had learned the list of words the examiner stood, turned to the observers, and said, "thank you." They were then dismissed. If the social stress condition had been presented while the subject was learning his first list of words the experimenter returned to his seat and said, "Now you will learn the second list of words."

Upon completion of the experiment each subject was told that the experiment did not have anything to do with him personally but that it was of interest to see whether it would be more or less difficult to learn a list of words while being observed. They were then invited to ask any question of concern to them. They were dismissed when it was apparent to the examiner that the subject was at ease and had no further questions.

The Perceived Stress Index (Jacobs & Munz, 1968) was administered as an objective measure of the level of stress under each experimental condition (Appendix IV). Each subject was first asked to check the one word or phrase on the PSI which best described how they normally felt. After each list had been learned they were asked to describe how they felt while learning the list.

The subject's task was to learn a different list of eight words under each of the experimental conditions---minimal stress or stress. These lists were composed of a series of eight paired-associate words. A nonsense trigram was used as the stimulus word. Both the nonsense trigram and its paired associate were chosen from the Archer (1962) list of trigrams, Table 1. The

Table 1
Paired Associative Lists, Four Randomly
Assigned Orders of Presentation

Practice	Experimental List # 1	Experimental List # 2
ORDER I		
1. CIR-SAT	1. TES-BUN	1. NOX-TIN
2. DEK-JAR	2. GIR-KIT	2. CIS-JAM
3. VAC-BEG	3. SEM-LOG	3. GON-LAD
4. LEM-ZIP	4. RAV-CUP	4. KON-WIG
5. HAK-MAN	5. ZIG-JOB	5. NOZ-HUT
6. JER-NAG	6. FOY-HAD	6. TYP-MEN
7. MAC-PAN	7. NEV-MUD	7. FAM-KEG
8. VOL-RAG	8. WOT-FAD	8. YEW-DOT
ORDER II		
1. MAC-PAN	1. FOY-HAD	1. CIS-JAM
2. HAK-MAN	2. SEM-LOG	2. KON-WIG
3. VOL-RAG	3. ZIG-JOB	3. GON-LAD
4. JER-NAG	4. RAV-CUP	4. FAM-KEG
5. VAC-BEG	5. NEV-MUD	5. YEW-DOT
6. LEM-ZIP	6. TES-BUN	6. NOX-TIN
7. CIR-SAT	7. GIR-KIT	7. TYP-MEN
8. DEK-JAR	8. WOT-FAD	8. NOZ-HUT
ORDER III		
1. VOL-RAG	1. GIR-KIT	1. TYP-MEN
2. MAC-PAN	2. FOY-HAD	2. NOX-TIN
3. DEK-JAR	3. SEM-LOG	3. YEW-DOT
4. VAC-BEG	4. ZIG-JOB	4. CIS-JAM
5. CIR-SAT	5. RAV-CUP	5. FAM-KEG
6. JER-NAG	6. TES-BUN	6. NOZ-HUT
7. LEM-ZIP	7. WOT-FAD	7. GON-LAD
8. HAK-MAN	8. NEV-MUD	8. KON-WIG

Table 1 (continued)

Practice	Experimental List # 1	Experimental List # 2
ORDER IV		
1. HAK-MAN	1. ZIG-JOB	1. GON-LAD
2. MAC-PAN	2. FOY-HAD	2. NOZ-HUT
3. VOL-RAG	3. NEV-MUD	3. KON-WIG
4. JER-NAG	4. WOT-FAD	4. NOX-TIN
5. VAC-BEG	5. TES-BUN	5. YEW-DOT
6. LEM-ZIF	6. SEM-LOG	6. CIS-JAM
7. DEK-JAR	7. RAV-CUP	7. FAM-KEG
8. CIR-SAT	8. GIR-KIT	8. TYP-MEN

nonsense trigram was selected from the eighty-first and eighty-second level of associative value. The paired associate word was selected from the one hundred percent level of associative value. The words and stimulus trigrams were presented on the memory drum for an exposure time of two seconds.

A pilot study using twenty subjects was run at a small rural high school. Ten subjects received experimental list one and ten received experimental list two. From the pilot study it was determined that the lists were equivalent in terms of difficulty in learning. It was also observed that subjects who had received I Q. scores below that of 96 consistently had difficulty mastering the task. Due to this latter finding the intelligence range for both normal and dependent-neglected children was set at 96 to 110, or roughly the average range of intelligence.

