AGGRESSION AND WITHDRAWAL IN CHILDREN.
PSYCHOLOGY 115
AGGRESSION AND WITHDRAWAL IN CHILDREN

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"Aggression and Withdrawal in Children" was written as a community project by the members of a graduate seminar in child psychology, in the Psychology Department of the University of Illinois. Only the first semester of the academic year 1947-48 was devoted to the project. The seminar was conducted by the writer of this preface, who assisted the group to organize its efforts, and acted as chairman during the discussion periods. The members of the group did their own bibliographic research, wrote their own summaries and evaluations, and -- in a few instances -- had an opportunity to revise their papers after group criticism. A special editorial committee was responsible for organizing and editing the final manuscript.

As there was insufficient time for producing a finished work, this mimeographed edition is being used as the point of departure for the new second-semester seminar group, who will review all of the material critically and carry the project to completion.

Although the members of the first group had hoped to write a monograph that could stand without revision or expansion, it became manifest in the final stages that this had been an impossible goal in view of the limited time available. They have had to satisfy themselves with the knowledge that their work was sound, and that this mimeographed edition was essential to the gaining of an integrated, over-all view of the field. This step would have been necessary regardless of who completed the monograph, and we are happy to record the fact that we have never worked with a more earnest, sincere, and responsible pre-professional group.

Richard M. Page
THEORETICAL CONSIDERATIONS AND DYNAMICS

Dynamics

When human beings come into the world they are not equipped with the repertoire of responses which their particular culture will demand of them. Nor are they at first capable of acquiring these responses. For a time, reflexive and the most easily learned ways of gratifying their basic needs are tolerated, even encouraged. But this period of indulgence is short. As the child's mental and physical capacities enlarge, the adults in his environment begin to manifest dissatisfaction with his infantile ways. Early modes of response which perhaps brought the most profound satisfactions to the child himself but which taxed the patience and energies of others now have to be abandoned and new, more arduous ways acquired. Each new level of adjustment is achieved only to be in turn abandoned, as the child is pushed on by increasingly complex demands. This is an imperative process for the highest evolution of the individual and for the welfare of the group. (1) The traits which arise out of these processes get their meaning from social relationships. They are not so much biophysical traits that are the property of the individual as they are biosocial traits that get their definition from the subjective appraisals of others. An individual's personality is evaluated by comparison with group standards.

Human society is based largely upon the capacity of individual human beings to interpret and respond to the behavior of other human beings. The more cooperative and closely knit the structure of a given society becomes, the more demands are put upon individuals to respond to the needs of others. The teaching of these restraints and skills which are deemed essential for adult social participation commonly requires that simple, naturally preferred ways of acting be interfered with and replaced by more complicated modes of behavior. Socialization is thus inevitably frustrating and necessarily generates resistance and tendencies to behave aggressively toward the socializing agents. In our culture the traditionally approved action in such cases consists of trying to bring the rebellious child to terms by means of physical punishment or counter-aggression. The consequences which these coercive measures have for personality formation will depend, in part, upon the sources of the child's hostility and the general nature of his adjustment up to that point in his life history. One may conclude then that it is the business of culture to frustrate and to check the aggressions mobilized by those frustrations. (2)

Adjustment mechanisms are acquired habits by which individuals satisfy their motives. All persons experience thwarting, and almost none have abilities or qualities that permit a successful direct attack on all problems; hence, adjustment mechanisms are normal and necessary in the life of every individual. The occurrence of defense mechanisms then is usually indicative of thwarting in the form of personal defect. Certain qualities of the individual result in social disapproval or in the thwarting of self-assertion or in both. This arouses a fear reaction and leads to incoordinated or unintegrated attempts to overcome the defect by the over-assertion (aggression) of adequacy. (3) This over-assertion in finale is a form of compensation, or the overemphasis of a trait, acting as defense to reduce the tensions occasioned by a personal defect.
Defensive behavior is a notable characteristic of children who have developed habits of receiving constant attention and praise. Egocentric habits many times originate in early childhood because of overindulgence by parents. (3)

Confronted with the frustration of some strong motive, the child makes varying responses until some form of behavior is discovered that will reduce his emotional tensions. In many instances the satisfying action is found in seclusiveness and timidity which are avoidant responses to the stimuli responsible for the maladjustment. The seclusive behavior is in a sense adjutative, for by avoiding the attempt to cope with his environment the child eliminates the possibility of failure. (3)

Morgan (4) holds that there are basically three main frustrating factors which the young child encounters. These are:

1. Physical frustration - physical obstacles, such as chairs, and other path impeders.

2. Personal frustration - people getting into the child's way - inhibiting him, teaching him and directing him.


These various agents per se need not call forth maladjustment of the personality, but the improper handling of the frustrating agents precludes a conflict between desire and the situation. Perhaps an illustration will help clarify the point. "A hungry boy presents what might be called a classic example of a maladjusted child. Between his present emptiness and his vision of the contentment arising from a large meal, there is a gap, a contrast, a void which is the essential factor of all maladjustment. In order to be a true case of maladjustment the gap must be realized. The boy may not be hungry (and therefore not maladjusted) until he passes the baker's window. Then he becomes actually conscious of the contrast between his present state and the desired one. The major element then in maladjustment is that of a felt contrast between the real situation and the desired one."

As the child grows older frustrating agents become more diversified because the scope of experience has been broadened. Frustrations still arise from the physical environment, from people, and from self repressions, but they take new forms and shapes because their realm of influence has become greater.

Aggression is representative of many diverse conditions. It may be a reaction to frustration of a fundamental need or impulse. It may be a means of coping with overwhelming inner fears stirred up by a terror of a menacing world. In the detached child, it may signify an avertion of close relationships with people; in the child with power strivings, a way of gaining control; and in the masochistic youngster, a technique of provoking others to a point where they retaliate in kind. (6)
Aggression may be a camouflage for a deep feeling of inner helplessness and as such is motivated by the condition that the only way to escape hurt is to overwhelm others. It may be a manifestation in the compulsively dependent child of disappointment in the adult to whom he clings, on the basis that his whims are not being satisfactorily gratified or because more favors are being shown to others than to himself. (6)

A number of children who exhibit behavior problems in the form of direct subversive aggression never seem to have developed an inner system of moral restraint or the ability to tolerate an average amount of frustration.

Some children whose overt aggression has been limited to a zero point by especially severe parents, are forced to find other ways of responding to frustrating situations. Timidity, intense anxiety, withdrawal, and a marked expression of guilt may result from such severe prohibitions by the parents. Withdrawal also may be due to the child's inability to reconcile his own desire to be an independent personality and his consequent resentment to adult domination, or it may be due to feelings of inadequacy in dealing with new adjustments. Whatever the case may be, among the most frequent causes of withdrawal are strong and continued fear conditioning, the persistent frustration of other modes of defense, and habit formations that predispose a child to withdraw rather than to employ other methods of adjustment. (7)

Integration of Personality

The psychological organism can be considered to consist of two parts: an inner system of psychological needs, and an outer surrounding system comprising the perceptual-cognitive, and motor functions. (1) The mediation of these two parts through the overcoming of regressive and resisting forces results in basic personality organization. It is attained and maintained through the continuous resolution of conflict, which is a normal phenomenon in the process of development. It is held in relatively unstable equilibrium, always breaking down and being built anew. The recurring conflicts prevent the organization from solidifying, and if adequately resolved give the personality greater breadth and adaptability. But incompatible ideas, inharmonious feelings and sentiments, and antagonistic drives and purposes are not always readily brought together. The conflict may persist with its consequent anxiety; or it may be solved through repression. Many times the conflicting experiences are pushed off into the unconscious and split off from the personality. When this occurs personality maladjustment is quite certain to occur at some stage of development.

Murphy subscribes to Heinz Werner's (24, p. 66) development levels "(1) a level of global, undifferentiated mass activity (2) a level of differentiated parts, each acting more or less autonomously; (3) a level of integrated action, based on interdependence of parts. The "whole" reaction of the organism at these levels, is first a "diffuse", then a "differentiated," and last an "integrated" wholeness. At all levels, tensions spread, giving resultant organism action. The mode of reaction at the second and third levels, however, depends upon thresholds, which, when sufficiently high, check tension spread, and direct or channel action into behavior, through organ systems in which thresholds are either sufficiently low, or which have been lowered as the result of a form of stimulation so that a directed action ensues."
The organism is conceived of not as static, but as a potential energy source, which has at all times a relatively fixed tension level, and which by homeostasis, maintains this level and reacts to stimuli by an increase in tension in a given area. This spreads through organ systems until an environmental or organic need is satisfied. When these tensions fail to spread, frustration evolves. This at the integrated level is exemplified by the hungry dog whose tissues require food. Resulting chemical imbalance stimulates nerves which in turn stimulate muscles, and indirectly increase tension level. This leads to behavior of searching for and consuming food. In the meantime, it is conceivable that thresholds leading to sex behavior are raised, while thresholds of a sensory nature, particularly smell or taste, are lowered. By establishing barriers, frustration can be readily shown and, depending upon the dog's environment, resultant reactions of aggression or withdrawal seen. Given withdrawal, regression even to the undifferented level, is possible.

*Tension levels, it should be emphasized, never exist evenly; many tensions exist within the organism at a given time, some regions dominant over others, all contributing to the behavior pattern. Further, it is conceivable that frustration can result from conflicting tensions. The degree, form, locus, and quality of the tensions combined with cultural influences, give the pattern which the form of aggression or withdrawal will take. In resolving tensions, cognizance must be given to the fact that both attitudes and situations influence behavior. For example, in the case of the hungry dog, not only hunger, but attitude toward food and the situation where it is to be eaten, influences the dog's behavior. Both Freud (26) and Woodworth (27) have shown that preparatory acts are in themselves occasionally satisfying.

Clinical evidence indicates that frustration patterns of humans are specific so that with repetition of the original stress stimulus, the frustration response occurs as it did in infancy. When the "giving up" pattern spreads, the general passivity syndrome is seen. However, frustration seldom or never spreads to such an extent that some form of release cannot be realized. At more specific levels, continued frustrating experiences occurring from infancy can impair function quite definitely. When the stimulus response sequence flows through tissues not under high tension, the impairment will not be great, but under stress of coping with competing individuals "the primitive pattern of approach to the goal object cannot be followed." (28, 308)

Graham Foulds, (29) investigating frustration types as seen in mentally defective juvenile delinquents has found, what he believes, three persistent types of reacting to frustration. These are based on Rosenzweig's (30) ratings of extrapunitive, intrapunitive and impunitive. He found by using Cattell's Psychoneurotic scale, that the extrapunitive showed paranoid trends, that is, he blamed the world for his trouble, and expressed anger and hostility against the world and people. Contrasted with this, the intrapunitive blames himself for his troubles, shows remorse and guilt feelings, using the defense mechanism of displacement, isolation and undoing, in other words, similar behavior to that shown by obsessional and compulsive neurotics. The impunitive, lastly, passes over frustration
lightley, says no one is to blame for his "troubles" that they are unavoidable accidents. His motives seem to be conciliation, self deception and repression, as seen in hysteria. That is, situations which are frustrations, are inevitable and excusable. Foulds, further investigating the relationship between family relationships and juvenile delinquency, found that childhood rejection correlated with extrapunitiveness and impunitiveness.

Luria (31) has shown that from the level of reflex to cortically integrated response the resolving of conflict is progressively easier according to the height of the level. Problems insoluble at lower levels are often easily solved at the cortical or symbolic level. However, as demonstrated by Hamilton, excessive conflict, may here cause such great overall organism tension, that solutions are blocked. Since the symbolic level involves the ego, it seems most vulnerable to frustration, giving in extreme instances, behavior such as reviewed by Foulds. (31)

Murphy is of the opinion that early faulty adjustment (usually to frustration) establishes neurotic patterns, and that these expand through the symbolic system. Considerable evidence of this is found in psychosomatic literature as well as clinical findings evolving from the Adlerian and Freudian schools.

Earlier emphasis was given to the fact that individual differences exist in all the modes of response which we have reviewed to this point. What then of individual frustration tolerance, whether due to constitutional factors or early environmental experience, as observed by Pratt, Nelson, and Sun (32)

This may be shown in symbolic patterns, such as stoicism or self control, which disperse energy before aggressive behavior occurs. Again, it may manifest itself in behavior as reviewed, or blockage of powerful drives may lead to constructive behavior, if strong enough habit or canalizations have been formed. Varying degrees of satisfaction may accompany this type of inhibition, from the ego feeling "no painful participation to feelings of self betrayal." (28, p. 318) Drive blockage, though, may occur before the drive has the opportunity to develop its "normal physiological tension level." This is the Freudian "aim-inhibited drive." At this level, continual reinforced inhibition may lead to a disappearance of the drive. Clinically, anorexia appears to be this type of inhibition. This may be a "masking" of the drive, which will reappear when the barrier is removed, or the drive inhibition may be "reinforced by outer circumstances or by inner habit" the effects of which may be traumatic.

The more complicated the individual, the more complex his "symbolic world" and the more likely he is "to involvement in situations by virtue of adience. --- Caught in the toils of a circular response he goes on reacting because he is in the situation."

Theoretical Considerations

In the previous paragraphs an attempt has been made to present some of the dynamics underlying human behavior and to emphasize that aggression or withdrawal can of course, be a tension-reducing mechanism. It is the aim
of this section to review some of the more prominent definitions of aggression and withdrawal, keeping in mind the semantic difficulties that are so prevalent in modern psychological literature. Even terms, the meanings of which are fairly crystallized among the general population, are not always used in the same sense by professional people whose aim it is to make their terms fit their theoretical considerations. Thus, a number of synonyms have found use in psychological language which denote the particular views of the authors who employ them. Various investigators have indicated their specific interpretation of the general reaction pattern of aggressive behavior by substituting ascendancy, approach, dominance, etc. By the same token, submission, avoidance, shyness, etc. have frequently been used as specific substitutions for the more general term withdrawal.

Some of the following definitions have found wide acceptance, mainly because they are general and not dependent on theoretical considerations. These definitions place emphasis on giving factual descriptions of observable behavior patterns. Thus, Warren defines aggressiveness as a "type of behavior characterized by attacking and pushing forward rather than shunning danger or difficulties." (9, p. 8) Young uses the term aggressiveness to cover a wide range of self-assertive activity. In his own words, "Those types of reaction which set up anger and resistant or attacking reactions at the stoppage of any course from drive to goal are usually conceptualized by the term aggression." (10, p. 378) Included in these reaction patterns are "rebellion against authority, disobedience to parents and teachers, delinquency, criminality, temper tantrums, negativism, overt teasing, jealousy, envy, cursing, nagging, verbal teasing, malicious gossip, irony, satire, fantasy wherein the person daydreams of evil befalling his enemies, leadership." (10, p. 378) Symonds (11) also considers aggressive behavior as a reaction pattern and mentions four meanings of the term aggression. The first includes self-assertive and vigorous activity which he considers to be of little psychological significance because it is too general to contribute to psychological understanding. The second includes acquisitive activity, especially efforts of this kind that meet opposition. The third type of aggressive behavior is characterized by hostility, attack, or destruction with the intent of injuring another person or his possessions. The fourth includes controlling, domineering or managing behavior of persons exhibiting leadership. Dollard and Doob mention a general definition of aggression as "an act whose goal response is injury to an organism or organism surrogate." (12, p. 11) The reaction pattern implied in this definition corresponds to Symonds' third meaning of aggression.

Since this monograph is intended for practical use and the definition stated by Dollard and Doob comes closest to reflecting the problems clinically encountered, it will be adopted for the purposes of this book. A book which purports to survey, evaluate, and synthesize the results of studies supporting various theoretical hypotheses must offer a "common denominator" based on observable overt behavior which does not presuppose any underlying theoretical structures.

Recently a number of theories have been advanced which take into consideration some sort of frustrating experience. (Dollard, Doob et al, (12); Rosensweig, 13, (1); Horney (14); Alexander, 15). This does not necessarily imply that the invariable result of frustration will be aggression. It is
generally recognized, however, that aggression is one of the major consequences of frustration. This view was first proposed by Freud himself in his earlier writings. He later reversed his position, postulating a highly speculative theory of a death instinct. He held aggression to be one of the fundamental biological needs relatively unaffected by the experiences of daily living, and analogous to such biological drives as hunger, thirst, etc. In contrast to Freud's notion of a death instinct, Dollard and Doob of the Yale group assume the need to behave aggressively to be highly variable from individual to individual and in the same individual from time to time. Thus, the Yale group stresses the following four principles relating aggression to frustration: 1. The strength of the instigation to aggression varies with the strength of the drive. 2. The strength of the instigation to aggression varies with the degree of frustration. 3. The strength of the instigation to aggression varies with the number of frustrated response sequences. 4. The strongest instigation to aggression is against the agent perceived to be the source of frustration.

Freud's concept of the death instinct has been criticized by many authors. Hunt (16) makes the interesting observation that some of the modern psychoanalysts seem to prefer Dollard and Doob's fundamental idea that aggression is usually a function of frustration. Masserman (17) points out that aggressivity is determined by so many complexly interrelated determinants that it is next to impossible to designate any inflexible pattern as a mechanism explaining such behavior. Many social psychologists, e.g. Money-Kyrle (18), have also taken issue with the notion of aggressive "instincts," and have regarded aggression as a substitute pattern of adjustment. Alexander points out that "the relation of aggressiveness to self-preservation is still an open question. The existence of inherent destructiveness operating for its own sake in excess of the need for self-preservation, has not been convincingly demonstrated." (15, p. 334) He concludes that "in morbid states, large quantities of inhibited hostile impulses accumulate and may be released by sadistic behavior which may be pleasurable but is not aimed at self-preservation." (15, p. 334) Murphy, Murphy, and Newcomb take the position that aggressiveness is "problem behavior." However, they are emphatic in stating that there is no one psychological problem involved. In their own words, the forms of aggressive behavior are all forms of insistent response to obstacles socially imposed between children and their goal. (19, p. 376) According to them, the child's aggression against all members of his social environment is a function of his early social development. There is, however, much confused thinking about the origin of aggression, how it develops, and how it manifests itself in adult life. They stress the need for a point of view based on experimental evidence and unencumbered by speculation, a need for more complete investigation of the biological and cultural aspects of aggressive behavior. These writers assert that aggressiveness in children takes two forms, namely, aggressiveness toward other children and aggressiveness toward adults, implying a resistance toward supposed authority. Aggressiveness has also been classified according to social approval. Thus, socially approved aggressiveness is called self-assertiveness and sociability. This may be considered as a sign of maturity showing self-confidence. Aggression may be anti-social with the result being that the aggressor becomes disliked. Children displaying this behavior may be called socially immature. Now the fact that a distinction between two forms of aggressiveness has been made, serves to create
considerable confusion. It becomes necessary to present our definitions more clearly. If the various forms of objective "aggressiveness" are incorporated in one term without consideration for motivational factors and due regard for the setting in which such behavior takes place, then we cannot expect to arrive at any valid conclusions.