Experimental Design

Upon entering the room the subject chose a number which determined his place in the total design. The order of list presentation was counter-balanced so that twelve subjects within each experimental group were tested first on list one and then on list two. The remaining twelve subjects received list two first followed by list one. The order of stress presentation was also counterbalanced so that half of the subjects were given the stress condition first, and half the subjects given the minimal stress condition first.

Each subject learned each list to one perfect trial or until he had attempted fifty-four trials.

The data obtained was analyzed in a 2x2x2x2 SPF-pru.q (Kirk, 1968) factorial design with repeated measures on the stress/minimal stress factor, and with no repeated measures on the remaining factors. The remaining factors were dependent and neglected vs. normal, sex, and order of list presentation. A pictorial representation of the experimental design is given in Table 2.

Table 2

Pictorial Representation of Split-Plot Factorial

Design: Type SPF-pru.q 2.2.2.2.

			Stress	Minimal Stress
			B_1	B_2
A_1 (Dependent)	C_1 (Male)	D_1 (List 1 First)	1. S	S
			2. S	S
			3. S	S
			4. S	S
			5. S	S
			6. S	S
	C_2 (Female)	D_2 (List 2 First)	7. S	S
			8. S	S
			9. S	S
			10. S	S
			11. S	S
			12. S	S

Table 2 (continued)

			Stress	Minimal Stress
			B ₁	B ₂
C ₁ (Male)	D ₁ (List 1 First)	1.	S	S
		2.	S	S
		3.	S	S
		4.	S	S
		5.	S	S
		6.	S	S
	D ₂ (List 2 First)	7.	S	S
		8.	S	S
		9.	S	S
		10.	S	S
		11.	S	S
		12.	S	S
C ₂ (Female)	D ₁ (List 1 First)	1.	S	S
		2.	S	S
		3.	S	S
		4.	S	S
		5.	S	S
		6.	S	S
	D ₂ (List 2 First)	7.	S	S
		8.	S	S
		9.	S	S
		10.	S	S
		11.	S	S
		12.	S	S

CHAPTER III

RESULTS

Intra-list response intrusion scores and no response error scores were obtained on dependent and neglected children and on normal children. The data were analyzed by a SPF-pru.q design (Kirk, 1968). The means and variances for each cell within the design are presented in Table 3 and Table 4. Tests for homogeneity of variance of error terms, required by the assumptions underlying the split-plot factorial design, were accomplished by means of the Hartley $F_{\max}$ statistic (Winer, 1962). The assumption of homogeneity was upheld in the following cases: $F_{\max} (.01) (8,5) = 24.85$ for subjects within group error terms (no response errors); $F_{\max} (.01) (8,5) = 10.01$ for between subjects within groups error terms (no response errors); $F_{\max} (.01) (8,5) = 4.31$ for between subjects within groups (intra-list response intrusions). Homogeneity of variance of error terms was not upheld in the case of $F_{\max} (.01) (8,5) = 44.70$, for subjects within group error terms (intra-list response intrusions). No correction was made for heterogeneity since the F ratios did not approach significance.

The Analysis of Variance summary table (Table 5, Table 6) indicates that only one of the five research hypotheses approached significance. The results are as follows.

Table 4

Cell Means and Variances (No Response Errors)

		B ₁ (Stress)	B ₂ (Minimal Stress)
A ₁ (Dependent)	C ₁ (Male)	$\bar{X} = 85.00$ Var. = 4,134.40	$\bar{X} = 71.16$ Var. = 1,1887.38
	C ₂ (Female)	$\bar{X} = 40.33$ Var. = 354.00	$\bar{X} = 56.00$ Var. = 947.20
	C ₁ (Male)	$\bar{X} = 87.50$ Var. = 5,550.80	$\bar{X} = 68.16$ Var. = 2,515.78
A ₂ (Normal)	C ₁ (Male)	$\bar{X} = 85.50$ Var. = 4,362.00	$\bar{X} = 64.50$ Var. = 1,420.70
	C ₂ (Female)	$\bar{X} = 52.50$ Var. = 376.80	$\bar{X} = 65.66$ Var. = 1,109.60
	C ₁ (Male)	$\bar{X} = 69.66$ Var. = 557.46	$\bar{X} = 61.66$ Var. = 1,461.66
	C ₂ (Female)	$\bar{X} = 72.16$ Var. = 983.46	$\bar{X} = 68.33$ Var. = 939.46
	C ₁ (Male)	$\bar{X} = 50.66$ Var. = 2,041.20	$\bar{X} = 32.16$ Var. = 84.16

Table 4

Cell Means and Variances (Intra-List Response Intrusions)