Assigning values cannot take the place of psychological understanding. The proper evaluation of psychological factors must include not only an understanding of the individual child and his motivation, as well as the total situation, but also the larger trends indicated by the structure and functional pattern of our culture. Many anthropologists have been interested in investigating the influence of cultural patterns on the range of aggressive behavior. Mead (20) studied the children of the Arapesh tribe of New Guinea and found little evidence of aggressive behavior among them. Neighboring tribes, however, displayed great amounts of aggressive behavior. She traces these variations to various differences within the cultures involved.

However, differences in culture patterns need not be traced as far as these primitive tribes. Analogies with our own social structure are overly abundant. In general, as indicated in the introductory chapter, it is the rigidity of the social structure which produces aggressive behavior, since it will not allow the individual to remove himself from the frustrating experience. This rigidity of structure is apparent in the sexual taboos of the primitive society as much as it is in the more rationalized sexual code of our own culture. Since these rigid laws cannot reduce aggressive behavior, it makes provision for controlling it by channelization. Specific forms of aggressive behavior are not only permissible but highly acceptable. One need only to see a football game. This channelization produces in effect a sanctioned dichotomy between in- and out-groups. By establishing an out-group the need for aggression in the in-group is reduced to a minimum. Alexander (15) states that hostility to the out-group as one condition underlying internal peace. Cohein (21) compares the feeling toward the out-groups to the oedipal situation in which the out-group is seen as the hostile father figure. Klineberg (22) presents evidence that various aspects of culture, among them social activity, diet, speed of work, etc., not only have a psychological effect but also show their influence on measures of physiological and biochemical reactions. Thus, according to Klineberg, a proper understanding of the dynamics of aggressive behavior will not be furthered by an investigation which attempts to distinguish between biological and social factors, between physiological and cultural influences. One is an integral part of the total situation as much as is the other. It therefore is not enough to measure aggressive behavior quantitatively. It must be understood in its total situation analogous to the "whole" of the gestalt psychologists.

All the material presented in the previous paragraphs should point to the obvious truth which is implied in the well-known witticism that the scientist knows more and more about less and less, while the philosopher knows less and less about more and more. The factors that lend themselves most readily to exact investigation are those that have been abstracted from their context. They rarely can be investigated in their complete setting. It remains to be seen how adequate a working compromise can be achieved between the need to abstract and study intensively and the need to retain the factors to be studied in their original setting. Murphy, Murphy, and Newcomb express the same thing when they say that it is "increasingly important to explore a variety of methods for understanding personality make-up.
particularly in social aspects." (19, p. 279) They conclude that "one cannot with much profit study a 'trait' in a group of small children, filtering it out from the full reality and studying it for itself or as it correlates with other traits." Such traits are the complex expression of deep biological and cultural forces...Behavior can be observed, experimented on, even measured, but it does not by itself make sense. It does make sense when the whole child is confronted in his whole social setting." (19, p. 615)

While the literature is fairly abundant with the material on aggressive behavior, there is a dearth of information concerning withdrawal. This is most likely due to the following two facts 1. Aggressive behavior implies overt observable behavior and is easily detected. Withdrawal is not always on an overt level and is thus diagnosed with more difficulty. Because of this there is no easy way of directly measuring withdrawal. Much of the material applicable to withdrawing behavior is more or less implied when the question of aggression is discussed. 2. Aggressive children disturb society more frequently than do withdrawn children. The withdrawn child often does not come to the attention of clinicians until the child has withdrawn to a very considerable extent.

While individual authors may differ as to whether withdrawing behavior is a qualitative absence of aggression, or an expression of aggression turned inward rather than openly displayed, most of them are in agreement that the same principles underlying aggressive behavior are to be found in withdrawal. Most authors support the idea that withdrawal is a function of repressed aggression. After several thwarted attempts at overt aggression, the fear of its consequences become so powerful as to prevent open expression. Since it is generally acknowledged that the withdrawing individual frequently displays quite aggressive behavior in his fantasy life, we feel justified in concluding that withdrawing behavior is aggression which has been repressed and makes its appearance in fantasy rather than reality. For example, the withdrawn individual may seek to inflict punishment on his adversaries by engaging in day dreams in which evil befalls them, (Young 10) whereas the overtly aggressive individual may seek to inflict actual bodily harm. In line with the definitions of aggressive behavior advanced in earlier paragraphs, we may now state the definitions of aggression and withdrawal as they will be employed in this book. Aggressive behavior is "an act whose goal response is injury to an organism or organism surrogate" (12, p. 11) Withdrawal is behavior overtly antithetical to aggressive. It may be expressed in many ways. The usual list of symptoms would include such adjectives as "shy, hypersensitive, self-conscious, insecure, fearful, cowardly. absentminded, suspicious, listless, lazy," etc., to cite just a few mentioned by Louttit. (23)
SOCIAL FACTORS

Minority Groups

Common sense tells us that it is the growing realization of the minority group child, whether he is set apart by race, religion or nationality, that his role and status in life is very often constantly restricted, and that the result of this knowledge may lead to behavior of an aggressive or withdrawn nature. The purpose of this section is to present the results of studies that have succeeded in isolating and measuring in children these two reactions to the frustrations of minority group membership.

The Negro child occupies a social caste position in which he is a victim of numerous disadvantages. His awareness of these disadvantages spring from his knowledge of his caste status and its disparity with his theoretical status as defined by American mores. Dollard (33) states that the result of this contradiction for the Negro is one of frustration. He suggests that the usual human response to frustration is one of aggression and that the likely object of that aggression will be the white majority group.

The sharpest social manifestation of this aggression in the Negro is the delinquency index. The Seventh Annual Report of the Juvenile Court Statistics, 1933 (34) reveals, that for both the Negro boys and the Negro girls, the delinquency rates were in practically all instances markedly higher than those for white children of the same sex. While this may seem indicative of a real difference between groups, and one that might be considered innate, a statistical breakdown of delinquency cases shown for individual districts, points to the fact that the rates for white and Negro boys and girls varied widely from district to district. The maximum rate in white boys, 415, appears in Mahoning County, Ohio, and the minimum 26, in Montgomery County, Pennsylvania. The maximum for Negro boys, 962, was in Baltimore, Md. and the minimum, 74, in Lake County, Indiana.

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Adapted From (34, Page 8)

Juvenile delinquency rates per 10,000 white and Negro boys and girls of Juvenile-Court age dealt with by courts that served areas with 100,000 or more total population and 10,000 or more Negro population, and that reported throughout specified periods.
In 1937 another survey was made. The resulting trend was similar to that of the 1933 report. Mary Huff Diggs concludes (35) from this report (1) that an appreciably larger percentage of Negro children come into contact with the courts at an earlier age than do white children. (2) That Negro children are represented in a much larger proportion of the delinquency cases than they are in the general population.

R. M. Page (36) using data collected in the Bureau of Child Study, Chicago, found that Negro boys and girls were referred for problems of aggressiveness in higher proportion than white boys and girls, although he did not press this point because of possible problems of selection.

T. L. Engle (37) has used the California Test of Personality in studying the relationship between personality adjustment and membership in the Amish, Negro, and white control group. The control group consisted of urban and rural white and Negro boys and girls.

A C. R. of 2.79 was found when Negro and urban white girls were compared on freedom from anti-social tendencies. The significant difference is in the direction of the more desirable adjustment for white girls.

A C. R. of 2.7 was found as a significant difference between Negro and urban white boys. When this finding is rephrased in light of the questions on the California Inventory it is found that Negro boys tend to feel that other people are so bad that they have to be mean to them. They also show a greater tendency to rebel at doing what other children ask them to do. Engle further states that the Negro girls are less well adjusted in the school situation.

Intrigued by the child's attitude towards "meanness" Engle (37) ran a succeeding study to determine the psychological basis for this reaction to meanness. Engle finds that children consider meanness a provocation, an outside aggression that they can retaliate against, or withdraw from. The author states that his groups were too small for final conclusions, but he feels that the investigation does throw some light on the problem. He finds that Negro children are subject to more meanness than white children, and that urban Negro children are meaner than white urban children.

Theodora Abel (39) investigating adolescent Negro and white subnormal boys and girls in a large New York institution for mental defectives, finds that Negro girls of 14 years or over showed a marked aggressiveness towards white girls of equivalent IQ levels. Negro boys showed some aggressiveness and dominance over white boys. The second part of the study was conducted to see to what extent dominant behavior of Negro girls would carry over into an experimental setting controlled by a white investigator. Here it was found that Negro girls were able to impose their judgments on white girls twice as often as the white girls could influence the Negro girls by their own opinions.

In conclusion we feel that there is a very definite tendency for Negro children to be more aggressive than their white neighbors. This aggression seems to be the result of environmentally pressures that have built up a great deal of resentment which may find overt or covert expression depending upon the individual involved and the structure of the situation in which the group finds itself.
We have seen how the Negro child, when resentful of his inferior status, tends to accumulate pent-up feelings which seek aggressive release. Does the Oriental child, subject to similar social environmental pressures that accompany lower caste status, react in a like fashion?

H. K. Misaki (41) ascertained the extent of juvenile delinquency of the Chinese and Japanese between 1920 and 1930 in Alameda, Fresno, and Santa Clara Counties, California; also in Honolulu County, territory of Hawaii. Table III gives a racial-national breakdown in Los Angeles County. Other reports confirm the same striking fact, that the magnitude of Oriental delinquency is only a small fraction of the amount of delinquency shown by other groups.

Table III

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number of Delinquents</th>
<th>Census of Enrollment 1930</th>
<th>School Enrollment for 1930</th>
<th>Ratio Per Thousand 1929</th>
<th>Ratio Per Thousand 1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>2,043</td>
<td>233,580</td>
<td>8.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negro</td>
<td>374</td>
<td>6,973</td>
<td>53.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>2</td>
<td>1,031</td>
<td>783</td>
<td>1.9</td>
<td>25</td>
</tr>
<tr>
<td>Japanese</td>
<td>19</td>
<td>8,682</td>
<td>7,290</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Italian</td>
<td>220</td>
<td>6,834</td>
<td></td>
<td>32.1</td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>963</td>
<td>40,646</td>
<td>23.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filipino</td>
<td>6</td>
<td>486</td>
<td>12.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russian (Including Mexican)</td>
<td>56</td>
<td>2,110</td>
<td></td>
<td>26.5</td>
<td></td>
</tr>
<tr>
<td>Spanish Speaking</td>
<td>1,055</td>
<td>39,099</td>
<td>26.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Adapted from 41, Page 179.

MacGill (42) comments upon the rarity of the Oriental child's appearance in the Canadian courts. School population figures for Vancouver show that for every 10,000 Oriental school children, there were 10 delinquents. For every 10,000 non-Oriental school children there were 156.5 delinquents. Thus the white delinquency rate was 15.65 times that of the Oriental. Misaki believes that the infrequency of the Japanese juvenile delinquency is due primarily to close supervision of children by adults. MacGill has independently arrived at the same conclusion. She states, "The explanation seems to be in the strong family system in both China and Japan, which operates to control and dominate the individual". Whether Oriental aggression is repressed, whether it is channelized, what forms it takes, are important questions that are yet unanswered.

Racially a member of the Mongolian group, the American Indian is culturally unique, and therefore considered as a special group. Most of the work done in this field is of an anthropological nature. It is not our purpose here to call upon nonpsychological studies. We will, however, quote briefly from one particularly valuable work that deals with aggression in the personality of the South Dakota Sioux Indians.
MacGregor (43) states that aggressive behavior was embodied in the warlike conduct expected of the Dakota men. The reward for this aggression centered in the satisfaction and prestige bestowed on them by the men's societies, and the esteem they were held in by the people. With the barring of warfare and the restriction of the Dakota people to the reservation they had to find other channels and targets for their aggressive drives. This aggression has taken the form among their children of a surliness when encountering whites, a feeling of distrust and resentment against white institutions, and a hatred of those Indians and their children who have, by becoming assimilated, betrayed the tribe.

There is a feeling among many American Jews that they have been "let down", relegated to an inferior position in society and deprived of those social and economic opportunities to which they believe themselves entitled. To what extent is this feeling present among the younger generation of American Jews? And is it true that this feeling produces attitudes of aggression?

J. F. Brown (44) has this to say about the aggression of Jews in general. "In order to compete with the Gentile, some Jews develop special economic and cultural abilities. To drive the bargain some Jews become sharp; this sharpness becomes distorted into the predatory economic aggressivity of the stereotype." He further states that "The average Jew possesses a racial individuality largely physiognomic, that sets him apart from the non-Jewish individual. The physiognomic difference leads to psychological differentiation. The Jew early becomes conscious of his Jewish characteristics, and in a culture which is dominantly Gentile, is inclined to develop inferiority feelings. These tend to be overcompensated by aggressive behavior which in its turn becomes the source of further anti-Semitism.

Seward and Friedman's study (45) supports Brown's statement of the possession of inferiority feelings by Jews. Their results are given in the following table which was adapted from the statistical presentation of their study.

Table IV

Score Differences on Hiedbroder Inferiority Attitude: University of Minnesota Freshmen, 1927-1928*

<table>
<thead>
<tr>
<th>Groups</th>
<th>D</th>
<th>Raw D/sig.D</th>
<th>Tryon D/sig.D</th>
<th>Percent Jews Exceeding Non-Jewish Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Jews vs. Paired Non-Jews</td>
<td>10.20</td>
<td>1.58</td>
<td>1.66</td>
<td>54</td>
</tr>
<tr>
<td>Male Jews vs. Unselected Non-Jewish Males</td>
<td>14.82</td>
<td>2.65</td>
<td>2.78</td>
<td>59</td>
</tr>
<tr>
<td>Women Jews vs. Paired Non-Jews</td>
<td>7.34</td>
<td>0.98</td>
<td>1.03</td>
<td>55</td>
</tr>
<tr>
<td>Women Jews vs. Unselected Non-Jewish Women</td>
<td>20.26</td>
<td>3.43</td>
<td>3.62</td>
<td>58</td>
</tr>
</tbody>
</table>

* Adapted From (45 Page 75)
In the Direction of Inferiority.
A. I. Gordon (46) made a study of 159 members of the Jewish student body at the University of Minnesota in 1942. Some of Gordon's conclusions are: 1. A large percentage of Jewish students studied has at some time had personal experiences which may be termed frustrating. 2. The younger students seem more frustrated than the older. 3. Although on the whole remarkably free from aggressive attitudes toward the Negro, it is evident that aggressive anti-Negro attitudes are more pronounced in those who have had frustrating anti-Jewish experiences than in others. 4. The Dollard (12) hypothesis is supported by the evidence with respect to the Negro, for in the cases where the personal experiences of a frustrating nature have been most numerous, the attitudes of the Jewish students toward the Negro is least liberal.

It is the opinion of the present writers that due to the lack of widespread sampling of religious groups as a whole and the Jewish minority group in particular, that no conclusive and definite trends are justified with regard to aggression and withdrawal. On the basis of the evidence which has been obtained up to now, we might, however, infer that collectively speaking, Jews are neither predominantly or characteristically aggressive or withdrawn.

Nationality

In general, historical analysis of a group's history, contributions, and present problems do not seem to give valid indications as to why a large proportion of members of a certain nationality background should be either aggressive or withdrawn. It is therefore not surprising that scant evidence of nationality differences in these traits can be found in a search of the literature. Italian children are the only ones about whom we can find data concerning these characteristics, and even these data are conflicting.

In a sociological study, Child found both marked aggressive and withdrawing reactions on the part of adolescent and mature second-generation Italians. This occurred when attempts toward social adjustment and treatment on equal footing were blocked.

Kingaley, H. and Carbone, M. (47) report in a study of 162 Italians and Italian Americans that:

1. 57% stated that they had experienced discrimination because of nationality linkage.

2. Nearly all who reported discrimination claim to have experienced it before the close of their adolescent years.

3. Most common reactions were anger, resentment, and hate.

4. The majority of these who were discriminated upon claimed to have retaliated in some way.

5. Feelings of resentment and bitterness toward Americans appear to decline and often to reach a professed indifference as the individual grows older.
In studies of the results of personality inventories and other tests given to 734 Italian second-generation children and 360 American children - all between 11-15 years of age, in 5 different schools varying in percentage of foreign enrollment, Tait found greater feeling of inferiority and poorer emotional adjustment among the Italian children. (48)

In contrast to these studies indicating frustration in the lives of Italian children, with accompanying indications of aggression or withdrawal, figures from the Bureau of Child Study (36) portray the Italian child as the only child of foreign parents who shows a significantly lower incidence of either aggression or withdrawal than the child of American parentage. (In all other nationalities studied, there were no significant differences in either direction.)

Italian children were less likely to be coded "Nervous or Hyperactive" (C. R. 3.2); less likely to be coded "Poor Work Habits" (C. R. 2.5); and less likely to be coded "Lacking in Self-Confidence" (C. R. 1.9). These differences may be interpreted as pointing in the direction of freedom from aggressiveness, since "Nervous or Hyperactive" was found to be related to aggressiveness; and freedom from withdrawal, since "Lacking in Self-Confidence" was found to be related to withdrawal.

Apparent ally nationality differences in the occurrence of aggression and withdrawal in children are nonexistent, with a possible exception in the case of Italian children. Here the present evidence is conflicting.

Sex Differences
The results of several investigations indicate that there are significant sex differences manifested in behavior of an aggressive or withdrawn nature.

Jersild refers to a study by Appel, wherein it was observed that the younger the child, the more similar boys and girls are likely to be. At the age of two, he found that the frequency of screaming and crying in boys and girls was quite identical. With added age, however, the girls did not exhibit so large a decrease in screaming and weeping as did the boys. As age increased, boys tended to hit more frequently than did the girls, and also tended to be more often aggressive.

As the child grows older, aggressive behavior seems to become more proper to the boy, while the girl seems to exhibit behavior of a withdrawn nature. Adler (50) holds that the male is soon to observe the prominent role that the father plays in making the arrangements in the family. The boy is soon to feel, that as a result of his masculinity, he has certain privileges and a greater social value. On the other hand, Adler thinks that the girl is soon to note the submissive role which the woman plays, loses courage, and sinks back from the solution of life's problems.

Ackerson (5) finds a high incidence of daydreaming in girls. Symonds (52) speaks of daydreaming as one of the "most commonly described mechanisms by which children withdraw from reality. Whenever the actual situation becomes difficult or distasteful, one method of making adjustment is to withdraw from it, and if they cannot withdraw from it physically, they can withdraw from it mentally. Oftentimes there is a sort of compensation and in daydreaming the individual has an opportunity to be and do those things in his imagination that he cannot achieve in reality."
Hewitt and Jenkins (53) found that boys more often displayed a pattern of unsocialized aggressive behavior, and that girls seemed to be over-inhibited in their behavior. Unsocialized aggressive behavior included such symptoms as assaultive tendencies (deliberate acts of violence against other persons), initiatory fighting; malicious mischief, and inadequate guilt feelings.