		B ₁ (Stress)	B ₂ (Minimal Stress)
A ₁ (Dependent)	C ₁ (Male)	$\bar{X} = 26.66$	$\bar{X} = 28.00$
		Var. = 902.00	Var. = 1,356.20
	D ₂	$\bar{X} = 6.66$	$\bar{X} = 19.83$
		Var. = 23.60	Var. = 292.21
	C ₂ (Female)	$\bar{X} = 17.66$	$\bar{X} = 14.33$
		Var. = 339.20	Var. = 45.60
A ₂ (Normal)	C ₁ (Male)	$\bar{X} = 23.00$	$\bar{X} = 16.16$
		Var. = 536.80	Var. = 155.00
	D ₁	$\bar{X} = 11.66$	$\bar{X} = 26.83$
		Var. = 71.06	Var. = 760.20
	D ₂	$\bar{X} = 13.66$	$\bar{X} = 14.16$
		Var. = 122.00	Var. = 165.40
C ₂ (Female)	D ₁	$\bar{X} = 10.50$	$\bar{X} = 23.00$
		Var. = 75.10	Var. = 201.20
D ₂		$\bar{X} = 6.83$	$\bar{X} = 8.33$
		Var. = 83.36	Var. = 45.60

Table 5

Analysis of Variance Summary Table (No Response Errors)

Source of Variation		SS	df	MS	F	P
1.	Between Subj:	134,348.63	47			
2.	A (Normal/ Dependent)	2,730.63	1	2,730.63	NS	>.10*
3.	C (Sex)	273.38	1	273.38	NS	
4.	D (List Presentation)	4,537.50	1	4,537.50	1.53	>.10*
5.	AC	2,360.20	1	2,360.20	NS	
6.	AD	165.92	1	165.92	NS	
7.	CD	104.55	1	104.55	NS	
8.	ACD	5,859.33	1	5,859.33	1.98	>.10*
9.	Subj: W/Group	118,318.00	40	2,957.95		
10.	W/in Subj.	40,855.00	48	851.14	NS	
11.	B (Stress/ Minimal Stress)	1,162	1	1,162.00	1.31	>.10**
12.	AB	170.70	1	170.70	NS	
13.	BC	1,820.04	1	1,820.04	2.06	>.10*
14.	BD	24.01	1	24.01	NS	

Table 5 (continued)

Source of Variation		SS	df	MS	F	P
15.	ABC	80.63	1	80.63	NS	
16.	ABD	1,159.99	1	1,159.99	1.72	> .10*
17.	BCD	228.16	1	228.16	NS	
18.	ABCD	532.09	1	532.09	NS	
19.	BX Subj: W/Groups	35,317.33	40	882.93		
20.	TOTAL	175,203.63	95			

Critical Values

 $\underline{F}_{.05} (1,40) = 5.42$ $\underline{F}_{.01} (1,40) = 8.82$ Two Tailed Test* $\underline{F}_{.10} (1,40) = 2.72$ Two Tailed Test.

** One Tail Test

Table 6

Analysis of Variance Summary (Intra-List Response Intrusions)

Source of Variation		SS	df	MS	F	P
1.	Between Subj:	23,067.84	47			
2.	A (Normal/ Dependent)	522.67	1	522.67	1.03	>.10*
3.	C (Sex)	287.04	1	287.04	NS	
4.	D (List Presentation)	937.50	1	937.50	1.84	>.10*
5.	AC	22.02	1	22.02	NS	
6.	AD	24.00	1	24.00	NS	
7.	CD	286.63	1	286.63	NS	
8.	ACD	693.37	1	693.37	1.36	>.10*
9.	Subj: W/Group	20,294.17	40	507.35		
10.	W/in Subj:	7,441.00	48			
11.	B (Stress/ Minimal Stress)	433.50	1	433.50	3.10	<.10**
12.	AB	240.67	1	240.67	1.72	>.10**
13.	BC	260.05	1	260.05	1.86	>.10*
14.	BD	112.67	1	112.67	NS	

Table 6 (continued)

Source of Variation		SS	df	MS	F	P
15.	ABC	198.37	1	198.37	1.42	>.10*
16.	ABD	433.49	1	433.49	3.10	>.10*
17.	BCD	51.45	1	51.45	NS	
18.	ABCD	134.97	1	134.97	NS	
19.	BX Subj: W/Groups	5,576.83	40	139.43		
20.	TOTAL	30,509.84	95			

Critical Values

F.05 (1,40) = 5.42F.01 (1,40) = 8.43 Two Tail Test*F.10 (1,40) = 2.72 One Tail Test**

Hypothesis I, which states that dependent and neglected children will perform less efficiently under stress than normal children, was not supported.