In contrast with the overly aggressive child whose behavior is more often characteristic of boys, there is the overinhibited behavior which is more often found in girls. This matter of behavior is characterized by such symptoms as seclusiveness, slyness, apathy, worrying, sensitiveness, and submissiveness.

Table V

The following table illustrates the sex distribution of children by behavioral and situational syndromes.

<table>
<thead>
<tr>
<th>Syndrome Pattern</th>
<th>Frequency Among</th>
<th>Percentage of</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Unsocialized Aggressive</td>
<td>48</td>
<td>4</td>
<td>12.4</td>
</tr>
<tr>
<td>Overinhibited Behavior</td>
<td>52</td>
<td>21</td>
<td>13.3</td>
</tr>
</tbody>
</table>

Page found that in the Bureau of Child Study files there are two times as many withdrawn girls as there are aggressive girls, but that there are two times as many aggressive boys as there are withdrawn boys. Since the factor of troublesomeness in the classroom would operate for girls as much as for boys, it would seem safe to draw the conclusion that aggression is more frequently observed in boys.

Two studies have been reported with respect to introversion and extraversion. One of these was done at the University of Wisconsin by Heidbreder (54) with 100 men and 100 women in the College of Science, Literature, and Arts. Another study was made by Guilford and Martin (55) with 400 boys and 400 girls at a Lincoln, Nebraska, high school. Both of these studies revealed that girls are more introverted than boys. The Lincoln study showed further that girls are more introverted with respect to thinking and more emotionally inclined in terms of depression and cycloid trends. Murphy, Murphy and Newcomb (19) found that women tended to be more pacifistic and that boys break away from parent's attitudes more quickly than girls.

Barker, Konin and Wright (56) report a study by Dennis with 525 Hopi children. Temper tantrums were found to be higher among boys than girls, as 21 boys and 7 girls were said to have tantrums. Fighting showed an even greater predominance of boys over girls than did tantrums, the numbers being 22 and 5. The girls who were reported as fighting were between 4 and 9 years of age. The greatest incidence of boy fighters was between 8 and 14 years of age. Boys outnumbered the girls in stealing 27 to 15.

In delinquency, overt aggression is often obvious. Healy and Bronner (57) report delinquency studies in the Chicago and Boston juvenile courts. In the
Chicago study, the ratio of girls to boys for 1921 is 1:2.3. In the Boston study, the ratio for the same year is 1:9.

Wood and Waite (58) found that "girl delinquents contribute from one-seventh to one-ninth of the total number, as measured by the statistics of 28 reporting courts."

Blanchard (59) made a study of the problem cases coming to the Child Guidance Clinic of the Commonwealth Fund, and found that girls represented 35.4% of the cases, and boys represented 64.6% of the problem cases.

A study was made by Shrubsall (60) of behavior deviations occurring among defectives and nondefectives sent to institutions. He reported that among defective boys, stealing occurs in 51.8% of the cases, and among defective girls, stealing occurs in 19.4% of the cases. Among nondefective boys, it occurs in 74.3% of the cases, while among nondefective girls, it occurs in 34.4% of the cases.

While there is a preponderance of males in all of these delinquency studies, it is important to note that there seems to be some hesitancy in bringing a girl to a clinic or into court. The greater ratio in the Boston study cited earlier may be accounted for in part because social agencies in Boston have attempted to help a girl without bringing her into court.

Effects of Poverty

A study of juvenile delinquency reveals two almost startlingly paradoxical trends -- juvenile delinquency increases with prosperous times; it decreases with prosperous communities. As wealth increases along a time dimension, more youthful delinquency appears; as wealth increases along a space dimension, less youthful delinquency appears. That the first mentioned trend should exist at all is contrary to expectations. That two such apparently divergent trends should exist together seems, at first, entirely anomalous.

Bogen (61), in a study of juvenile delinquency trends in Los Angeles between 1925 and 1941, shows that depression, instead of bringing an increase in child delinquency, actually brings a decrease. He does not calculate a correlation between his variables, but a rank order correlation of his statistics by the present writer shows a correlation of .88 (see Table 1). Lunden (62) in a study of records at the Alleghany County Juvenile Court, Pennsylvania, for 1924-1934 found fundamentally the same results.

Burt, on the other hand, in his 1922-1923 London studies found that juvenile delinquency correlates .67 with the amount of poverty in each borough (63, p. 73). Elmer (64) finds that juvenile delinquency is most prevalent in the traditionally low income slum areas in Minneapolis and St. Paul. Shaw and McKay (65) state that:

Most of the areas characterized by high rates of delinquency, as well as by a concentration of individual delinquents, are either in or adjacent to areas zoned for industry and commerce. This is true, not only for areas close to the central business district, but also for outlying areas, such as those near the
Stock Yards, the South Chicago steel mills, and other industrial sections. On the other hand, the areas with low rates are, for the most part, those zoned for residential purposes.

They also find that in Chicago the areas of juvenile delinquency concentration correspond with areas characterized by decreasing population, low rentals, and a high proportion of families on relief. Studies of several other cities, cited in Shaw and McKay, have found substantially the same thing.

Economic influences are among the most important in human life. They constitute the "how" of man's getting nurture from the environment; they are the manner in which the biological organism meets its physical needs and provides for its material luxuries. It should not be shocking that they pervade human activities so complexly that various phases of economic life actually work counter to one another. However, as we proceed we shall find that the different ways in which economic factors produce effects are not so different after all.

Before we try to find some of the causes for delinquency increases with prosperity, this trend in itself can tell us some interesting things. It becomes obvious that delinquency in children is not merely the result of biological pressures for food and other necessities. Here child and adult delinquency differ. Bonger (66), Thomas (67), and Winslow (68) all find a direct relationship between crime rates and poverty trends for adults, considering only crimes involving stealing. Wagner (69) finds a correlation of -.955 between burglary rates and volume of trade in Philadelphia, 1925-1934. Apparently, adults and children do not steal for the same reasons. It becomes obvious that any study of crime trends in general that did not take this fact into consideration might come out with different results each time, and with relatively worthless results most of the time.

Table VI
The Yearly Indices of Business Activity and Juvenile Court Petitions for boys, 1925-1941, based on 1930 as 100 per cent.

<table>
<thead>
<tr>
<th>Year</th>
<th>Index of Juvenile Court Petitions, boys</th>
<th>Index of Business Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>76%</td>
<td>88%</td>
</tr>
<tr>
<td>1926</td>
<td>91</td>
<td>92</td>
</tr>
<tr>
<td>1927</td>
<td>88</td>
<td>98</td>
</tr>
<tr>
<td>1928</td>
<td>93</td>
<td>102</td>
</tr>
<tr>
<td>1929</td>
<td>106</td>
<td>109</td>
</tr>
<tr>
<td>1930</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1931</td>
<td>92</td>
<td>87</td>
</tr>
<tr>
<td>1932</td>
<td>83</td>
<td>70</td>
</tr>
<tr>
<td>1933</td>
<td>88</td>
<td>65</td>
</tr>
<tr>
<td>1934</td>
<td>93</td>
<td>73</td>
</tr>
<tr>
<td>1935</td>
<td>84</td>
<td>85</td>
</tr>
<tr>
<td>1936</td>
<td>97</td>
<td>101</td>
</tr>
<tr>
<td>1937</td>
<td>101</td>
<td>107</td>
</tr>
<tr>
<td>1938</td>
<td>97</td>
<td>103</td>
</tr>
<tr>
<td>1939</td>
<td>106</td>
<td>109</td>
</tr>
<tr>
<td>1940</td>
<td>107</td>
<td>121</td>
</tr>
<tr>
<td>1941</td>
<td>126</td>
<td>148</td>
</tr>
</tbody>
</table>

r = .88
But to return to the main problem, how is child delinquency increased with prosperous times? The best method for proceeding is, probably, to determine what factors change with prosperity. First, many families get smaller; brothers and sisters now find they have the financial wherewithal to marry and set up housekeeping on their own; families that had doubled up in one apartment to save on rent can now separate. How does this affect delinquency? The Page study shows that, contrary to much belief on the subject, overcrowding actually decreases aggressive behavior in children, as shown in Table VII below.

Table VII
Relationship Between Aggression and Overcrowding

<table>
<thead>
<tr>
<th>Aggressives (percentage in crowded homes)</th>
<th>Stables (percentage in crowded homes)</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>White boys</td>
<td>6.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Negro boys</td>
<td>20.3</td>
<td>30.4</td>
</tr>
</tbody>
</table>

During prosperous times, the family gets smaller in another respect; many mothers will go out to take a job. Older siblings may also find jobs. Thus lack of supervision over the child may occur. Hewitt and Jenkins (53, p. 70) find that the socialized aggressive or socialized delinquent is typified by traits that correlate by tetrachoric correlation with the factor of being neglected about +.45. The typical socialized delinquent, they find, either has only one parent living or the mother may work during the daytime. (p. 43)

The unsupervised child lacks, of course, a great deal of the parental affection and moral training necessary to fit into society. He must develop a moral code of his own, and he does so with the aid of other children who have been left home to shift for themselves (see the section on family influences for a more complete discussion of these factors.) Van Ophuijsen (70) and Clark and Barker (71) find a lack of guilt feeling in delinquents. These findings support the theory that the unsupervised child must find a moral code of his own.

Another point must be brought out here. It is not to be assumed that increased business activity brings a great increase in wealth to the lower income groups. It provides more jobs, true; but the average factory worker in 1946 could buy only a trifle more with his income than he could in 1941, the Bureau of Labor Statistics indicates, despite the fact that money wages had risen almost one-fourth. Thus it becomes obvious that any amount of delinquency due to biological press or social press does not necessarily vanish in good business periods.

We may now consider the tendency for delinquency to increase as the district becomes poorer. What are the concomitants of a poor district?
To a great extent we find that they are the same as those of increased business activity. Most families in these areas are not too well off. As these zones are directly in or adjacent to commercial and industrial areas -- as indicated by Shaw and McKay -- so many mothers take the opportunity to seek work. As mentioned in discussing the Hewitt and Jenkins study above, the socialized delinquent typically either has only one parent living, or the mother works during the daytime. The Page study finds critical ratios as high as 7.8 between aggression and unwise parental direction, the latter defined in this case as including inadequacy of discipline, no adult care for the children, and quarrelsomeness. Hewitt and Jenkins (53, p. 61) find a tetrachoric correlation of +.53 between urban deteriorated areas and lack of supervision.

Hewitt and Jenkins also find a tetrachoric correlation of +.37 between deteriorated areas and mother's discipline being harsh, a fact not inconsistent with lack of supervision. Burt, discussing harsh discipline, writes:

Of these boyish pranks not one would be seriously considered in any but a needy home. But where every penny and every fraction of a penny has to be jealously counted, the loss and wastage, however trifling, become matters for dire reproach and drastic punishment.

(63, p. 81)

Dolter and Ginandes (72) conducted an experiment on "children's attitudes toward discipline as related to socio-economic status," by presenting hypothetical cases to the children and seeing how harsh or lenient the responses were. The lower economic group was much more strict and unconstructive in its responses, probably as a reflection of their own training. Springer found that children from lower economic groups tend to be more emotionally unstable than those from higher groups; she also found a critical ratio of 5.18 that indicated lower economic groups had more of a tendency toward behavior problems, as measured by the Haggerty-Olson-Wickman Behavior Rating Schedule (73, 74). Ulton (75) and Meltzner (76) also report that they find more emotional instability in children from low economic status groups. These studies certainly indicate that there is a high degree of emotional instability and behavior problem tendencies coming from low income, though not necessarily poverty-stricken districts.

The Page studies indicate that both withdrawal and aggression in children are associated with living in a poverty-stricken home. Of the many presumably frustrating factors investigated in this study, poverty is the only one that is clearly, consistently, and equally associated with both aggression and withdrawal.

Table VIII
Percentages of Withdrawn, Aggressive, and Stable Children Coming From Poverty Stricken Homes; by Group, Critical Ratios Indicated

<table>
<thead>
<tr>
<th></th>
<th>Withdrawn (percent)</th>
<th>Aggressive minus Withdrawn (percent)</th>
<th>Aggressive minus Withdrawn (critical ratio)</th>
<th>Stable minus Withdrawn (critical ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS</td>
<td>18.4</td>
<td>14.8</td>
<td>6.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Haggerty</td>
<td>16.5</td>
<td>22.2</td>
<td>6.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Jenkins</td>
<td>22.3</td>
<td>20.6</td>
<td>7.8</td>
<td>0.5</td>
</tr>
<tr>
<td>McKay</td>
<td>23.0</td>
<td>20.6</td>
<td>7.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Jenkins</td>
<td>18.4</td>
<td>14.8</td>
<td>6.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Wickman</td>
<td>16.5</td>
<td>22.2</td>
<td>6.5</td>
<td>0.8</td>
</tr>
<tr>
<td>McKay</td>
<td>22.3</td>
<td>20.6</td>
<td>7.8</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Obviously there is no significant difference between the percentages of aggressive and withdrawn children coming from poverty-stricken homes, a fact that might offer some degree of insight into the relationship of these two antithetical behavior syndromes were it not for the fact that this relationship is so unique in his study.

Thus far we have been using the terms delinquency and aggression almost as synonyms. Delinquency is, by definition, an aggressive act. But how typical of the rest of aggression is it? Page finds the following relationship between lying and stealing and the trait of general aggressiveness:

Table IX

<table>
<thead>
<tr>
<th>Withdrawn</th>
<th>Aggressive</th>
<th>Stable</th>
<th>Aggressive minus</th>
<th>Aggressive minus'</th>
<th>Stable minus</th>
</tr>
</thead>
<tbody>
<tr>
<td>percentage</td>
<td>lying and</td>
<td>percent</td>
<td>Withdrawn</td>
<td>Critical</td>
<td>Critical</td>
</tr>
<tr>
<td>lying and</td>
<td>stealing</td>
<td>lying and</td>
<td>Critical Ratio</td>
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<td>white</td>
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</tr>
<tr>
<td>boys</td>
<td>2.2</td>
<td>11.5</td>
<td>1.5</td>
<td>4.9</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Thus lying and stealing, which Shaw shows to be 70 percent of the delinquent acts of children (65, p. 58) in Chicago is definitely a trait associated with aggressiveness. In other words, the child who is labeled "aggressive" is very likely to lie and steal.

The child around whom most of the discussion thus far has been centered may not fit into society as a whole; he is, however, a socialized child -- he does not dissociate himself from all other people. There appear to be two types of child who do not share this characteristic. The first is the child Hewitt and Jenkins call the unsocialized aggressive, the second is the withdrawn child. The emotional instability found to exist in greater proportion in the lower economic status than in the higher seems to be concentrated to a large extent in these two types." Hewitt and Jenkins (53, p. 95) find a tetrachoric correlation of .22 with neurosis for the unsocialized aggressive and a correlation of .26 with neurosis for the withdrawn child; the socialized aggressive on the other hand shows no tendency toward neurosis. The unsocialized aggressive seems to be the product of the harsh treatment which sometimes accompanies poverty; while their study shows only a .15 correlation between unsocialized aggression and neglect. Hewitt and Jenkins find a .38 correlation with rejection.

The withdrawn child, as Table VIII indicates, comes from a poverty-stricken home significantly more often than does the "stable" child; we are interested in inquiring into the factors in a poverty-stricken home that determine if the child will be aggressive or withdrawn. Hewitt and Jenkins (53) find that the home of the withdrawn child is, on the whole, somewhat better than that of the aggressive as far as the child is concerned. The general educational level of the parents in the withdrawn child's home is higher than that of the aggressive. There is also some evidence that too much is being expected from the child.
The general impression that comes from the study of economic influences on both aggression and withdrawal is that their effect is one on the family first, seeping through to the child from above. The dominant factor in the socialized aggressive seems to be neglect, in the unsocialized the dominant influence seems to be harsh treatment. The important thing in withdrawal, economic influences considered, seems to be the aspiration level of the family.

Poverty seems to be a dominant element in both aggression and withdrawal, yet there must be factors that prevent the responses from being alike; and these are the factors that must be further investigated in the future. One last thing must be remembered in the investigation of economic factors in personality: the effect of these factors can last on long after the actual factors are gone. The effect of poverty upon an individual can influence other individuals for years after our original beggar made his fortune and died.
Sibling Rivalry

Knickerbocker (79) is of the opinion that one of the main problems of the child concerns his relationship to his siblings. She also emphasizes the extreme importance of parental attitudes and their effect upon sibling rivalry. The anxieties and aggressions of children often are stimulated by the parents, later to be transferred by the child to his brothers and sisters. These feelings are often sufficiently intense to interfere with the child's emotional development, resulting in stunted emotional growth and regression. This regression may be sufficiently deep to cause anxiety or, on the other hand, it may give rise to outbreaks of anger with planned aggressiveness.

Knickerbocker holds that jealousy implies either an envy of the opposite sex, of the power of other children, of the love bestowed upon another child or it may be an envy of the love the child himself bestows. All of these reactions involve the parents and may incite hostilities on the part of the parents towards children.

Dorothy W. Baruch (80) used play therapy with dolls to study aggression in forty-six nursery school children ranging in age from two to five years. She found aggression manifested in some form by slightly over two-thirds of the children, often in the form of hostility towards other siblings in the family.

From his clinical guidance experience, J. Bowlby believes that jealous hatreds of one sibling to another depend on how the parents handle the situation. If the parent does not understand the child's reactions towards his other siblings and punishes the child with little or no sympathy the child's jealousy will increase and so will his hostility. If this happens, repression may occur and the child may become either withdrawn or aggressive. Aggression, according to Bowlby, is an end-reaction. It "can spring from such simple situations as deprivation or jealousy. At other times it can be the result of fear or it can be traced to feelings and despair." (81)

Murphy, Murphy and Newcomb (19) state that jealousy is commonly aggravated by insecurity and gives rise to aggressiveness. This is not an infrequent response of children from three to six toward their siblings. These authors also summarize experimental work, Sewell, Smalley and Foster as follows: (19)

In Sewell's study of 70 children, all having younger siblings, it was found that 26 out of the 70 manifested aggressive behavior by bodily attacks upon the younger sibling.

M. B. McFarland (82) studied and observed 22 pairs of sisters. The older sisters ranged from 3-5 to 6-0 and the younger sisters from 1-4 to 4-11. The I.Q. for the whole group ranged from 87 to 150 with the median of 115.5. Two children of a sister pair were observed simultaneously at a time when contact between them was possible and when they were under the supervision of the home. Each child's behavior was noted and recorded every thirty seconds, over a period of 235 minutes. The total time was divided into five observation periods. The first three observations, forty-five minutes in length, were taken in any situation the children happened to be in at the time of the observation. The last two, fifty minutes each, were controlled situations in which one time a sand table and sand toys were used, and the other time two dolls and tea dishes.
During these observations, each pair of sisters showed conflicts, overt responses of rivalry and direction and submissiveness. Time engaged in conflict varied in the sister pairs from 4% to 22% of the social interaction period. There was no consistent indication that the older or younger sister was mostly the initiator or the winner in these conflicts. There was less conflict if both sisters were given parallel play materials than when they were given entirely different play things.

There were 62 instances when one child showed direct rivalry toward the other sister. Of these, 31 were of material rivalry in which the child attempted to equal or exceed her sister in the possession of materials. There were 31 instances of social rivalry in which one child tried to surpass the other in the attention or regard of another person; 13 instances of material rivalry were on the part of the older sisters and 18 were on the part of the younger sister, 26 instances of social rivalry were shown by older sisters and 5 by younger sisters. 11 older sisters and 4 younger sisters made attempts to equal or excel their sisters in the attentions or regard of another. This wide difference between older and younger sisters in the frequency of responses of social rivalry was accompanied by a comparable difference in the amount of exclusive attention that older and younger sisters received.

Rivalry was not observed in the behavior of all the sisters. However, parents reported that there was rivalry present at other times so it seems probable that rivalry was a part of all the relationships. Different occasions aroused rivalry at different times for all the sisters. Rivalry seemed dependent upon the interests of the sisters, it did not carry over from one instance to another. The response of rivalry of the sisters seemed primarily related to immediate situations and secondarily to such general factors as difference in intelligence and physical attraction, economic status, size of the family, and parental attitudes which influenced the immediate situation.

Throughout the observations it was found that there was a consistent tendency for the older sisters to direct their younger sisters more than their younger sisters directed them. The mean for the older sisters directing their younger sisters was 112 times while the mean for the younger sisters directing the older sisters was only 66. Both younger and older sisters used verbal command more frequently than any other technique of direction. The younger children tended to use crying and squealing as a technique of direction more than the older sisters.

The findings of this study seem to support the conclusions of other investigators. Rivalry is commonly present in the relationships between younger children of the same family. Rivalry or hatred is not the primary reaction of the child to her sister, but attitudes of rivalry and hatred are effective in influencing behavior in certain types of situations. There seemed to be a general trend for the older sister to play the more aggressive role in the relationship although there were some younger sisters who played the aggressive role.

One of the most important studies of sibling rivalry was carried on by David Levy (83) who demonstrated and observed sibling rivalry by the use of dolls. In his experimentation he presented to the child a group of three figures; a metal amputation doll with clay breasts; a celluloid baby doll
held in the mother's arms nursing at the mother's breasts; and a brother or sister doll, the sex of which is the same as the patient. The child was asked what the baby doll is doing and what the brother (or sister doll) is thinking about the nursing. Dr. Levy believes there are four stages in the development of aggression. There is prevention of hostility on the part of the child, who escapes the situation by having no part in it. Slowly, the child shows more and more hostility. The aggression then begins to manifest itself. The child destroys either the mother or the baby doll. Finally, the child defends his reactions by saying the mother is dumb or the baby was bad.

In one of his experiments Dr. Levy saw thirty-five children, all of whom had at least one other sibling in the family. He feels there are four fundamental patterns in the reactions of these children. First is primitive hostility or destruction of the baby, mother, or mother's breasts. Secondly, there is passive hostility such as taking the baby and making it his own. Thirdly is regression, and fourth self-punishment.

In this manner the feelings of the children were revealed through activity in the play situation. All children were aggressive toward the baby and/or the mother.

Parental Influences

One of the foremost agents in the formation of personality adjustment is the family and the home, and the family and home are important among frustrating agents and subsequent maladjustment. Francis (9) in her study of environment and parental attitudes found that the physical environment alone is of comparatively little importance, whereas a number of parent attitudes appear to be significantly influential. Thus, the factors originally thought to be important, namely poor economic conditions, broken homes, foreign-born parents, and physical sickness have little effect on their own account. There appears to be a tendency of harmful attitudes of parents to produce maladjustment in the children and for helpful attitudes to do the reverse.

Bender (78) attributes aggressiveness in children to severe physical restrictions and neglect by their mothers.

Buxbaum (78) accounts for uncontrolled aggressiveness in children as a result of failure in habit training.

Fite (3), continuing in the same vein, concluded that the most marked characteristic found in the attitudes of children toward acts of overt aggression was that of conflict -- conflict between acceptance of parent attitudes and of opposing attitudes on the part of other children, between attitudes expressed by one parent and by the other, between attitudes received from parents and the demands of the immediate situation, between the results of group experiences and precepts handed down by adults, between group patterns and group rules, between conflicting standards in adult rules alone, between the acceptance of parental standards expressed verbally and opposing parental standards expressed in other ways through the parent-child relationships, between the child's own needs and drives and adult standards for his behavior. Notable throughout this study was the potency of parental attitudes in influencing the formation of child's attitudes.
A study by Stagner and Krout (28) concluded that family relationships are associated with, and presumably exert influence on, personality characteristics. Feelings of favoritism, of rejection, of affective distance, and of identification are shown to be related to symptoms of satisfactory or unsatisfactory adjustments.

Though we like to consider ourselves a relatively progressive generation we are still unable to meet present-day problems without applying old and time-worn techniques in dealing with our children. One of the most damaging and devastating techniques is the use of constant repression and fear-arousing experiences. Serious difficulties of adjustment often date from fear-arousing experiences. In almost all cases fear unites the individual to meet new situations with proper adjustments. Fear is a kind of retreat, flight, or escape from situations in which the child feels himself inadequate. Aggressiveness and withdrawal are often to be explained by fear.

The Page (36) study supports the evidence from the above studies which indicate that sibling rivalry is associated with both aggression and withdrawal. He found that sibling rivalry is associated with aggression and withdrawal in white boys. The white girls and the Negro boys and girls did not supply a sufficiently large population to make the results from these groups statistically reliable.

In summary, these studies indicate that jealousy increases as family income decreases or the age of the mother increases, and decreases as the number of children in the family increases. Jealousy also is found to occur most frequently in girls and in the oldest children, to be related somewhat to a low I.Q., and to be fostered by over-solicitousness and inconsistent discipline. The importance of parental relationships and understanding in relation to aggression and withdrawal becomes evident. And, in girls at least, it appears that the older sibling assumes an aggressive role while the younger takes on a submissive attitude. Some of the findings are based on rather significant figures while others may be easily disputed, and all of the findings are generalizations in which contrary cases can be found in many instances.

Birth Order

The factor of birth order has long been of interest in studies of children. Alfred Adler and his followers made the family constellation very important and declared that various characteristics were determined by order of birth.

A number of studies have since been made concerning the influence of position in the family upon personality, dominance-feeling, and juvenile delinquency. Some of them that are less statistically reliable are reported briefly. Those that have been given more thorough statistical treatment are related here in detail, so that it may be determined if position in the family is important in relation to withdrawal and aggression in children.

Bender (84) administered the Allport Test for Ascendance-Submission to four hundred sophomores at Dartmouth College. Position in the family was obtained for 192 of them. Subjects were classified into groups of only child, older or oldest child, younger or youngest child, and intermediate child. In terms of mean scores, the only as well as the oldest tended to be slightly above the mean of the entire group in ascendance, and a tendency
appeared for the youngest and the intermediate members to be below the mean of the whole group. The standard deviations of the differences between the means were compared with the obtained differences. Since the obtained difference was in no case three times the S.D. of the difference, the differences were not considered statistically significant. In the intermediate group, however, all the critical ratios were one or above, which may be slightly suggestive that intermediate children are inclined to be somewhat more submissive. This fact was more evident when the oldest group or the entire group was compared with the intermediate group.

Eisenberg (44) obtained similar results in a study of factors related to dominance-feeling. A short form of the Maslow Social Personality Inventory was given to 216 Columbia University men and 238 Barnard College women. Those whose test scores revealed extreme dominance or non-dominance were interviewed, and their feelings were found to be in agreement with scores on the test.

Findings show that there appears to be a tendency for oldest and only children to feel more dominant than middle and youngest, and there seems to be a correlation between family position and dominance-feeling, with the first child feeling more dominant than the second, the second more dominant than the third, and so forth. These differences were for men. There were slight suggestions of the same trend for women, but the differences were not clear. Eisenberg pointed out that the data should be treated with caution since it was not possible to equate the groups for socio-economic or for religious background.

In a later study by Carpenter and Eisenberg (95), the same inventory was given to five hundred Barnard and Brooklyn College women. Subjects whose scores fell one S. D. above or one S. D. below the mean were classified as dominant or non-dominant respectively. Oldest children appear in greater proportion among the dominant group and middle children more frequently in the non-dominant group than only or youngest children. However, the two groups compared were small and were not representative of the general population.

A tendency for first-born children to be more aggressive and less neurotic than those who have older siblings was found in a study by Abernethy (96). The differences were not statistically reliable, but uniform trends were noted. This survey was made at Queens College, North Carolina, where three hundred women students in psychology courses were given the Bernreuter Personality Inventory and the Bell Adjustment Inventory.

Hayes (97) administered the Bernreuter Personality Inventory to seventy-six women students at Mount Holyoke College and found that the more older siblings a subject had, the less likely she was to be dominant and self-sufficient. The groups in this study were too small to yield statistically reliable evidence however.

The tendencies shown in the previous studies are entirely contradictory to those that had been found by Goodenough and Leahy (98) in 1928. Their subjects were 293 kindergarten children from the Demonstration Child Guidance Clinic in Minneapolis and St. Paul. They were above average in intelligence and social status, and their family position was known. The children were rated on aggressiveness, among other traits. In this study aggression was considered a single trait with "easily modified behavior" at one end of the scale, behavior with "ego impulses predominating" at the other end and an "ideal" in between.
Goodenough and Leahy (98) concluded that oldest children tend to lack aggressiveness as well as leadership and self-confidence. According to their findings, middle children also lack aggressiveness, but somewhat less than oldest children. Youngest children do not reveal a tendency to either extreme. Only children show more aggressiveness and self-confidence than oldest, middle or youngest children.

In agreement with these findings are those of Pallister (99) in a study of withdrawal attitude. One hundred fifty-five women in elementary psychology courses at Barnard College were given Lecky's Individuality Questionnaire. In this study oldest children appear to be the most withdrawn and only children the least. Pallister stated that the chances are ninety-nine in one hundred that this is a significant difference.

Luddon (100) established critical ratios for fourteen elements of home and school environments as associated with delinquency. Data were obtained from 345 delinquents for whom there were complete records. A control group of 641 non-delinquents was selected from the seventh, eighth, and ninth grades. Intermediate position in the sibling group ranked as one of fourteen facts indicative of possible delinquency with a critical ratio of 2.10. Among four factors unfavorable to delinquency was that of being the youngest child in the family, for which there was a critical ratio of 2.80.

Hardy (101) in a study of the relation of certain aspects of home environment to behavior in children of elementary school age, found that fifty-four percent of the maladjusted children were neither oldest or youngest and that among the well-adjusted children forty-four percent were the youngest in their families. According to these findings, the chances of the maladjusted child being neither the oldest nor the youngest were better than ninety-eight to two. Four hundred and nine white children in elementary schools were selected for this study which took place over a period of several years. Data were obtained by personal interviews in the home and school rating scales, questionnaires, and special reports.

Studies of delinquency by Healy and Bronner (57) and by the New Jersey Juvenile Delinquency Commission (102) indicate that intermediate children of large families are more likely to get into trouble as juvenile delinquents than either oldest or youngest children.

Still other investigations relative to the influence of family position fail to yield any significant differences whatsoever. Baker, Decker, and Hill (103) made a study of eighty-four boys from ten to sixteen years of age who had been convicted of theft by the Juvenile Court of Wayne County, Detroit. A control group was selected and matched with the experimental group as to age, school grade, nationality and neighborhood. The birth order distribution for delinquent boys was in close agreement with that of the control group.

The Bernreuter Personality Inventory was administered to four hundred and thirty University of Wisconsin men by Stagner and Katzoff (104). No groups gave a critical ratio as high as 2.00 on dominance. It was concluded that birth order "enters only as an insignificantly small factor which may appear statistically significant with this population and insignificant with another." (104, p. 345)
Using Hewitt and Jenkins (53) classifications of over-inhibited children and unsocialized-aggressive children, Horowitz found no statistically significant differences between these two groups in any background factors. The subjects for this investigation were five hundred and forty-one cases from the Institute for Juvenile Research. All were between six and eighteen years of age and had an I.Q. above eighty.

Birth order was not thought to be a determining factor in studies made by Wile and Jones (105), Wile and Noetzel (106), Tolman (107), Culinan (108), and Levy (91) which contained data about withdrawal and aggression in children.

In Page's study (36), a barely reliable difference was found to suggest aggression in "oldest" children, but there were no other trends in that direction. Neither were there reliable trends indicating withdrawal. A high incidence of unusually favorable personality was found among oldest children. With the exception of hyperactivity and nervousness, youngest children showed no reliable trends favoring aggression. There were no reliable trends in the direction of withdrawal.

In all of these studies of birth order, almost no truly significant differences appear. Although trends are indicated in many of them, contradictions are too prevalent, numbers of subjects too small, samplings too unrepresentative, and methods too varied, even in the best studies available, to be able to draw any general conclusions concerning the relation of position in the family to withdrawal and aggression in children.

Foster Home and Adopted Children

The behavior problems of foster home and adopted children are many and of varying degrees. They range from problems caused by shyness and withdrawal to destructiveness and legally recorded delinquency. Many authors, among them, E. M. Wires (B-53), stress the "insecurity" in the lives of these foster children as the frustrating factor which brings on the withdrawal or aggressive behavior. These patterns of behavior also serve the child as a sort of testing process, in which they test out the new situation and their new parents. The child discovers, or hopes he will discover, what is new in the situation and will perhaps also find whether his old patterns will serve or whether he must make some modifications of them. In this way, aggressive behavior serves as a means of social learning. Bender and Schilder (64) bring out the fact that the withdrawal of love increases aggressive tendencies in children. L. G. Lowrey (85) brings out this fact in his study "Personality Distortion and Early Institutional Care."

Lowrey's study concerns twenty-eight children in boarding homes with one common factor in their background; that is, three years of institutional experience. These children were admitted from infant homes during 1936 and the first half of 1937. The foster homes used were not in any way different from the general run. In some, the income from boarding children was important, in others, it was not; in some, these were the only children; in others, there were other boarding children or children belonging to the family. The homes were all Jewish (as were the children), which means that the pressures exerted regarding food, obedience, expressions of affection, etc., were those typical of the middle class urban Jewish home. Most of them were simple orthodox homes, conforming to the Department of Welfare standards as to size and convenience.
Statistical analysis was not especially valuable in revealing the difficulties in social adjustment of these children because of the wide variety of combinations of adjustments and maladjustments. There were certain individual behavior traits which occurred so frequently that they are worth noting. All of these occurred in half or more of the children; hostile aggressiveness, temper tantrums, enuresis, attention demanding behavior, speech defects, shyness and sensitiveness, difficulties about food (refusal, fussy, slow eating), stubbornness, negativism, selfishness, and excessive crying. Somewhat less frequent problems were: over-affection and repelling affection, over-activity, exclusiveness, submissiveness, and difficulties in school adjustment (85, p. 579)

From this study Lowrey concludes that infants reared in institutions undergo an isolated type of experience, with resulting isolation type of personality, characterized by unsocial behavior, hostile aggression, lack of patterns for giving and receiving affection, inability to understand and accept limitations, marked insecurity in adapting to environment (85, p. 585). This behavior may be explained by the fact that at the time of the transfer, the children are at a stage when they can form only partial love attachments; hostility and aggression are at a peak; egocentricity is marked and they do not recognize the individuality and needs of others. They are unprepared and unequal to the demands and limitations of family setting. They are exposed to attention and affection far in excess of anything they have previously known, and so they react excessively, either by aggressive behavior or by withdrawing.

Mary Elizabeth Belden made a study of "The Relationships of Problem Children Who Were Placed in Infancy." (86) This study was undertaken to discover whether a group of problem children who had been placed in infancy had characteristic forms of difficulty in social relationships. Twenty-two subjects were used in this study. The method used to study the social relationships of these children was to interview the adults who came in daily contact with them. These adults included cottage parents, teachers, and one of the therapists. Each one of these reported on the child's typical relationship with seven different types of people: adult female, adult male, children of the opposite sex, chum, older children, younger children and groups.

The only consistent factor in the lives of these children was the early placement experiences. They varied with respect to I.Q., race, sex, and length of residence in the group. Half of the children were in the early adolescent period and none were under six. The number of placements previous to the study varied from two to nineteen.

Eight types of behavior were found to be exhibited by the children from the analysis of their social relationships: friendly, fearful, attention-seeking, pretentious, hostile, dominating, cooperative and withdrawn. According to this study, the characteristic picture of the children showed that attention-seeking and withdrawn behavior occurred most frequently, but fearful and dominating behavior was manifested towards certain individuals. Friendly and pretentious behavior was exhibited towards almost everyone. Hostile and cooperative behavior traits were not part of the characteristic picture, since they were manifested rather infrequently. The frequent occurrence of attention-seeking and withdrawn behavior pointed to a primary need of affection. In cases where there seemed little opportunity for gratification of this need, the children avoided contact by withdrawing from other people.
W. Goldfarb (87) made a study of "Infant Rearing and Problem Behavior." Interest in this research was initiated when it was noticed that several of the children referred by the Foster Home Bureau to the Bellevue Hospital for observation because of extremely poor personal and social adjustments had all spent their infant years in the infant institution. After reviewing and observing more cases the following hypothesis was suggested: That aggressive behavior disorders are more likely to be found in foster children with infant experiences in an institution than in the rest of the foster home population.

The subjects were divided into two groups: children who had been in foster homes from early infancy (foster home children); and children who had been in an institution from early infancy to about age three. At this age they were transferred to foster homes and supervised by trained case workers (institution children). The problem was to compare the adjustment of institution children with that of foster home children. The two groups were equated within three months on the basis of age and length of time under care. These children differed only in the kind of care they had experienced during their first three years. Following the age of three they were exposed to objectively similar foster home experiences for a minimum of about three years. In the initial investigation, twenty institution children were equated with twenty foster home children. These comprised Group A. The investigators found the results of Group A so interesting that the study was extended to include an additional group of children, Group B. The purpose for enlarging the population was to raise the reliability of the observed divergencies between the institution and foster home children through the use of a larger group; and to see if the differences observed between the institution and foster home children in Group A would also be found in an older group of children. Group B consisted of 20 institution children and 20 foster home children, equated on the basis of age and length of time under care. A minimum age of 7½ was set for any child selected in this group. Also, a more deliberate attempt was made to select children who were admitted to care below the age of six months to be certain that even very early infancy was spent either in an institution or a foster home.

The scope of the investigation was limited to the following questions: Do the two groups differ in the frequency with which they demonstrate behavior problems; and do the two groups differ in the kind of problem behavior that they demonstrate? The data for the study were gathered by the social case workers who were ignorant of the purpose for which the data were to be used.

Results show that the institution children in Groups A and B and the total group, show a greater frequency of problem behavior than do the foster home children. It was also reported that the foster home children tend to show less of the various kinds of problem behavior, except those involving withdrawal behavior.

From this study of infant rearing and behavior problems, Goldfarb came to the conclusion that the institution children as a group show a greater frequency of overtly aggressive problems than do foster home children. The foster home children show more problems of passive anxiety (timidness, shyness, etc.).