Hypothesis II, which states that there will be mean score differences between the groups due to sex was not supported.

Hypothesis III, which states that there will be mean score differences between the groups as a function of the order of lists presentation was not supported.

Hypothesis IV, which states all subjects (whether dependent or normal) will perform less efficiently under stress, is significant at the .10 level.

Hypothesis V, which states that there will be mean score differences between the groups as a function of stress and order of presentation of paired-associate verbal learning lists, was not supported.

A t test was performed on the number of trials needed to reach perfect criterion. There is no significant differences between the two groups as a function of either stress or minimal stress ($p > .05$). The data are presented in Table 7 and Table 8.

A t test was performed on the scores derived from the Perceived Stress Index (Jacobs and Numz, 1968). There is no significant difference between the means of the two groups as a function of perceived stress ($p > .05$). The data are presented in Table 9.

Table 7

Trials to Perfect Criteria: Stress

Dependent	Normal
25	18
23	24
13	8
39	12
8	19
14	14
12	8
13	26
9	16
15	29
11	19
6	14
54	22
23	22
11	18
17	16
13	9
18	23
9	5
19	6
17	6
54	21
7	27
29	25
459	407

$\bar{X} = 191.25$
 Var = 1739.88
 $t = 1.67$

$\bar{X} = 169.58$
 Var = 263.89

Table 8

Trails to Perfect Criteria: Minimal Stress

Dependent	Normal
15	24
8	54
30	11
37	12
9	31
12	10
31	23
10	14
20	19
5	8
18	28
16	7
31	37
16	19
10	31
10	31
17	9
19	26
14	17
5	8
24	13
28	12
18	8
12	7
<u>415</u>	<u>459</u>
$\bar{X} = 17.29$	$\bar{X} = 19.12$
Var = 283.25	Var = 139.59
$\underline{t} = .53$	

Table 9

Perceived Stress Index Results

Normal	Dependent
7.52	9.35
7.52	9.35
7.52	3.61
7.52	9.35
10.64	7.87
7.52	9.14
10.65	7.52
10.00	6.87
5.12	5.74
7.72	7.52
10.67	4.43
8.43	6.88
7.52	5.39
	5.08
	7.52
10.00	5.08
5.39	4.70
7.52	2.95
3.61	7.87
12.44	6.87
5.39	7.18
10.00	4.40
7.83	7.52
5.74	7.52
5.39	
11.14	
192.80	159.71
$\bar{X} = 8.03$	$\bar{X} = 6.65$
Var = 4.8	Var = 7.0

CHAPTER IV

DISCUSSION

The purpose of this study was to determine whether children exposed to extreme neglect in infancy and early developmental years would be less efficient in coping with social stress during a learning situation in adolescence than children not so stressed. Accordingly, an attempt was made to structure two distinct groups reflecting two ends of the continuum from extreme neglect to above average acceptance by parents and peers.

The basic assumption underlying research efforts or theory building in developmental psychology has been that early experiences predispose children to good or bad ego functioning later in life. Part of good ego functioning is the ability to cope effectively with one's social environment. If the basic assumption made by researchers and theorists holds it should be possible to demonstrate inadequate coping behavior in children most likely to have been exposed to the negative conditions specified as leading to inefficient coping behavior. Dependent and neglected children have undergone extreme neglect since infancy. Such extremely neglected children should, therefore, exhibit deficient coping behavior under stress. Social stress was specified as the stressor since dependent and neglected children

have, almost by definition, been denied the social stimuli experienced by normal children. Further, they should be even more inhibited if the coping behavior is measured during adolescence. Adolescence is believed to be a time when the ego is under extreme pressure in most children and should be more so in children who have not been prepared in infancy to deal with such pressure.

The experimental group was chosen to select those dependent children less likely to have experienced good socialization processes at any period in life and who presently describe themselves as neglected by parents and rejected by peers. The control group was composed of children who had apparently been exposed to maximum socialization throughout life and who are presently accepted and valued by parents, teachers, and peers. If a cause/effect relationship between early social deprivation and later maladaptive response to social stress does exist it should be possible to demonstrate such effects using these two groups.

The results of the present study indicate that, although certain individual children were deficient in coping behavior, the dependent children as a group were as efficient in coping with the social stress condition imposed upon them as were the normal children. The results were unequivocal in demonstrating little or no differences between the groups. Thirty F ratios were computed. Of this number less than half approached a F of 1.0, which is considerably below the F of 5.42 needed to reach the .05 level of significance. Thus the results appear to be clear. Children from deprived

backgrounds, as a group, functioned as efficiently under the social stress imposed in this experiment as did children from excellent backgrounds.