Hewitt and Jenkins (53) assert, "It is possible that the parents of this presumably illegitimate, unwanted, and immediately rejected child never attempted to establish a home together. At least this child was likely to have been placed in a foster home at an early age. If they did marry,
situations many abusive. this offspring. Rogers (5) also says that one aspect of the foster home situation on which many placements come to grief is the presence of the foster parent's own children in the home. He has found that it is very rare that placements are successful if the "own" child and the foster child are near enough in age to compete with each other for parental affection. H. M. Mitchell (88) also found this true on a study of forty-five legally-adopted children who were patients of the Northern New Jersey Mental Hygiene Clinics; it was found that strong feelings of rivalry and jealousy were directed towards "own" and other adopted children.

Closely related to the effect of foster homes on the development of a child is the influence of the broken home, and/or inadequate parents on the development of aggression or withdrawal in children.

The children comprising Hewitt and Jenkins' (53) socialized delinquent group usually came from homes where one of the parents was missing through death and if any replacement was made the substitute was a stepparent. In many of these situations, where the mother was living, the mother was employed outside the home during the daytime and was unable to offer adequate supervision. The parents in these homes were characterized as being inclined to alcoholism, violent tempered and abusive. In many instances the father may have had a reputation for dishonesty and be suffering from a chronic illness or physical impairment.

The "over inhibited child" (withdrawn) comes from a family which, in comparison to the other groups described, shows greater evidence of stability in its personnel. The child in these situations was much less likely to have lost contact with either or both of his own parents. These parents are described as extremely nervous, with few if any social contacts outside the home. The authors of this study point out the striking similarity between the outstanding characteristics of the parents and those of their "problem offspring." This is an interesting observation to consider when we think of the inadequate parent in relation to the child's behavior.

Jean Adams, however, states that "the influence of the disruption of the house on children may be much less than has been commonly assumed and actually claimed recently." (89) The author bases her conclusion on data collected from the case files of child guidance clinics in the Glasgow area. She compares two groups of "problem" children; one hundred and fifty coming from broken homes in civilian life and fifty from homes where the father was in military service, but with no evidence of parental disharmony.

No significant difference was noted between sex or educational achievement in type of home (broken or service group); and emotional disorders, behavior disturbances and delinquency problems were similar in broken homes and service group homes. There was no relation between the type of home (whether broken or service) and the most significant symptom of the problem child who came from it.
Page (36) found that aggression in white boys is positively associated with the family factor of inadequate parents and foster or boarding homes. In the case of foster or boarding home placement, the difference in the percentages of aggressives and withdrawns was supported by a critical ratio of 2.9, and between the aggressives and the stables of 3.0. No similar relationship was found for white girls. The factor of inadequate parents was positively associated with both aggression and withdrawal in the case of Negro boys.

The Only Child

Stanley Hall is said to have considered being an only child a disease in itself. Other psychologists have followed Hall's lead in pointing out the "handicap" which the only child must combat in his struggle to attain an adequate adjustment.

Friedjberg was perhaps the first to contribute pertinent data from clinical experience. As quoted by Thurstone and Jenkins, he found 87 of 100 only children in his practice to be neuropathic while only 31 of 100 children having siblings showed similar traits. Fear, capriciousness, constipation, and enuresis were prominent symptoms and ten of the only children were severely neuropathic.

Levy's (91) study of the behavior problems of 785 Chicago school children is one of the most comprehensive of those done with clinical population. He compared the incidence of only children among a large group of clinic cases and among a control group of 35,000 non-problem children and concluded that "the distribution of children's behavior problems appears to be, for the most part, independent of size of family." However, he did find a tendency toward maladjustment in a group of only children of rich parents.

Anne Ward (92) studied 100 only children living at home with both parents in comparison with 100 clinic children. In this study it was found that only children present much the same problems as the clinical group, except that stealing, lying, truancy and sensitiveness are less frequent in the former. An explanation for this is that more "only" children come from a relatively high type of family and here they have been reared in an atmosphere where antisocial behavior is less common.

A further check on problems presented by "only" children was made by a study with children of "three-child" families. The outstanding item here is the poor school work. It was found that school adjustment is more of a crisis to the only child than to other children. He may not be accustomed to a group, and has to learn what it means to be inconspicuous. Thus, he may develop a dislike of school and turn to disturbing attention-getting behavior, or he may withdraw and become a day-dreamer. Among the thirty-four doing poor school work, seven were discipline problems while ten were day-dreamers.

School adjustment is influenced by the home too. The over-ambitious parents can be so concerned about school progress that the child develops a negativistic attitude to it. Another factor which may account for poor school work is the "only" child's completely satisfied affection drive. At home he has no competition for love and attention: therefore he has no need to be a leader at school.
It was also shown that in respect to certain family relationships the "only" children afford a distinct contrast to the middle children in several respects. They show the highest percentage of positive reports of negativism, persistent disobedience in home or school, temper tantrums, nervousness, poor sleep, night terrors and fears of various sorts.

The only children in kindergarten groups are rated as more aggressive and more self-confident than any of the other groups. They show the greatest proportion of cases of extreme fondness of physical demonstration of affection and are highly gregarious in their social interests. They are more than ordinarily likely to show some instability of mood, are easily excited and their attention tends to be flighty and distractible. Only children as a group are slightly more likely than other children to be aggressive, to bully and to insist upon having their own way.

Page found a striking difference in the personality of white boys who were "only" children and those who came from a crowded home. The only child definitely tends toward temper tantrums, attention-getting devices, disciplinary problems, nervousness and hyperactivity, thumb-sucking or nail-biting, and poor work habits. Boys from crowded homes are either reliably free from these characteristics or they at least display no more than an average trend in the direction of any of them.

These studies show that psychologists do not agree on the relation of "shliness" to behavior. Some report that it tends to be related to maladjusted children, others claim that being an "only" child is hardly the cause of withdrawal or aggression in children. However, certain environmental factors arising out of the "only" child family situation need to be considered. The only child is surrounded by adults; he has no sibling companions to share his youthful activities and interests. Such environmental factors could easily give rise to behavior problems in children.
EDUCATIONAL FACTORS

Page, (36) devoted a portion of his study to educational factors with respect to aggression and withdrawal. Logically, his findings seem to break down into two parts. Considered first, are the occurrence of (or where we may expect to find) aggression or withdrawal in children. The second, presents educational factors that are often supposed to be related to aggression or withdrawal, but which appear in this study to be unrelated and tend, in some instances, even to be stabilizing in their effect.

Occurrences of aggression were most often found in children who were in the fourth through the eighth grade in school. This was particularly true for white boys and Negro girls. The educational factors, Late entrance, and Mental age three through six (both indicative of mental immaturity), and Child attending high school were found most often in those children who were withdrawn. Closer observation of the data reveals that among those children who entered school late, the white boys and the Negro girls were most often withdrawn. The ranks of the withdrawn were primarily composed of white boys, Negro boys, and Negro girls who were mentally immature. Negro boys and Negro girls who attended school only half days, unlike white boys and white girls, were frequently found to be withdrawn. This apparent racial difference may have an economic or social basis, since half-day schools are found only in certain under-privileged and overpopulated areas.

The basis for relating high-school attendance to withdrawal rests mainly on the information for white boys because the data for other children, in this respect, were unreliable. It would seem then that the pattern of aggression and withdrawal is related to the school grade. We are more apt to find aggressive children in the upper elementary school level, while the withdrawn, for the most part, are evidenced in the lowest and highest levels of our public schools.

It is difficult to explain this pattern of aggressive and withdrawn behavior because the bio-social correlates are so closely interwoven with the educational factors that it is difficult to separate their influence. Withdrawn behavior which is most often found in the lower grades seems to be a developmental product of mental immaturity. The educational factors involved here are no more than synonyms for mental immaturity. The inclination toward aggressive behavior in the upper elementary school child would appear, similarly, to have a developmental explanation. Here we find no other educational factors that substantiate any educational cause for this change in behavior. The picture of developmental influence is completed with the relatively large percentage of withdrawn children that are found in high school. Once again, we can find no definite relationship with other educational factors. Therefore, this pattern of withdrawn to aggressive and back to withdrawn behavior as found in our schools, extending from the first grade through high school, in this study, seems causally related to bio-social development. To what extent educational factors are involved is purely a speculative matter. We can only say where a certain type of behavior is likely to be found.
### Table XI
**OCCURRENCES OF AGGRESSION AND WITHDRAWAL IN RELATION TO EDUCATIONAL FACTORS**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Adapted from Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aggressive minus</td>
</tr>
<tr>
<td>Withdrawn %</td>
<td>%</td>
</tr>
<tr>
<td>Placement in Grades (4 through 8)</td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>25.4</td>
</tr>
<tr>
<td>Negro Girls</td>
<td>5.9</td>
</tr>
<tr>
<td>Child Attending High School</td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>16.2</td>
</tr>
<tr>
<td>Mental Age (3 through 6)</td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>33.0</td>
</tr>
<tr>
<td>Negro Boys</td>
<td>50.1</td>
</tr>
<tr>
<td>(3 through 7)</td>
<td></td>
</tr>
<tr>
<td>Negro Girls</td>
<td>82.5</td>
</tr>
<tr>
<td>Late Entrance</td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Generally, those children who had repeated a grade, who had had a varied school experience, who were unsuitably placed, or who had a reading disability, showed little inclination toward either aggression or withdrawal. In some instances, these factors seemed to have even a stabilizing effect.

The often-expressed opinion that a child who is "too old" for his grade is usually aggressive seems to be disproved by these findings. Results here show that such an individual exhibits, in most instances, a positive freedom from either aggression or withdrawal. The opinion formed as a result of this study, in reference to these educational factors and their lack of coincidence with either aggressive or withdrawn behavior, is stated by Page, (c--p. 85)

"There was little evidence from our data that any of these conditions are related to these traits in the mass, although this does not preclude the existence of a relationship in individual cases, nor can it be said that our evidence definitely establishes a state of alienation between these conditions and these traits."
**Table XII**
EDUCATIONAL FACTORS "SUPPOSEDLY" RELATED TO AGGRESSION OR WITHDRAWAL

Adapted from Page

<table>
<thead>
<tr>
<th>Factor</th>
<th>Withdrew %</th>
<th>Aggressive %</th>
<th>Stable %</th>
<th>Aggressive minus</th>
<th>Withdrew C.R.</th>
<th>Aggressive minus</th>
<th>Stable C.R.</th>
<th>Stable minus</th>
<th>Withdrew C.R.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overage for Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>45.9</td>
<td>44.9</td>
<td>51.9</td>
<td>0.2</td>
<td>2.7</td>
<td></td>
<td>1.6</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>White Girls</td>
<td>38.8</td>
<td>35.2</td>
<td>46.9</td>
<td>0.4</td>
<td>1.7</td>
<td></td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeated Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>53.5</td>
<td>58.1</td>
<td>62.7</td>
<td>1.0</td>
<td>1.7</td>
<td></td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Girls</td>
<td>55.3</td>
<td>51.8</td>
<td>53.1</td>
<td>0.5</td>
<td>.2</td>
<td></td>
<td>0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negro Boys</td>
<td>58.3</td>
<td>70.8</td>
<td>67.2</td>
<td>1.3</td>
<td>.8</td>
<td></td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negro Girls</td>
<td>76.6</td>
<td>53.3</td>
<td>58.4</td>
<td>1.8</td>
<td>.6</td>
<td></td>
<td>1.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Half-Day Sessions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Boys</td>
<td>2.7</td>
<td>2.9</td>
<td>4.1</td>
<td>0.2</td>
<td>1.3</td>
<td></td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Girls</td>
<td>5.8</td>
<td>1.9</td>
<td>3.4</td>
<td>1.3</td>
<td>0.8</td>
<td></td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negro Boys</td>
<td>43.7</td>
<td>13.5</td>
<td>30.4</td>
<td>3.9</td>
<td>4.7</td>
<td></td>
<td>1.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negro Girls</td>
<td>41.2</td>
<td>13.3</td>
<td>27.8</td>
<td>2.1</td>
<td>2.5</td>
<td></td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This study indicates the complexity involved in trying to determine if any relationships exist between educational factors and behavior that is aggressive or withdrawn. There seemed to be a relevancy between the grade in school and occurrences of positive or negative behavior. Indicates of this study are contrary to the theory that adolescence with its frustrations usually results in aggressive behavior. Educational factors, traditionally thought of as stimulating either aggression or withdrawal, appeared to be unrelated to these expected tendencies. In many cases, these factors were apparently stabilizing in their influence upon the child.

Hewitt and Jenkins (53) presented figures indicating the percentage of children in each of three "personality" groups, namely, Unsocialized aggressive behavior, Socialized delinquent behavior, and Overinhibited behavior, who had certain educational histories in common. For the purposes of this discussion, only the first and the last of these groups will be considered since the middle group does not appear to represent especially aggressive or especially withdrawn characteristics, as evidenced by the qualifying adjective "socialized."

In the total sample, over half of the children were in elementary school (kindergarten through 6th grade), about a quarter were in junior high school (7th to 9th), about 7% were in senior high school (10th to 12th), and the remaining 12% were either not enrolled or had been given other "special" placement. In the Unsocialized aggressive group, three quarters of the subjects were found to be in the elementary division, less than 15% were in junior high school, none were in high school, while about 11% were not enrolled or were in special classes. In the over-inhibited group, somewhat
less than half were in the elementary grades, over a quarter were in junior high school, while 15% were in senior high. It would seem then, that overt aggressive behavior is characteristic of young children; perhaps if we accept the hypothesis of the Yale group, these children have not yet learned that society punishes such behavior. That such learning may occur, was shown by the marked decrease in the percentage of aggressive individuals in junior high school and the dearth of such individuals in high school. The attribution of this decline to education, however, may not be justified since the role of maturation is not clear in the socialization of the individual.

The incidence of Over-inhibited individuals in the elementary grades was somewhat less than the corresponding incidence in the total sample and decidedly less than that in the aggressive category. However, the percentage of these individuals in the junior high school group was well above either of the others, as was the percentage in high school. The ratio of "Over-inhibited" individuals in each grade group to the corresponding number of individuals in the total sample increased with increased grade from elementary through high school, indicating perhaps, that the pressure from society exerts itself more and more upon the individual as he advances in grade and correspondingly in age. Again it is questionable here whether the increased incidence of withdrawn behavior is attributable to learning or maturation.

Although the same study presents a tabulation concerning the three behavioral syndrome groups mentioned above and degree of Advancement or Retardation, no significant relationship is apparent therein. These results are in agreement with those of Page, who found negligible correlations between retardation or acceleration and aggressive or withdrawing tendencies.

Hewitt and Jenkins proceed further to tabulate the tetrachoric correlations obtained from their sample between the same three behavioral syndrome groups and achievement in reading, arithmetic and spelling. Negligible correlations were found for all the pairs involved except one. Tetrachoric "r" between Spelling disability (achievement one year or more below M.A. expectancy) and Unsocialized aggressive behavior was -.30. The significance of this coefficient is not certain. There is no trend indicated and the isolated relationship may or may not be important.

The study by Luton Ackerson (51) of 2,113 boys and 1,181 girls examined consecutively at the Illinois Institute for Juvenile Research yielded results not dissimilar to those obtained by Page (36). The work consists of tables of intercorrelations among 162 trait items classifiable respectively as "personality items" and "situational items." The subjects were all white children, the data on others being insufficient to justify statistical treatment. The sexes were treated separately. Interpretation of obtained coefficients is as follows: .50 or greater, high (on the basis of rarity); .40 to .49, large; .30 to .39, substantial; .20 to .29, moderate; and smaller than .20 to negative correlation greater than -.20, important (on the basis of rarity).

In the light of this scale, it is to be noted that no "high" or "large" correlations were found between any educational factor and any personality trait.
Before further consideration of Ackerson's material, it may be well to mention that he did not group traits under headings such as aggression or withdrawal, but rather treated them as individual entities, not necessarily combinable under these larger headings.

The two factors treated by Ackerson which might unequivocally be termed educational, are Retardation in school and Irregular attendance at school. The former was qualified to include only those cases in which Retardation would presumably amount to two years or more at the age of sixteen. The latter included cases of excessive truancy and parental unwillingness to keep the child in school.

Retardation was found in 41.6% of all the boys tested and in 40.1% of all the girls. This high proportion of Retardation indicates that the sample used was not representative of the population at large. However, the applicability of results obtained from this type of sample to the basic discussion of aggression and withdrawal is given elsewhere in this survey and need not be a determining factor here.

Ackerson's data indicate a substantial negative correlation between Retardation in school and the trait "leader" among the girls, but a low negative correlation among the boys. At the same time, daydreaming correlated with Retardation gives moderate negative coefficients in the -.20's for both sexes. Moreover, only negligible correlations were found between Retardation and various other traits, all of which are themselves associated with aggression or withdrawal, such as truancy from school, violence, leading others into bad conduct, threatening violence, swearing, disturbing influence in school, disobedient, etc., on the one hand, and follower, sullen, sulky, bashful, exclusive, lack of initiative, and depressed, on the other. If leadership is an indication of aggression, and daydreaming is associated with withdrawal, the paradox asserts itself wherein, Retardation is associated negatively with aggression, negatively with withdrawal, and is not associated with either aggression or withdrawal. It becomes obvious here that relationships, where they exist, exist between isolated traits and the educational factor involved, and that no valid generalizations concerning aggression and withdrawal may be drawn. Thus the advisability of considering the individual traits by themselves becomes patent.

The other educational factor analyzed in the Ackerson study was Irregular attendance at school. The correlation of this factor with swearing was moderate for girls, but negligible for boys. The correlation with truancy was substantial for the girls and moderate for the boys. Consistent substantial correlations were found between Irregular attendance and Refusal to attend school. From these results, irregular attendance would appear to be closely linked to aggressive symptoms. However, a moderate negative correlation was detected between Irregular attendance and another supposedly aggressive trait, sex delinquency among the girls. The correlation among the boys was negligible, but negative. A low negative correlation was found among the boys between irregular attendance and sullenness.

Irregular attendance at school seems as closely linked with withdrawal as with aggression in both sexes. Moreover, numerous cases of lack of correlation were observed with both aggressive and withdrawn traits among both sexes. Just as in the case of Retardation, no generalizations are justified here.
In regard to the relationship between aggressive and withdrawn behavior and the repetition of grades or non-promotion, Sandin's (109) study of the social and emotional adjustments of regularly promoted and non-promoted pupils indicates several significant relationships.

This study was conducted in the public schools of Wallingford, Connecticut, during the school year 1940-1941. The two classes from each grade, one through eight, which had the greatest number of non-promoted pupils were selected for study. The sixteen classes included 416 pupils, of which 225 were boys and 191 were girls. Of this group, 139 were retarded due to non-promotion, 89 being retarded one year, 42 retarded two years, and 8 retarded three years.