There are various possible explanations for the results obtained. They may have been due to such factors as deficiencies within the design, or to a differential response to the stress condition by individual children. It is also possible that the results reflect the problem in psychology of identifying nosological entities. On the other hand, the results may accurately reflect that most dependent children regardless of deficiencies in background can come to terms with those adversities. In doing so they may later emerge as capable of functioning under stress as do normal children.

In the following discussion the possible explanation for the non-significant results will be explored.

Design Deficiencies

Two possible deficiencies within the design could account for the results obtained in this study. Since the data favored the normal children a larger n or a stress of greater magnitude may have yielded significant results.

The size of the n was not increased because it was felt that the power of the statistics used was such that genuine differences between groups could be detected if such differences did exist. Secondly, the number of children meeting the criteria was limited. Only thirty six dependent children were found who qualified

for the experiment.

It is also possible that the stressor was insufficiently strong to produce a breakdown in ego functioning. This supposition is based on the direction evident in the results. The normal children tended to function more effectively under stress, but not significantly so. Thus, a stronger stress condition might have increased discrepancies between the groups. On the other hand, the stressor did seem strong enough to elicit extreme reactions within the dependent group. Two dependent children broke down under stress and could not complete the experiment. One girl was reduced to staring at the memory drum, unable to utter a word. A second girl made a few attempts to master the task then began saying repeatedly that she could not do it. Both girls evidenced behavior reflecting a high degree of anxiety. They were sweating profusely, twisting their hands, and fidgeting in their chairs. Two other children within the dependent group attempted fifty-four trials under stress without mastering the task. They also evidenced many of the same overt signs of anxiety. These children were able to master the minimal stress task with relative ease. Thus, it would appear that some dependent children were considerably more stressed during the experiment than were the normal children. It should also be noted that the one significant F ratio in the results indicated a trend toward poorer performance for both groups under the stress condition. It appears, therefore, that there is some evidence to contraindicate a weakness in the stressor. It seems more appropriate to contend that the

stressor had differential effects upon intraorganismic variables within individual children.

Variability

The differential effect of the treatment on the subjects could have negated the results by introducing an unusual amount of variability into the experiment. This supposition seems, in fact, to reflect one of the more important findings in the experiment. Variability was great in both groups but more so in the dependent group. As already noted, four dependent children evidenced anxiety reactions considerably greater than any shown by the normal children. Also, there was a significant F_{max} computed on intra-list response intrusion measure. This measure seemed particularly sensitive to individual anxiety level. The greater variability was within the dependent group. This variability suggests more overt anxiety in that group as well as the obvious fluxuations in performance.

Edwards (1964) makes a strong point in favor of viewing variability in stress experiments as an important research finding.

It is difficult to overemphasize the importance of organismic variables in accounting for differences in variability of performance of subjects under different experimental conditions...it seems that one of the most probable explanations for significant differences in variances is that of, differential operation of a given treatment upon differences in an organismic variable.... To find that subjects with different values of an organismic variable react differentially to a given treatment is of perhaps even more psychological importance than to find that all subjects respond to the treatment in the same manner /p. 111/.

With respect to the significant $F_{\max}$ obtained, it should be noted that the variability did not appear to be related specifically to any of the factors such as sex differences, stress conditions, or list order presentation. This inference is made on the basis of non-significant results obtained on these factors. Instead, there appeared to be an almost random differential response to the gross experimental condition. The effect could be explained by hypothesizing that dependent children may have been responding to any number of factors unrelated to the design specifically. For example, the clinical impression of the examiner was that dependent girls responded with more anxiety to being alone with the examiner than did the normal girls. Normal children seemed to respond more in terms of the experimental conditions. Thus, intra-organismic factors within the dependent children could have resulted in more extreme reactivity to the entire procedure.

If the dependent children did experience more anxiety due to differential sensitivity to any number of stimuli, then the increased variability could lead to interesting speculations. Since intra-list response intrusions reflect difficulty in the control of verbal expression under stress, the inference can be made that some dependent children when under stress may tend to give inappropriate responses although their total functioning is not impaired. Some may overcontrol verbal expression while others may give free rein to verbalizations. Either of these overt behaviors could result in the children being viewed differently by

authority figures and by peers. Teachers, for example, might see the child who has little control over verbal expression as slow simply because of a tendency to emit the wrong answer. A normal student would theoretically tend to keep quiet if he did not know the answer. This latter inference was a clinical observation made by the experimenter during the study. Normal children seemed more controlled. They sat quietly in front of the machine and worked at the task. Dependent children would often evidence unrestrained behavior. One boy, for example, gave his responses in a loud voice. Each time a word would appear on the memory drum he would repeat it out loud three or four times before the word changed. At the same time he was snapping his fingers and popping up and down in his chair. His performance on the experimental task was excellent, but the way he arrived at his goal was noticeable. Thus, in terms of the expression and handling of anxiety the dependent group evidenced more variability behaviorally. This behavioral variability appears to be reflected in the intra-list response intrusion scores.