One hundred thirty-two retarded children and 175 regular progress children were rated by their teachers on a 20-trait schedule. In determining if the rated differences between the regularly promoted and the non-promoted pupils were reliable, the Chi-square method of analysis was used, with a probability of 5% or below being considered significant.

Three of the rated behavior characteristics may be considered as aggressive in nature, and one representative of withdrawal. In the following table, the results of the ratings are summarized:

<table>
<thead>
<tr>
<th>BEHAVIOR CHARACTERISTICS</th>
<th>Girls Slow</th>
<th>Girls Reg.</th>
<th>P</th>
<th>Boys Slow</th>
<th>Boys Reg.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cruel, bullying</td>
<td>4.4</td>
<td>1.1</td>
<td></td>
<td>16.1</td>
<td>3.6</td>
<td>5%</td>
</tr>
<tr>
<td>Disagreeable, quarrelsome</td>
<td>4.4</td>
<td>3.3</td>
<td></td>
<td>23.0</td>
<td>4.8</td>
<td>1%</td>
</tr>
<tr>
<td>Impertinent, defiant</td>
<td>6.7</td>
<td>3.3</td>
<td>5%</td>
<td>29.9</td>
<td>9.6</td>
<td>1%</td>
</tr>
<tr>
<td>Unsocial, withdrawing</td>
<td>0.0</td>
<td>1.1</td>
<td></td>
<td>13.8</td>
<td>4.8</td>
<td>5%</td>
</tr>
</tbody>
</table>

Thus it is shown that 16.1% of all retarded boys were rated as cruel or bullying as compared to 3.6% of all regular progress boys. The difference between the two percentages converts to a probability of 5%, meaning that there are 95 chances out of 100 that this difference between regularly promoted and non-promoted boys is a reliable one. The difference between the two groups of girls is not considered a reliable one.

In regard to the trait Disagreeable-quarrelsome, the slow-progress boys ranked significantly higher than did the corresponding regular progress group. Again, no reliable difference was found between the two groups of girls. On the trait Impertinent-defiant, both slow progress groups were rated reliably higher than were the regular progress pupils. The slow progress boys were rated Unsocial-withdrawing significantly more often than were the corresponding regular progress group. No reliable difference was found between the two groups of girls.
The text on the page is not legible due to the quality of the image. It appears to be a page from a document with text and a table, but the details are not clear enough to transcribe accurately.
On the basis of the teacher ratings, Sandin concludes that a reliably
greater percentage of non-promoted boys were regarded as exhibiting cruel and
bullying behavior, showing impertinence and defiance, being quarrelsome and
disagreeable, and tending to be unsocial and withdrawn. A significantly
greater percentage of the retarded girls were found to be impertinent and
defiant, but on the other traits, did not differ significantly from the
regular progress girls.

A second device used by Sandin consisted of a "Who-is-it-test" composed
of 18 question-portraits. The individual pupils supplied the names of one or
more classmates best described by the portraits.

These data obtained show that the children themselves more often named
the retarded boys as aggressive than non-retarded boys. However, the pupils
did not mention the retarded pupils as being shy, quiet, and seldom noticed.

In general, the results of the "Who-is-it test" substantiated the
results of the behavior rating by teachers on those items indicative of
aggressive behavior.

Comparing pupils experiencing non-promotion once with those who two or
more times had failed, showed that additional failures tend to be accompanied
by additional aggression. A deviation from this general trend did occur in
one instance in the teachers' ratings. They more often rated the pupils who
had repeated one grade as being aggressive than those who had repeated two
grades. However, the members of the relatively smaller group who had repeated
three grades were rated as aggressive much more often than either the one- or
two- grade repeaters. On the "Who-is-it test," the frequency of mention of the
retarded children as being aggressive increased directly with the amount of
retardation.

The study by Kvaraceus (110), conducted at the Passaic, New Jersey,
Children's Bureau, indicates a significant relationship between juvenile
delinquency and certain educational factors. Delinquent behavior as stated
here would be consistent with aggressiveness as stated in Chapter I of this
text. In Passaic's total elementary school population, the retardation rate
based on a semi-annual promotion system, was found to be 17%. In the
delinquent group of 651 children, 43.5% had repeated one term or more. These
data, when analyzed, appear to be reliable.

TABLE XIV
Percent of children with half-year repetitions among Bureau cases
and among all Passaic elementary school children. From Kvaraceus
(110, p. 139)

<table>
<thead>
<tr>
<th>Number of Half-year Repetitions</th>
<th>Delinquent Group (651 cases)</th>
<th>City-wide Control Group Grades 1-8 (5650 cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>One</td>
<td>9.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Two</td>
<td>11.6</td>
<td>14.5</td>
</tr>
<tr>
<td>Three or more</td>
<td>19.7</td>
<td>27.6</td>
</tr>
</tbody>
</table>
The findings of this study show that delinquents in most instances have repeated two or more grades, while repeaters in the general school population are usually held back but one term.

Kvaraceus expresses the commonly accepted opinion that being held back with younger children develops feelings of insecurity, inferiority, and dislike for the overall school situation, which ultimately result in aggressive behavior.

This study indicates the relative effect of varied school experience upon the general school population and the delinquent group.

It is shown that a very high proportion of delinquents have experienced an excessive number of school transfers as compared with the general school population. It is pointed out that the factors which compel the delinquent family to move often may have a bearing upon the delinquent behavior. Furthermore, moving from one school to another necessitates new adjustments which may have direct implications for delinquency.

<table>
<thead>
<tr>
<th>School Transfers</th>
<th>General Population</th>
<th>Delinquents</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>50.2</td>
<td>28.4</td>
</tr>
<tr>
<td>One-Three</td>
<td>41.9</td>
<td>49.8</td>
</tr>
<tr>
<td>Four or more</td>
<td>7.9</td>
<td>21.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The delinquency referral rate experienced a sharp decline during the summer months. It may be that this period of comparative freedom from restriction and school-imposed frustration provides, at the same time, a substantial number of socially approved outlets for the aggressive tendencies, which otherwise would manifest themselves anti-socially.

A noted study in delinquency by Glueck and Glueck (111) compared the educational factors in the lives of their delinquent group with that of the Boston public school boys.

The results indicated a decrease in delinquency with advanced school grade. A total of 83% of all delinquents had not completed eighth grade, whereas, of the total population, a mere 7% had not done so. Additional direct relationship was discovered between delinquency and the mobility of children's families. Inability to perform satisfactorily in school work appeared to be an accompaniment to delinquent behavior. Using the figures on Withdrawal from school because of inability to do the school work, Glueck and Glueck (111, p. 88) found that seven times as many such withdrawals occurred among the delinquents as among the school population at large.
Results such as these are in agreement with those of Hewitt and Jenkins (op. cit.), who found decreased aggression with increased grade placement, and seem further to be supported by the more recent work of Page.

Van Alstyne and Hattwick (112) have made a study of the behavior of children, beginning with the assumption that social and emotional habit patterns are fairly well established by the time a child is seven or eight years old. Their point of departure, therefore, was the nursery school, where the subjects were actually in the formative stage. From there they went to the grade school to follow up their data and to correlate the behavior patterns found in the younger children with their later school behavior.

This study was made in the Winnetka school system. Rating scales were used to chart the child's behavior. During the nursery school period, these ratings were made by the mother and the nursery school teacher. The later ratings were made by the mother, his present grade teacher, and an observer (who was usually his former nursery school teacher). Statistical evaluations made on these ratings found the teachers to be nearest to the correlation between all three ratings, therefore, hers were taken as criterion for post-nursery school studies.

The follow-up studies showed that the children who had been most difficult to manage, had had more difficulty with other children, had fought most, had had more temper outbursts, and had been most negativistic in nursery school, were still in the less well-adjusted group in elementary school. This tendency strengthened the original assumption set forth. As additional proof, it was found that less than 10% of the children developed any of the undesirable traits after the age of four years.

From this study is derived further evidence of the lack of relationship between educational factors and aggression or withdrawal. It is interesting to note that this study, which utilized a technique based on rating scales, is in substantial agreement with studies which utilized more direct quantitative methods.

In Katherm Mae McKinnon's (113) study on behavior changes and consistencies, behavior was classified into four categories: 1) conformity, 2) caution, 3) invasiveness (aggression), and 4) withdrawal. Each child studied was placed into one of these categories at the age of three, and again at eight. All changes were seen to be only changes in degree of their original behavior pattern. The behavior of none of these children remained constant, the modifications always being in a direction that had been evident earlier. Further survey of this study revealed that changes were made in the direction of conformity, in as the child grew older, his behavior tended toward the norm. Comparable educational procedures injected into this study were given comparable children, but no significant, consistent changes were detected. These results tend to support the Alstyne and Hattwick study.

In further consideration of aggression and withdrawal of children, it is advisable to investigate the relation of the school atmosphere to the behavior of children. Are there certain factors operating in the atmosphere of the schoolroom which tend to make a child dominating or submissive in his relations with his superiors and his peers? A few excellent studies have been made in this field.
The studies of Anderson are concerned with domination and integration in the behavior of children. For our purposes, dominative behavior may be said to be aggressive behavior. In dominating another individual, a child attempts to force himself or his ideas upon another. Such an assertion may have physical and verbal aspects.

The subjects for an early study of Anderson (114) were forty-nine children, twenty-one boys and twenty-eight girls from three kindergarten groups in two schools. The procedure was observational. The reliability of the two observers in this study was high, ranging from .98 for dominative behavior to .90 for integrative scores.

In this study, Anderson was concerned with showing that dominative behavior on the part of the child incites dominative behavior in the companion singled out for the original aggression. The results pertinent here are presented in Table 6, which is adapted from table 4. (114, p. 20)

Table XVI

<table>
<thead>
<tr>
<th>School</th>
<th>Session</th>
<th>Number</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>A.M. &amp; P.M.</td>
<td>63</td>
<td>.85</td>
</tr>
<tr>
<td>Y</td>
<td>A.M.</td>
<td>24</td>
<td>.82</td>
</tr>
<tr>
<td>Pre-School</td>
<td></td>
<td>513</td>
<td>.68</td>
</tr>
</tbody>
</table>

These significantly high positive coefficients of correlation indicate that, as Anderson suggests, dominative behavior of one child tends to incite similar behavior in his companion. An aggression of A will tend to cause his playmate, B to aggress. Aggression thus tends to be circular; an aggressive act serves as a stimulus for another aggressive act. Aggression, then, is to some extent dependent upon the environment in which a child finds himself. If he is surrounded by hostile school chums, he will more easily and quickly aggress than if his companions are cooperative and helpful.

However, this study does not adequately answer the question, "What is the relation between the classroom atmosphere and the behavior of a child?" In the classroom, the figure of the teacher looms large. Is the behavior of an individual a reaction to this teacher's personality? In the above study the personality of the teacher was ignored. Other studies carried on under the direction of Anderson, however, have investigated teacher-child relationships. A summary of these studies will give some insight into the problem of the effect of the psychological environment of the classroom.

The first study is of teachers in kindergarten classes (114). The subjects were two teachers, and thirty-two children enrolled in a kindergarten. Records of children's and teachers' behavior were made on five-minute observation blanks devised after a great deal of preliminary experimentation. The child-behavior categories are as follows: Works and plays alone, plays and works harmoniously with others, plays and works dominatively with others, works or plays noisily, works or plays destructively, works or plays dangerously, follows in teacher's lead, does not follow teacher's lead, unidentified. The teacher's behavior was further subdivided into "initiated by teacher" and "initiated by child."
The data were collected by two observers previously trained in the use of the observation blank. The reliability of the observers, measured by Pearson r, ranged from .99 to .74.

To determine the effect of teacher's personalities on children's behavior, the coefficients of correlation between the categories of children's behavior were determined. The "r's" range from -.50 to .58. The most significant correlations are between 1) works alone and total individual contacts (-.50); 2) plays noisily, dangerously, and destructively and domination initiated by teacher (.58); 3) does not follow teacher's lead and domination initiated by teacher (.55). These correlations would indicate that the withdrawn child, the one who works alone, is neglected by the teacher. The moderately high positive correlation between plays noisily, dangerously, and destructively and domination initiated by the teacher shows that aggression on the part of the child is met by aggression on the part of the teacher. The individual in authority does not attempt to break the "vicious circle" by the use of integrative behavior, but rather uses the less desirable technique of domination on "misbehaving" children. A similar interpretation may be made of the correlation .55 between "does not follow teacher's lead" and "domination initiated by the teacher."

In a later study of Anderson, Brewer and Freeman (115), the child-behavior and teacher-contact categories were further refined. The subjects for this study were fifty-nine children in two second-grade rooms in one school building, and the two teachers. The observational method was used in collecting the data in this experiment. The high reliability of observers permits the use of the data collected as measures of behavior in the classroom.

Regarding the relation of teacher's contacts and child behavior, certain statements can be made from a careful analysis of the results. Dominative behavior on the part of the teacher was reflected in dominative behavior in the pupils; integrative behavior on the part of the teacher led to cooperative and social behavior in the pupils.

In the study of Anderson, Brewer and Freeman, no control groups were included. Therefore, it might be said that the dominative or aggressive teacher had a group of "misbehaving" children to cope with from the beginning and her conduct was influenced by the group during the entire year. Furthermore, the group subject to democratic authority might have happened to be "mild" and the teacher less dominating because of her well-behaved class. These criticisms were known to Anderson and his associates, and the following year, 1939, (116) follow-up studies were made. The children in the two rooms together with their teachers were brought under observation, 1) to determine if the teachers' personalities were basic to their psychological make-up or more a function of their particular classes in 1938, and 2) to determine the relation between teachers' contacts and child-behavior in third grade rooms, and to compare the findings with the results of the previous study.

The subjects for this study were 129 children and four teachers. Of this number, forty-nine were consecutively enrolled in the two second and two third grades. The method used in this experiment was the same as used by Anderson and Brewer in the study of Anderson, Brewer and Freeman. In this study, also, the reliability of observers was high; the observations may then be said to be good measures of classroom activity. In general, the dominative teacher remained aggressive and her pupils were less cooperative than those in the room conducted democratically. Results show that children in the
democratic second grade did not persist in their cooperative behavior in the third grade. The children promoted from the autocratic second grade to the third grade, reflected the greater activity of the third grade teacher, who was both more domineering and more integrative than the second grade teacher.

The results of these three studies warrant the conclusion that the psychological environment of the classroom, created to a large extent by the teacher, influences the behavior of the children. If the teacher tends to dominate her pupils, they will be more aggressive and less socially integrative. On the other hand, if a teacher uses integrative techniques in handling her class, the children will be more cooperative and less aggressive.

The studies of Lewin (117) in connection with artificial social climates, give further evidence that the psychological environment does influence children. A specific experimental study by Lippitt emphasizing the topological approach of Lewin and designed to show the effect of democratic and authoritative group atmospheres is particularly pertinent here.

Two groups, each consisting of five boys and an adult leaders, were chosen to form mask-making clubs. The leader in one group was democratic in his approach, directing activities as little as possible. In this group, the club members planned activities and directed the club program as much as possible without the interference of the leader. In the other club, the leader was authoritarian in dealing with the members. Activities were planned for the group and the leader directed the program, allowing little or no freedom to the individuals in organizing their work.

The method in this study was observational. A stenographic record was also kept of the conversation of the children in the group.

The main problem in this research was to determine the effects, if any, of these different atmospheres on the boys' behavior.

The behavior of the group members may be summarized as follows: (117, p. 73)

1) In the total social actions (including general conversation) the two groups were about equal.

2) The social actions of the authoritarian group included a larger proportion of ascendant actions than those of the democratic group. Analyzing the components of ascendance, it was found that the largest component was aggressive, dominating behavior in the authoritarian group and work-centered, objective-directed behavior in the democratic group.

3) In the democratic group, submissive actions toward one another accounted for twice as large a proportion of the social actions as in the authoritarian group.

4) Social interaction chains began ascendantly most often in both groups, but they tended to begin more by an ascendant approach in the authoritarian group and more objectively or submissively in the democratic group. In the authoritarian group, the chains tended to end ascendantly or with a refusal to respond; in the other group, they generally ended submissively.
5) In the authoritarian group, the dominating behavior of four members focused on the fifth member on two occasions. After each "scapegoat" incident, there seemed to be a less tense atmosphere; the members also were less dominating and worked more objectively. No singling out of a single member for hostile behavior occurred in the democratic group.

The studies of Anderson and his associates and that of Lippitt give evidence of the relation between the psychological environment and the behavior of individuals. If, in the environment, certain individuals are dominating or authoritarian, the children are more aggressive toward each other and toward the teacher or leader than if the individual in authority is cooperative and integrative. It is not claimed that the social atmosphere solely determines the behavior of an individual; it is but a contributing factor. Nevertheless, it is important to realize that a tense, unfriendly atmosphere tends to incite aggressive behavior in children.

In the preceding discussion, an attempt has been made to present a profile of recent research concerning the possible effect of educational factors upon aggressive and withdrawn tendencies in children. In general, material has been used from only such studies as approached the problem through accepted statistical practices, and where necessary the pertinent figures have been included.

Limitations upon straightforward interpretation of the results were imposed by the varying techniques of classification and description and by the diverse statistical procedures employed by the workers whose material was used. It is to be understood, therefore, that all inferences are subject to such revision as the future studies which this work purports to encourage will make necessary.

For some purposes, it may be necessary to discover the specific areas among the numerous ones covered, in which several studies yield accordant or conflicting results. For such use a brief comparative survey follows.

Page finds aggression most prevalent in grades four through eight, and withdrawal most prevalent in grades one through four and in high school. Hewitt and Jenkins observed the greatest incidence of overt aggression in grades one through six and a continual decrease with the advancing grade group thereafter. It is unfortunate that the sample used in the two studies were not divided similarly. The distribution of aggressive individuals within the first six grades of the Hewitt and Jenkins study would have to be determined to find whether or not the findings agree with those of Page.

Hewitt and Jenkins find a pattern of distribution of withdrawal similar to that found in their study for aggression. The greatest incidence of withdrawn behavior occurs in the elementary grades, somewhat less occurs in junior high school and the least in high school. It would appear from their results that children with deviant behavior tend, as they advance in school, increasingly to achieve, at least overtly, the aspect of normalcy. In direct contradiction to these findings, Page's data show a high incidence of withdrawal in grades one through four and again in high school. As previously stated, aggression was found in Page's study most often in grades four through eight. It appears, then, that as far as the data on high school pupils are concerned, the results of the two studies diverge widely. Comparison of the results concerning elementary pupils is hampered by the lack of completely comparable data in the two studies.
In their longitudinal study, Alstyne and Hattwick found no reliable change in the particular behavior characteristics of interest here, between children in nursery school and the same children in elementary school.

Both Sandin and Kvaraceus disagree with Page on the coincidence of repeated grade and aggression. Page finds no relationship, either with aggression or withdrawal. The other two writers, however, show data indicating a correlation between retardation and aggression, at least among boys. In addition, whereas Page finds varied school experience to be generally unrelated to either behavior syndrome, Kvaraceus finds evidence indicating that varied school experience and aggression do tend to occur together.

Finally, it may be well to include here the support given the common-sense notion that classroom atmosphere affects the attitudes of pupils. Anderson's study indicates a tendency on the part of pupils to react aggressively to dominating, authoritarian attitudes on the part of teachers. Similar results were obtained by Lippitt in his study of authoritarian and democratic atmospheres. Aggression, it appears, begets aggression.

The findings of this survey indicate that there is no reliable agreement or disagreement showing a consistent relationship between educational factors and aggression or withdrawal. Isolated relationships have been illustrated, but evidence has not been presented that would lead us to believe that, given a specific or group of educational factors, aggressive or withdrawn behavior would necessarily result.
Gifted Child

Independently of the study of aggression and withdrawal, the Chicago Bureau of Child Study (36) made an investigation to determine the effects, if any, of acceleration in grade placement on the educational adjustment of gifted children. This was done by comparing a group of accelerated children with a control group of nonaccelerated children. The study was restricted to boys with typical school histories aside from acceleration or lack of it, satisfactory health histories, and from typical Chicago families living above the subsistence level. The two groups were equated physically, mentally, educationally, and socially. Sixteen accelerated and 16 nonaccelerated boys comprised the final groups. The median acceleration of the former group was 9/10 of a year. The personality observations, the basis of judgment of the child's adjustment, were made by the psychologist as part of an individual case study of each child. All intelligence ratings used in the study were obtained from the Stanford-Binet scale. The IQ range was from 130 to 149.

Comparison of these two groups disclosed that 44% of the underage accelerated boys were making a conspicuously satisfactory adjustment in school, while only 12.5% of the nonaccelerated group showed satisfactory adjustment. Nineteen percent of the accelerated group showed definite evidence of maladjustment, while 62.5% of the nonaccelerated group showed the same symptoms, with aggressive behavior predominating. The chances are 997 out of 1000 that the difference in proportions of maladjusted boys in the two groups is a real difference. In other words, accelerating gifted boys in school reduces the likelihood of their becoming maladjusted. Or conversely, holding gifted boys down to the "normal" rate of progress through the grades definitely results in increased aggression.

Miss Wester (118) studied a group of 46 superior students who were accelerated in school and a control group of 46 gifted children who were not accelerated. The students were matched as nearly as possible for other factors, such as economic status, I.Q., and ratio between girls and boys. She shows that vice-principals and counselors reported fewer accelerated than regular pupils to be withdrawn and that fewer disciplinary problems were found in the accelerated group.

Witty (119) found that his gifted group decreased in educational achievement and level over a ten-year period, and that the number of disciplinary problems increased. He regarded these results as due to insufficient use of acceleration.

Various studies by other authors of supernormal mentality, although not directly pertaining to the effects of acceleration on school adjustment, contribute to understanding of the social adjustment and personality of gifted children. Hollingworth says, "Children of very superior intelligence are not as a group socially annoying." (120, p. 253) "Until recently no attention has been paid to the problems of discipline in the gifted because they do not ordinarily show themselves to be problems at all." (121, p. 13) The much more thorough study given to mental defectives is evidence that society studies only what is annoying. Children capable of going on to acquire professional education (about 130 I.Q. minimum) (122, p. 296) and
those who might be capable of creative achievement (about 180 I.Q. minimum) (122, p. 296) are largely neglected by educators.

The gifted child usually has parents more intelligent than average. He frequently has the advantages of superior cultural environment as evidenced by the fact that professional people contribute 1003% of their expected quota to the gifted group and by the frequency of high socio-economic rating of their families (123, p. 43). Several studies have indicated that the parents of the gifted child have more favorable attitudes toward him than parents of average or retarded children have toward them. (124, p. 556, 125, p. 87, 126, p. 207). Furthermore, the gifted child is more likely to be physically attractive, large and heavy for age than the average child. (120) These children are, as a group, liked by their classmates and are elected to positions of honor and responsibility in the school as often as children taken at large. (119, p. 7) They have been judged to have more acceptable character and moral traits than average children. (121, p. 13) Terman summarizes this favorable group picture, "Children above 140 I.Q. are not as a group characterized by intellectual one-sidedness, emotional instability, or any other type of maladjusted personality." (127) "Although individuals with any degree of intelligence may become involved in neurotic difficulties, the tendency is much greater in the case of humble intelligence," (128, p. 206). Few problems apparently arise from brilliance itself for "children gifted in body and mind are not social misfits." (121, p. 13)

As personality measurement is less precise than are other psychological measurement, data from different studies are not readily comparable. In some cases the reader must accept opinion inadequately substantiated by statistical evidence. The gifted group is of course far from homogenous, the most gifted often surpassing the child with the lowest rating in the group farther than the latter surpasses average ability. "The gifted are . . . farthest perhaps from constituting a stereotype." (129, p. 886) Differing adjustment problems appear with increasing deviation from mean intelligence. Hollingworth emphasizes that such problems are unique, not those of society as a whole, and are to a considerable degree confined to the period of childhood and adolescence. (120) When at maturity the gifted child equals his associates in physical size, social experience, and age, the problems arising from differential emotional and intellectual maturity cease to exist. However, in the range from 130 to 150 I.Q. personality adjustment is rendered easier by the fact that "schools and neighborhoods are selective" segregated classes existing unofficially. (130, p. 272) Above 170 I.Q. there are always feelings of isolation, (130, p. 272) "The deviate beyond this range, unable to make his ideas understood by others, may be subjected to increasing strain unless he has learned to suffer fools gladly." (120, p. 253)

These studies seem to show that the gifted child, if accelerated, makes better adjustments than if held back. If kept back with the "normal" group, he may become aggressive and less outstanding, but in general, the gifted child makes a relatively successful social adjustment.

Of the traits found by R. B. Cattell (131) his B trait is that of Intelligence, general mental capacity - v - mental defect, (the common G factor). This trait contains more moral traits than are commonly associated with intelligence, including reliability, conscientiousness, mental alertness,
and emotional maturity. Three separate factors are associated with withdrawal and aggression: A, a withdrawal with hostility due to environmental conditions; C, demoralized general emotionality, important in predicting delinquency; and G, the reverse pole of which is immature dependent character.

Accompanying an interest in withdrawal and aggression during the past twenty-odd years, has been an attempt to correlate withdrawal or aggression with intelligence. Professor Cattell's analysis seems to indicate that within the normal range of intelligence, a moral somewhat stable factor accompanies the G factor. With perhaps the exception of the upper and lower end of the intelligence scale, most studies indicate that there is not much relation between intelligence and various forms of anti-social behavior manifestations. The fact that personality is made up of not one factor, but of many in different combinations should, however, be kept in mind, in viewing this situation. Intelligence as measured in its various attributed aspects is an integral part of the personality constellation. Environmental influences reacting with constitutional factors, combined with habit formations and conditionings make up externally observable behavior.

Recent studies, embodying data obtained from clinics specializing in children with behavior problems have given some insight into the inter-relations existing between intelligence and personality traits. Large populations have been analyzed by Ackerson (51) Jenkins (53) and Page (36). These populations, regarded as a whole show skewed distribution with I.Q. averages in the vicinity of 85. Varying types of behavior problems were surveyed, from minor to theft and delinquency. Statistical comparisons were made, using either correlations or critical ratios to establish the degree of relationship existing, between traits, and intelligence quotient ratings. From these reports, the following material seems pertinent.

Ackerson (51) believing that some relationship does exist, posits the following hypothesis:

"The interaction of the age factor and the intelligence factor produces the resultant effect of increasing the number of behavior problems within the lower age and I.Q. ranges, and of inhibiting them within the upper age and I.Q. ranges, within the group of children below 18 years of age. It is possible that either the age factor or intelligence factor alone if other factors were held constant would likewise produce this 'waxing and waning' effect. The process so far as developmental factors are concerned is probably a matter of learning and unlearning." Ackerson, after sorting his group of white boys (N equals 2113) and white girls (N equals 1181) for various factors such as personality total which comprised all personality traits, and traits such as conduct, repressed manner, attractive manner, bossiness, sensitivity or worrisomeness, correlated these traits with age and intelligence quotient.

He found a zero, or nearly zero correlation between age and inferiority feelings, mental conflict, hatred or jealousy of sibling, spoiled child, daydreaming, queer behavior, sensitiveness, boastfulness or show-off manner, psychoneurotic trends, emotional stability and sulkiness.

His correlation between the factor repressed and I.Q. were .27 .03 for white boys, .24 .04 for white girls, with other behavior difficulties correlating within a range from this general level to negative levels approximately equal but opposite in sign, with intelligence.
His highest correlation was between school retardation and I.Q. \(-0.70 \pm 0.01\), and \(-0.70 \pm 0.02\), for white boys and girls respectively. The diagnosis hypochondriasis correlated \(0.57 \pm 0.02\), and \(0.53 \pm 0.02\) with measured intelligence. From this one can conclude that some evidence exists as to a slight relationship between intelligence and behavior traits. Substantial correlation obtained between intelligence and school retardation.

However, if an antithetical sorting of a population comparable to this is made, then one finds, as Page did, certain trends or patterns.

Specific differences between white children in his investigation reveal that the withdrawn boys are more likely than withdrawn girls to be mentally and socially immature. In addition when aggressive traits were sorted, and compared with intelligence quotients it was found that the aggressive traits of "Aggressiveness," "Disciplinary Problem," "Lying and Stealing," and "Temper Tantrums" all show a regular and progressive increase as one moves from the I.Q.'s in the seventies through the I.Q.'s in the nineties to the I.Q.'s in the hundred and tens. Some of the differences are statistically reliable even two adjacent groups, and taken altogether, the trends indicate that aggression is associated with the higher I.A.'s and withdrawal with the lower I.Q.'s.

Jenkins, however found one factor differing from the two studies previously mentioned. His population showed a considerable deviation at both ends of the intelligence scale, showing a bimodal curve of inhibition, 36\% of his children with I.Q.'s of over 120 overinhibited.

Hollingworth investigating personality traits as correlated to I.Q. came to the conclusion that individuals with scores deviating more than three \(\text{SE}\)'s below, and more than six \(\text{SE}\)'s above the mean become isolated. Those with over a six \(\text{SE}\) positive deviation, are isolated psychologically, those with a negative deviation of more than three, socially and psychologically. Individuals at both extremes feel this isolation. In addition the person with a high intelligence score notices the irrationality of and the errors made by authority. Consequently negativism results. Because of rapid maturation, they seem to be intolerant of the slower thought processes of others, and to compensate for this seek companions older than themselves. These children often show good adjustment; possibly because some compensating function, such as Cattell's moral trait, accompanies their intelligence.

Williams in a comprehensive survey of literature on intelligence and delinquency shows that recent studies have yielded from 10 - 30% mentally deficient, a central tendency of about 85 I.Q. and a reduced proportion of superior intelligence of from 3 - 12%. These results range below the general population, particularly at the upper levels. He further states that there is no direct causal relationship between delinquency and low I.Q. except perhaps in individual cases. Sampling from inferior groups show both a higher incidence of delinquency and low I.Q.

This skewness, the hypothesis of Hollingsworth as to the individuals of extreme I.Q. range, and Jenkins' findings of inhibition at both ends of the intelligence scale, seem to indicate, that although most authorities think that no substantial correlation of intelligence and behavior occur in the normal range of the probability curve, that possibly syndromes involving, at least certain kinds of intelligence exist at the extremes.
Considerably more information concerning the adjustment of children with high and low intelligence quotients is available than for the middle range. The individual with normal intelligence is more or less neglected with the exception of comparisons of neurotic, delinquent, and some behavior problem syndromes within the range.

Delinquency is essentially a form of aggression or socially disapproved behavior. Of children or adolescents showing a delinquent behavior several groups, apparently separable as clinical entities exist, the problem child with dull - normal to superior intelligence, and the mentally defective delinquent. Considerable experimental data have been gathered from this last group.

Rosensweig, used such a group of boys, to evolve his theory of intro-punitive, extrapunitive and impunitive frustration reactions. Foulds as elaborated previously, has demonstrated neurotic patterns, as coinciding with this classification.

Developed as a method of detecting predelinquents, or a means of segregation defective delinquents from mentally retarded children, several scales, or applications or existing intelligence tests are currently in use.

Since the group shows social inadequacy or according to Wechsler's (133) classification are "social and emotional or moral defectives", and as a result of their inadequacy, whether from constitutional or environmental causes, show their deficiencies in patterning on tests measuring in varying degrees certain abilities thought to measure intelligence, considerable accuracy is obtained in separating control groups from delinquents or mental defectives from delinquents.

Bijou and McCandless (134) have evolved a method of analysis of predelinquent boys. Performance quotients derived from the Grace Arthur Performance Scale (135) are used, in conjunction with the Terman Vocabulary, and the 1937 revision of the Stanford-Binet (these giving Vocabular Quotients and Intelligence Quotients).

454 boys were broken into three groups showing the following patterning:

<table>
<thead>
<tr>
<th>Percent</th>
<th>Mean VQ</th>
<th>Mean IQ</th>
<th>Mean FQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>13%</td>
<td>73</td>
<td>72</td>
</tr>
<tr>
<td>Group II</td>
<td>27%</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Group III</td>
<td>60%</td>
<td>68</td>
<td>67</td>
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</table>

Behavior efficiency is based on the FQ, verbal learning interference is derived directly from Binet Test scoring, functional intelligence below latent intelligence, is determined by comparing FQ's and VQ's, IQ being the indicator of functional level.
Characteristics of the group were:

I 1. Low behavior efficiency.
   2. Mild or no verbal learning interference.
   3. Functional intelligence below latent intelligence.

III 1. Adequate or good behavior efficiency.
   2. Marked verbal learning interference.
   3. Functional intelligence below latent intelligence.

II Either A

1. Adequate behavior efficiency.
2. Mild or no verbal learning interferences.
3. Functional intelligence equal to latent intelligence.

or B

1. Low behavior efficiency.
2. Marked verbal learning interference.
3. Functional intelligence lower than latent intelligence.

A PQ exceeding the VQ, indicated high behavior efficiency, accordingly 74% of the group with high PQ's were placed on probation and made considerably better adjustments than did those with low PQ's.

Porteus (136) using a recently evolved method of judging qualitative response on his maze, his Q score, claims that by judging errors, made in working his maze problems, he can segregate with high accuracy, delinquents, criminals, and socially maladjusted individuals from well adjusted children. His critical ratios for the population tested in the order given were, from 9.7 to 4.22, the lowest score resulting from maladjusted women workers.

Wright (37) working in California using the same technique, substantiated his results. Errors, indicative of carelessness and impetuousness showed that the delinquent has a tendency to carry out a simple task in an erratic, heedless, slipshod or nervous manner.

Armstrong and Heiser (138) demonstrated that both Negro and white delinquent boys showed deficiencies in arithmetic and reading, the colored group slightly lower in arithmetic and reading than the white group. Both groups were above average mechanically, the white children more than the colored boys. Sloan (f 24a) testing defective delinquents with the Wechsler-Bellvue intelligence scale, found that the patterning shown in the group tested, indicated differentiating the defective delinquent from the mentally retarded is possible. The pattern shown agrees considerably with that of the adolescent psychopath. Whitcomb (139) using the same test, came to the conclusion that adequate social adjustment could be predicted by the Wechsler-Bellvue patternings.

Lorge (140) analyzing the correlation between a number of personality inventories such as the Bernreuter Personality Inventory Scale (f 3a) found the total correlation between psychoneurotic tendency and intelligence quotient from .00 to .43, \( \frac{1}{2} \) gave correlation of .00 to .10, \( \frac{1}{6} \) from .10 to .16, and \( \frac{1}{6} \) from .16 to .43, so that of the best of this type of inventories only \( \frac{1}{6} \) of the correlations with intelligence show a slight relation. Projective techniques, and some inventories which involve verbal ability or knowledge, show because of this factor, higher correlation with intelligence.
R. McK Simmons (141) found a large amount of overlapping between dull and highly intelligent children, with the ease with which they change their minds under pressure. Again we have some indication that very superior and dull children may show some factor not found as extensively in the normal range; perhaps as Jenkins supposes, a form of inhibition. The child with super intelligence does show frequent maladjustments, again, though there seems to be considerable controversy in this area. Hollingworth (130, who some would criticize because of the size of her sample, states that the girl with the phenomenally high I.Q. is prone to develop a "morbid aggressiveness," unless she can adjust to the cultural concept of womanhood, control her competition and aggressiveness, and adjust her self respect and self determination.

Drayton (142) canvassing four hundred fifty-five schools, in three hundred communities, thirty six states, discovered nine hundred thirty pupils with intelligent quotients of from 125 to 145. Fifty were found with I.Q.'s exceeding 145, ten had I.Q.'s of 160 or more. His studies, to a considerable extent, showed that teachers rated some of these children with "super intelligence" as dull, cruel, destructive, domineering, and generally maladjusted.

Summary

Lurie, Levy and Rosenthal (143) in a study of the defective delinquent, say that mental defectives show marked inferiority feelings and that this is associated with withdrawal. They are mentally immature, and socially inadequate.

Hollingworth's study also indicates this fact, the negative pole of Cattell's intelligence factor also agrees with this syndrome. This, then would account for part at least of the syndrome since these boys were all in school, and the mean intelligence of the group as measured would not be too high. Further cognizance should be taken of the maturation difference between boys and girls.

Negro boys of the same age showed the same trait - with withdrawal associated with the chronological ages of six and seven.

With more maturity, these boys showed traits of aggressiveness. This conceivably could be due to environmental factors as well as growth.

However, in the factor sorting it was found with an increase in I.Q. an increase in aggressiveness occurred, with a corresponding decrease in withdrawal. Noticeable was that temper tantrums, truancy, and identical syndromes occurred.

The fact that certain factors show considerably greater numbers than others is observed in Page's data. Those factors with the highest critical ratios, and with the greatest proportion of the total studied population included, shall be isolated, and compared with material covered so far.

Disciplinary problem, included 8.4, 12.9, and 14% of the cases of I.Q.'s in the order 70, 90, and 110. Nervous, hyperactive, include 11.6, 11.7, and 17.7 percent of the cases, poor work habits 11.3, 18.5 and 18.5, while withdrawal traits embodying lacking self confidence show 12.1, 14.6, and 12.5 percent of the total cases in each. I.Q. classification, as listed above, and social immaturity is shown in 8.1, 5.2 and 2.2 percent of these cases.
From this it appears:

1. Disciplinary problems increase in number in the above mentioned I.Q. ranges.
2. Nervous and hyperactive behavior similarly increases.
3. Poor work habits increase from 11.3% to 18.5% in I.Q. ranges from 70 to 90, then remain at the same level.

In withdrawal:

1. Lacking self confidence increases from 12.1 to 14.6% between 70 and 90 I.Q. Between 90 and 110 I.Q.: it drops to 12.5%.
2. Social immaturity declines from 8.1, 5.2 to 2.2 percent of the population as I.Q.'s increase.