Another interesting inference can be made in view of the work of Rosenthal (1968) on the expectancies in psychological research. He demonstrated improvement in performance among students as a function of teacher expectancies. The present study may reflect a slightly different shift in emphasis. It could be that some children designated as dependent children generate a negative expectancy in the teacher and in classmates. This could be done if

the child did not control, or suppress, erroneous answers to questions asked by the teacher. On the other hand, if he did not respond when he knew the answer the results might well be the same. Similarly, peers may view his behavior as strange and make inferences about his behavior which would lead to exclusion from the group.

Finally, the variability in the intra-list response intrusion scores may reflect that some dependent children are less emotionally efficient in their performance. Although they may learn the task as quickly as normal children, they may expend more "psychic energy" in reaching their goal. Thus, in these children a good performance "cost" them more in terms of the emotional arousal needed to cope with the stressor. This inference would lead to the conclusion that an eventual breakdown in ego functioning may occur.

Nosological Difficulties

Another important consideration derived from the data is related to the problem encountered in psychology when one seeks to measure a nosological entity. Kelton (1969) obtained results to the effect that, "the delinquent population is actually a composite of sub-groups which differ from each other" p. 767. He contended that a serious fault has existed in the multitudinous studies attempted with delinquent children. The fault is in considering all children within an institution delinquent by virtue of the fact that they are in an institution for delinquent children.

Within that population there may be blatantly psychotic children or others with equally diverse characteristics and psychological problems.

The present study would tend to underline those results obtained by Kelton. It is quite possible that no such entity as "the dependent and neglected" group exists. Within that group there may be equally diverse personalities and sub-groups as exist among the so-called "delinquent" population.

The reason children do differ within any group may be a function of the individual child's reaction to his environmental conditions. This is, in fact, a growing approach to the understanding of developmental psychology.

Individual Reaction to Deprivation

The definite negative results of this experiment may well demonstrate that by the time of adolescence there is no group differences between children from deprived backgrounds and normal children in their ability to cope with stress. While the variability evidenced in the dependent group may reflect some individual breakdowns in ego functioning, the total results would suggest that the majority of dependent and neglected children overcome the problems encountered during infancy. Such an hypothesis involves adopting a framework similar to that of Piaget or Escalona. Piaget (1952) believed that the organism reacts to the environment in terms of already existing cognitive organizations. All experiences are molded into already present schema and alter the schema in terms of

reality conditions. Hence experiences cannot be isolated, fixed S-R connections impressed on a passive brain field. All experiences are integrated into a constantly changing structure. Further, his notion of equilibration is a motivational concept which implies a seeking of mastery over the environment. This idea of the active, seeking organism in search of mastery over the environment is currently of great interest. Escalona (1968) reviews the literature to date and makes the following evaluation:

In one respect all the research we have discussed so far has lead to the same conclusion. The observed phenomena and relationships do not prove orderly and comprehensible when isolated antecedent variables are related to isolated developmental measures or behavior characteristics. Whether the antecedent variables be intrinsic (pre-maturity, minimal brain damage, activity level) or extrinsic (institutionalization, social class, ordinal position, child-rearing techniques), all well-controlled investigations have shown a wide disparity among children subject to the same antecedent conditions. Even when statistical relationships emerge...differences within a group tend to be nearly as large as differences between the groups p. 187.

The present study seems to reflect Escalona's position exactly. There was wide disparity between children subject to what appeared to be similar antecedent conditions and the differences within the group were as large as those between groups. Further, institutionalization or differences in child-rearing practices did not make either group less efficient under a stress condition. The inference may be made that the study does demonstrate no group differences. The differences seem related to individual adjustive reactions and not particularly to the antecedent conditions.

Escalona's statement is a more recent rewording of the same theoretical position of Oppenheimer (1955) and of Hunt (1965). The individual should be the subject matter of psychology with more attention being paid to naturalistic observations such as those of Piaget. The emphasis is upon the role of biology in development and in the role of the innate organizing activity of the child. Escalona (1968) underlines this point.

There is a greater readiness to abandon the view that extrinsic and intrinsic factors act upon the organism to produce behavior changes in favor of the view that the organism's activity (motoric, perceptual, affective) shapes and constructs events that constitute developmental change.... Whatever happens to the growing child is regarded as the result of continuous interaction between him and the conditions and events to which he actively and selectively responds. Children--even newborn infants--have the power to influence and change their environment
p. 20, p. 557.

The results of the present study appear to reflect a growing trend in developmental research. While no one seriously questions the position that early experiences may influence children to behave in certain ways, there is a question as to the irreversibility of these effects. It seems that children may themselves make adjustments which preclude the drastic outcomes one would predict from the study of trauma during critical periods, lack of early stimulation, absence of social stress in infancy, etc. The children used in the present study probably had extreme interference with normal growth during all stages of development yet as a group they coped as well under stress as did normal children. Thus, there is some support for the contention that the

dependent child as an nosological unit does not exist. Certain children within the general classification may, however, have been exposed to such deep rejection and continual failure that they could not overcome the effects of their early environment. This was reflected in the variability present within the dependent and neglected group and by the fact that two dependent children had to be dropped from the study because they could not continue. On the whole, however, the results are encouraging since it does appear that the dependent children taken as a group were able to overcome much of the environmental adversities to which they had been exposed.

Needs for Further Study

The variability within the dependent group on the intra-list intrusion measure suggests that dependent and neglected children may tend to give more overt signs of anxiety under stress. Normal children tend to control their anxiety responses and, in effect, mask their internal state. Thus, a study designed to measure the subtle signs of overt behavior in the classroom or in the presence of non-dependent peers would serve to substantiate the inferences made from the present study.

A second area for profitable research with dependent children would be to isolate sub-groups or individual differences within a given institutional setting. It appears that there are certain individual children who have coped effectively with hardships encountered during their developmental years. Others are apparently broken by those experiences. By investigating individual differences

it might be possible to determine some environmental situations, or intra-individual differences which contribute to the eventual outcome of a child's development.

It is also possible that a better understanding of personality differences within institutions would lead to a broader understanding of the kinds of children who function well in a particular setting. It seems that there is an unspoken normative behavior expected of children in a given institution, and each institution appears to differ in the kinds of behavior it can tolerate. This normative expectancy goes deeper than a mere designation by the state of an institution suitable for a particular type of child. It seems these expectancies arise from certain needs within the staff to see children in a certain way. Due to these needs it appears that certain definite limits are set on behavior tolerated within a given institution.

CHAPTER V

SUMMARY

This study represented an attempt to determine whether dependent and neglected children who had been deprived of most experiences deemed important for development would function less efficiently under social stress than would children who had experienced maximum stimulation.

Two groups of children were selected. The dependent and neglected children were chosen from several institutions for the dependent. These children were judged not to be delinquent, and to have experienced a lifetime of neglect. They were also chosen on the basis of their own perception of themselves as neglected. It was felt essential that they should feel rejected by their parents. The control group was selected by teachers and staff who judged the children to be accepted well by peers and staff alike. They were also judged to come from stable homes, and rated themselves as accepted by their parents. Both groups were tested by having them learn two lists of paired-associate trigrams. Two observers designated as a teacher and a counselor sat behind the children as they learned one of the paired-associative lists. No response errors and intra-list response intrusions were used as data. The data were analyzed in a $2 \times 2 \times 2 \times 2$ split-plot

factorial design with repeated measures on the stress factor.

One of the five hypotheses was significance at the .10. This finding demonstrated a trend for both groups to see the observation by adults as stressful. The four remaining hypothesis were not supported suggesting no measurable differences between the two group in the ability to master the task under social stress. A significant F_{max} on the intra-list intrusion measure suggested a wide variability within the dependent group. The inference was made that the intra-list response intrusion was sensitive to anxiety and reflected difficulty among some dependent children in inhibiting or overinhibiting verbal responses. It was suggested that such difficulties might lead to adverse expectancies on the part of teachers and peers.

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APPENDIX I

RAW DATA FOR NO RESPONSE ERRORS

S	Dependent Stress	Minimal Stress	S	Normal Stress	Minimal Stress
1	92	66	1	59	95
2	96	39	2	81	97
3	46	109	3	28	44
4	204	139	4	43	36
5	33	39	5	65	95
6	39	35	6	39	27
7	46	103	7	36	56
8	74	30	8	93	56
9	27	67	9	68	74
10	42	16	10	98	30
11	31	67	11	71	130
12	22	53	12	52	24
1	233	167	1	68	41
2	85	54	2	77	50
3	42	40	3	71	88
4	60	27	4	59	82

S	Dependent		S	Normal	
	Stress	Minimal Stress		Stress	Minimal Stress
5	27	62	5	31	36
6	78	59	6	127	113
7	30	50	7	13	38
8	68	23	8	6	26
9	45	91	9	23	44
10	235	127	10	63	38
11	24	51	11	76	20
12	111	45	12	123	27
	—	—		—	—
Total	1740	1559		1470	1367

APPENDIX II

INTRA-ERROR RESPONSE INTRUSIONS

Dependent		Normal	
Stress	Minimal Stress	Stress	Minimal Stress
24	10	16	30
17	6	23	74
7	40	4	8
86	98	17	9
5	2	9	40
21	12	1	0
7	48	3	25
6	9	3	3
5	25	18	22
7	1	26	3
15	27	26	30
0	9	6	2
53	17	24	41
21	11	17	21
9	10	10	34
4	5	2	26

Dependent		Normal	
Stress	Minimal Stress	Stress	Minimal Stress
5	21	2	1
14	22	8	15
0	7	1	16
20	0	0	3
18	24	2	17
63	35	10	8
3	18	24	5
34	13	4	1
444	470	256	434

APPENDIX III

PARENT ATTITUDE RATING SCALE

1. No matter what happens, I know that I can always turn
to my parents for help. _____
2. My parents are nice to me most of the time, even
when I do wrong. _____
3. Sometimes if I make a mistake my parents say that
it can happen to anyone. _____
4. My parents often tell the neighbors when I've done
something wrong. _____
5. I know my parents love me. _____
6. My parents just don't care about what happens to me. _____
7. My parents always tell me that something bad will
happen to me if I don't behave. _____
8. My parents punish me even if I didn't do something
wrong. _____
9. Every time I make a mistake my parents get angry
and yell at me. _____
10. I'm always scolded when I don't pick up my toys. _____
11. I can't tell my parents anything. _____
12. My parents act as if I were in the way. _____
13. When I have something to say, my parents listen. _____
14. My parents are interested in me. _____
15. My parents never punish me for something I didn't
do. _____
16. When I'm sick my parents are very worried and try
their best to make me well. _____

- | | | | |
|-----|--|-----|-----|
| 17. | Sometimes my parents punish me more than I deserve to be. | ___ | ___ |
| 18. | I can tell my parents about things I do and they seem to understand. | ___ | ___ |
| 19. | I'm afraid my parents will stop loving me if I get bad grades. | ___ | ___ |
| 20. | My parents want me to be whatever I want to be. | ___ | ___ |
| 21. | No matter how I do things, I know my parents like me. | ___ | ___ |
| 22. | My parents want me to be somebody important when I grow up. | ___ | ___ |
| 23. | Sometimes I feel like doing something bad just to see if my parents will still love me. | ___ | ___ |
| 24. | My parents don't push me into things. | ___ | ___ |
| 25. | My parents have already decided what I'm going to do. | ___ | ___ |
| 26. | As long as I do my best my parents are satisfied even if other children can do things lots better. | ___ | ___ |
| 27. | My parents give me special treats to get me to do things better. | ___ | ___ |
| 28. | Somehow I know that no matter what happens, my parents will always love me. | ___ | ___ |
| 29. | As long as I do my best my parents are satisfied. | ___ | ___ |
| 30. | My parents always nag me to do things better. | ___ | ___ |
| 31. | My parents are nicest to me when I am good in school. | ___ | ___ |
| 32. | My parents feel that I am important, not what I do. | ___ | ___ |
| 33. | My parents often talk about what I am going to be when I grow up. | ___ | ___ |
| 34. | My parents like to have me show off in front of company. | ___ | ___ |
| 35. | My parents always listen to what I have to say. | ___ | ___ |
| 36. | My parents like me as I am. | ___ | ___ |

APPENDIX IV

INSTRUCTIONS

Here is a list of words and phrases which can be used to describe your feelings. Please check the word or phrase which best describes the way you FEEL. So that you will become familiar with the general range of feeling that they cover or represent, read the entire list before making your selection. Check only one word or phrase.

- ☐ DISTRESSED
- ☐ UNRUFFLED
- ☐ THREATENED
- ☐ AT EASE
- ☐ TIMID
- ☐ EXTREMELY TERRIFIED
- ☐ FEARFUL
- ☐ UNEASY
- ☐ MARVELOUS
- ☐ ALRIGHT
- ☐ NOT MATTERING
- ☐ THRILLED
- ☐ FEELING GOOD
- ☐ SCARED STIFF
- ☐ KEEN