Critical ratios show that:

1. Disciplinary problems increase considerably between I.Q.'s of 70 and 90, some between I.Q.'s of 70 and 110, slightly between I.Q.'s of 90 and 110.
2. Nervous hyperactive behavior increases steadily at these levels.
3. Poor work habits are particularly evident at I.Q.'s between 70 and 90.
4. Lacking self confidence shows a decrease, slightly connected with I.Q. changes.
5. Social immaturity shows a progressive decrease as I.Q.'s increase.

This material, regarded as a whole, shows trends as outlined in the material mentioned in the Ackerson, Jenkins and Page studies.

Yet a qualification should be made. Regarded broadly, these traits do show increases or decrease with increase in I.Q. With I.Q. increases, however, all the factors which concern personality constellation and personal adjustment should be included.

To illustrate this point, one should mention that social immaturity is shown quite definitely as linked with reading disabilities, repeating grades and overage for grade, with critical ratios of 6.0, 3.2, and 4.3. The only child shows disciplinary problems and poor work habits, with critical ratios of 3.0 and 3.9.

This does not mean, that as such these traits are independent, but as stressed previously, that the personality constellation is made up of a large number of traits, combined in varying degrees, heredity and environment, interacting, so that various patterns are shown.

An analysis of the listed aggressive traits will show that one or many factors may be involved. Disciplinary problems involve a large number of socially undesirable actions, nervous hyperactive behavior depends upon many factors, constitutional as well as environmental.

This is well expressed by both Cattell and Chassell (144). Chassell surveying the field of intelligence as related to morality states that the correlation which one would expect to obtain between morality traits and intellect, may be expected to fall between .10 and .30 and believes that the true relation should be somewhat under .50.
He does believe, however, that if one uses a narrow trait sampling method that the correlation between intelligence and self control, unselfishness, reliability, industry, loyalty, and quite similar traits should be about .60.

Since most researches which have been done are of such a restricted range, the figure for the population as a whole, between morality traits and intellect should be considerably higher.

Cattell (145) states "The B factor presented difficulties in rotating for simple structure because it produced only a relatively faint and uncertain hyperplane: there were relatively few variables that it did not influence (only the D factor exceeded it in width of influence)."

Intelligence....loads "particularly character traits and notably good habits which may be consciously acquired. This factor correlates however about .30 with C, that of emotional stability and integration, and together with other factors they yield a second order factor which may be the genetic adhesion of intelligence and temperamental (emotional) stability produced by social stratification.

If Cattell's intelligence factor functions in a bipolar fashion, this would in part explain the data from Page's study. As the children increased in alertness and maturity, actions quite typically a revolt against environmental frustrations would result, particularly if they resulted from feelings involving the self. An environment, in which a person less mature might withdraw, would as intelligence increases tend to cause an increase in fighting back, or in conflict absolving behavior depending particularly upon the type of individual "socialization" and the circumstances. Noticeable also is that with increase in intelligence social immaturity decreased.

That the child, with "super intelligence" has a form of intelligence including "special talents" not measured in the Stanford Binet Intelligence Test or most tests of a verbal type, is recognized not only by Hollingworth, but by Wechsler. This then makes these children cases to be regarded from a slightly different point of view than the child with average or low intelligence.

It seems obvious, from material covering not only the very superior child, or the child with "super intelligence" but the mentally defective, and the average child as well, that varying degrees, and numerous kinds of social maladjustment, many including aggression or withdrawal, occur, correlated with intelligence in varying degrees, from relations as low as .0, in Ackerson's study to from .10 to .30 and even higher, if one is to regard Chassell's opinion as pertinent.

But most important, is that intelligence as such cannot be isolated, nor can behavior traits be completely separated from one another, but that all exist in a flux, changing from individual to individual, and from time to time as environmental and physical as well as psychological factors change.
Endocrine Disorders

Considerable study has been made of the effect of endocrine disorders on behavior, and these investigations have revealed much that is pertinent to withdrawal and aggression in children. Review of the literature in this area indicates that investigators have been in the main, concerned with the effects of pituitary and thyroid dysfunction on on behavior. Relatively few studies seem to be concerned with the malfunctioning of the other ductless glands as related to conduct deviations.

The results of most investigations of endocrine disorders tend to exhibit some associated behavior which may be either of an aggressive or withdrawn nature. The controversy seems to revolve around the dynamics of such behavior. Some authors claim that it is the glandular disorder itself which is the causative factor, whereas others claim that it is the individual's reaction to the concomitant physical abnormalities which creates the behavior problems.

Levy (146) in a study of thirty three boys from the Institute for Child Guidance analyzed the relation between aggressive-submissive behavior and the Fröhlich syndrome. All of the thirty three patients displayed definite signs of this hypopituitary condition. Of this number, twenty-six of the boys were easily characterized as submissive, two as displaying mixed behavior, and five as aggressive. Levy's criteria for submissive behavior were satisfied when shyness, withdrawing behavior, and fear of fighting were evidenced. Aggressive-ness was manifested by defiance of authority and attacks on others. By applications of these criteria the majority of the boys with Fröhlich's syndrome were found to be submissive in contrast to the prevailing aggression in 1000 children referred to the Institute.

In an effort to determine the source of this submissiveness, Levy studied a control group of male patients who were characterized by small genitalia and varying degrees of obesity, since these are the physical factors in the Fröhlich syndrome to which a psychological response would be most likely made. Fröhlich syndrome patients were excluded from this group. About sixty percent of these controls were found to manifest aggressive conduct. This evidence, Levy believes, precludes the possibility that submissive behavior represents an adaptation to certain physical features of the Fröhlich syndrome.

A study of the life histories of the thirty-three patients was made to determine whether early experience favored a submissive attitude. The social factors in the background of patients with the syndrome were not in significant contrast with the social factors for the group used as a check. Thus, it is concluded that the submissive behavior is partly determined by constitutional factors, especially the endocrine factors basic to the syndrome as a whole.

Another study by Mittleman (147) of sixteen cases of nonneoplastic type of Fröhlich syndrome with boys aged four to thirteen years, concludes that the psychopathologic findings were traceable partly to physiologic factors. The passive, submissive, overdependent behavior of some of these patients was attributed to the poverty of drive related to low basal metabolism. Mittleman claims that in some of these cases the types of psychic manifestations were represented by reactions of the total personality to circumscribed deficiencies of the body. These deficiencies prevented the subjects studied from playing efficiently with their playmates, and ridicule followed.
The patients' reactions to these narcissistic injuries were either one of withdrawal, exemplified by overdependence on the mother, a passive, submissive female adaptation, or one of hostility, characterized by an increase in sadism, disobedience, assaultiveness and tantrums.

This study concludes that "both types of reaction represent attempts at compensation for the narcissitic insults. Both types of reaction may be present in the same patient. The physiologic reactions mingle with the psychic reactions." (147, p. 206)

Brill (147) commenting on Mittleman's investigation, confirms the expression of conspicuous submissive or pugnacious behavior in persons exhibiting adiposogenital dystrophy.

Wolf (148) concurs that boys suffering from Fröhlich's syndrome, because of their feeling of genital inadequacy and appearance of femininity, and girls because of self-consciousness about their abnormal weight often grow extremely shy or seclusive. The tendency of these persons to withdraw further from social groups is exhibited by their unusual drowsiness and indulgence in daytime naps.

Ninety-seven inmates of the New Jersey State Home for Boys, all of whom displayed evidence of pituitary disturbances, were studied carefully to determine the relation of the disturbance to behavior problems. The subjects' ages ranged from 9 to 16 years. The offenses committed by these patients which caused their placement in this boys' home tended all to be in the direction of aggressive behavior, i.e. stealing, malicious mischief, unmanageableness, immorality, assault and battery. The accumulated data indicated a rather equal distribution of hypo- and hyper-pituitarism among the ninety-seven patients. It was concluded that the "boys with the pituitary dysfunctions were found to be unstable, immature, and suggestive. More personality deviations were found than in the control group." (149, p. 132)

Rowe (150) made an exceedingly thorough study of 650 patients who had been referred for physical diagnosis because of outward evidences suggesting endocrinopathy. All of these patients were less than seventeen years of age. As a result of a careful diagnostic study of each member of this group of 650 patients, a sub-division of the group based on primary etiology was made. Three hundred and seventy four of the cases showed an actual endocrine disorder of which 68 demonstrated an observable or case history behavior problem. Two hundred seventy-six patients displayed some disease condition, or organic derangement wholly unassociated with the ductless gland, of whom 36 indicated the existence of some behavior problem.

In a breakdown of the cases suffering from glandular disorder, as shown in the table below, it was discovered that pituitary cases clearly constituted a dominant majority of group, with thyroid disease appearing less than one third as frequently and gonad cases exhibiting a significantly small representation.
INCIDENCE OF BEHAVIOR PROBLEMS IN PATIENTS WITH ENDOCRINOPATHIES

<table>
<thead>
<tr>
<th>Endocrinopathy</th>
<th>Total</th>
<th>With Behavior Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Pituitary dysfunction</td>
<td>218</td>
<td>42</td>
</tr>
<tr>
<td>Hypofunction</td>
<td>61</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>279</td>
<td>53</td>
</tr>
<tr>
<td>Thyroid hyperfunction</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Dysfunction</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>Hypofunction</td>
<td>58</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>13</td>
</tr>
<tr>
<td>Gonad hypofunction</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Grand Total</td>
<td>374</td>
<td>68</td>
</tr>
</tbody>
</table>

The nature of the various types of behavior disorders revealed in the study show a preponderant tendency in the direction of aggressive behavior. Only asocial and morose behavior, as given in the table below, show a proclivity toward a withdrawn reaction. This may possibly be explained, in large part, by the fact that behavior problems in the patients would tend to be classified as such only where overt behavior of a kind destructive or reprehensible to society was observed or recorded.

CLASSIFICATION OF BEHAVIOR PROBLEMS

<table>
<thead>
<tr>
<th>Behavior Problems</th>
<th>Endocrine (68)</th>
<th>Non-endocrine (36)</th>
<th>Total (104)</th>
</tr>
</thead>
<tbody>
<tr>
<td>asocial</td>
<td>10%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>antisocial</td>
<td>12%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>morose</td>
<td>21%</td>
<td>22%</td>
<td>21%</td>
</tr>
<tr>
<td>bully</td>
<td>15%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>disobedient</td>
<td>24%</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>egocentric</td>
<td>7%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>vicious</td>
<td>3%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>thief</td>
<td>12%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>vagrant</td>
<td>2%</td>
<td>11%</td>
<td>5%</td>
</tr>
<tr>
<td>incendiary</td>
<td>6%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>sex delinquent</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>homicide</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Rowe, unwilling to ramble into the field of speculation, stays within the limits of his investigation findings by emphasizing that a causal relationship between the behavior problem and the demonstrated disease condition remains to be established. An associational relationship between the behavior and the disease is all that may at present be claimed. "All attempts to analyze these data for a causal relationship between personality defect and primary etiology have proven abortive." (150, p. 464)
A high percentage of neural involvement was apparent in the 104 cases with behavior problems since one-half of the endocrine and two-thirds of the non-endocrine moiety, a total of 61 per cent, gave evidence of some kind of injury to the central nervous system.

The endocrine group with behavior problems displayed a significant percentage of metabolic errors, with the 53 pituitary cases evidencing an average of 17 percent below normal, and 13 thyroid cases indicating an average of 23 percent below normal metabolism.

The inference which Rowe feels may be warrantable from this is "that agencies which affect metabolic levels, be it directly or indirectly, through hormone control of the endocrine glands or through the manifold intrinsic functions of the nervous system, through one or both, working independently or together, that such agencies may be associated with the mental status engendering a behavior problem." (150, p. 472) He adds, however, that it is equally clear that these agencies may exist without producing mental status. In other words, there must be soil fertile to their influence for the problem child to be produced.

Berman (151) points toward the aggressive behavior of what he terms "pituitary personalities" which in childhood produced the second and third offenders in the juvenile courts, the delinquents and pathological liars, the incorrigibles and the precocious hoboes.

Fewer studies seem to have been made pertaining to thyroid dysfunctions. This seems unusual in the light of rather substantial evidence that thyroid disorders are known to have a far-reaching effect on behavior and are referred to as determinants of mental activity. It is an established fact that thyroxin plays an important role in the control of the metabolism of the body, and in line with Rowe's conclusion that metabolic errors may well be factors involved in behavior problems, it would seem that effects of thyroid disorders on conduct should be studied with greater intensity. (28) Severe thyroid deficiencies which result in such extreme abnormalities of mind and body as cretinism will not be discussed here on the assumption that these persons are not adequately equipped to react to their environment in any normal fashion.

This diversity of investigation findings gives no consistent picture of the role that endocrine disorders may play in withdrawn and aggressive behavior. If the assumption that withdrawn or aggressive behavior may result from the reaction of the total personality to internal environmental dysfunctions and to the physical abnormalities that result from such disorders, then it seems logical to assume that endocrine disorders may be considered among the primary etiological factors in such behavior deviations.

Nutritional Disorders

Nutritional disorders, which in this discussion shall include abnormal variations on over- and under-weight, seem to possess a statistically substantiated relation to behavior problems indicative of both aggressive and withdrawn conduct. Emerson (156) comments that "undernutrition and mental stability cannot go together. Sooner or later the undernourished person becomes unstable, often resentful and destructive." Clinical literature has
frequently noted the association of neurotic symptoms and poor nutritional status (157, 158). The mal-nourished child is frequently backward, forgetful, unhappy, oversensitive and unreasonable in both his likes and dislikes. One may also see accompanying symptoms of overfatigue, irritability and dullness. (159) It is pointed out that a syndrome can be produced by nutritional deficiency. Bowman (160) cites the work of Jelliffe who produced a neuresthenic syndrome, characterized by such symptoms as lassitude, weakness and exhaustibility in four out of five experimental subjects by subjecting them to a thiamine-poor diet. Such factors might easily be components of a behavior pattern of withdrawal. Addition of thiamine to the diet of these subjects caused all the symptoms to disappear in three days.

One hundred and fifteen persons suffering from dietary deficiencies resulting in pellagra due to a thiamine lack, were found to display emotional disturbances exhibited in excess anger, hostility, and depression. (161) These patients found themselves unable to control rage produced by a slight stimulus.

Roberts (158) claims that one of the most striking and serious effects of malnutrition is shown in the nervous system. If the deficiency of food materials results in a lack of subcutaneous fat the nerves are unprotected. This infers that the threshold for response to stimuli is lowered, proposing a greater irritability. There are, says Roberts, two types of nervous deterioration which seem, in part, due to malnutrition. These are (1) the dull, listless, phlegmatic and the (2) hyper-irritable, excitable, over-energetic child.

Sylvester Davis (62) studied 41 children between the ages of one and fifteen years all of whom were described as hyperactive. The hyperactive behavior was defined in this study as hostile and antagonistic feelings toward persons and objects in the environment portraying itself in destructiveness. Twenty-nine of the subjects were characterized as aggressive while four were said to be definitely withdrawn. Blackman (22) continuing the investigation of hyper-active children, found no substantiation of the frequently expressed idea, that hyperactives are most often underweight. It was determined that 24 per cent of the hyperactives, as compared with 14 percent of non-hyperactives, were more than 10 percent overweight, and 15 percent of the hyperactives, as compared to six percent of the control, were more than 10 percent underweight. This finding suggests that hyperactive children are of two types -- unusually fat or unusually thin.

Ackerson's (51) findings are somewhat at variance with those of Blackman. In his study of 2113 white boys and 1181 white girls between their sixth and eighteenth birthdays, he found that underweight conditions (10 percent or more) appeared to be of negligible clinical importance, since it correlated less than .20 with behavior patterns.

Blanton (163), while on duty as a medical officer with the U. S. Army in Germany after the first World War, made a psychiatric and psychological study of 6500 German children who had been forced to subsist for three years on an inadequate diet. The ages of the children were between five and a half and fourteen years. The greater proportion of these children were of the hyper-irritable type. About 20 percent were of the dull, phlegmatic type. However, only 0.23 percent of the 6500 children displayed conduct disorders, which would indicate that his use of the term hyper-irritable did not infer aggressive behavior. Also, the juvenile court in the Trier showed no record of an increase in juvenile delinquency.
Mal-nourishment may result from anorexia nervosa. However, as Bakwin (164, p. 160) points out, "We know the origin of this complaint is psychological." This rejection of food is sometimes considered as a form of aggression against the parents, which indicates that the behavior problem precedes the organic disorder.

Hewitt and Jenkins (53) found no correlation between their categories of behavior deviations and malnutrition that fulfilled their statistical criterion of .30 as a minimal coefficient of reliability.

Page's study (36) which is discussed more fully in the appendix of this book, discovered some highly reliable relations between his category of "poor health and nutrition" and aggression and withdrawal reactions, as may be seen in the table below. His data showed that withdrawn children exhibit a statistically reliable difference in the direction of poor health and nutrition as opposed to the stable and aggressive group.

Poor health and nutrition were positively associated with withdrawal in white girls but the difference is a barely reliable one. In a quite small number of Negro boys and Negro girls withdrawal was also positively associated with these physical factors but again the difference did not meet the criterion of the study for reliability.

PHYSICAL AND HEALTH HISTORY (36, p. 36)

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>Aggressive-Withdrawn</th>
<th>Aggressive-Table</th>
<th>Stable-Withdrawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wh. Boys</td>
<td>-13.0</td>
<td>3.9</td>
<td>3.3</td>
</tr>
<tr>
<td>Wh. Girls</td>
<td>-11.5</td>
<td>6.8</td>
<td>1.7</td>
</tr>
<tr>
<td>N. Boys</td>
<td>-9.2</td>
<td>5.9</td>
<td>1.6</td>
</tr>
<tr>
<td>N. Girls</td>
<td>-22.8</td>
<td>11.7</td>
<td>2.0</td>
</tr>
</tbody>
</table>

There seems to be considerable unanimity of thought and research results which postulates the existence of some form of relationship between nutritional disorders and withdrawn and aggressive behavior.

Withdrawal reactions rather than aggressiveness seems to be the preponderant response of the individuals suffering nutritional deficiencies. It may well be that the nature of the nutritional disorder itself or the individual response of the personality gestalt to the disorder determines the direction that the disturbed behavior will take.

Auditory Defects

Though much research has been done with children handicapped by visual and auditory defects, it has concerned itself primarily with studies relating to the effects of these handicaps on general intelligence, problems and methods in teaching, and the place of these children in the educational system. Very few studies have been made to establish a personality peculiar to children
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handicapped by either partial or total blindness or deafness. Of the few research studies that have included personality traits, none have been able to offer reliable statistics in support of the hypothesis that the trait found is due to the physical disorder of the child. Such a hypothesis is, in fact, one that is disputed among writers and workers in the field. There are those who contend that the resulting personality may be attributed to the environment as a result of the disorder, rather than to the disorder itself. To contend that the physical disorder plays no part other than an instigator of an environment antagonistic to the development of a healthy personality would seem an extreme view; while the converse viewpoint, that the physical disorder is the sole causal factor, would occupy the other extreme position. The solution lies somewhere between these two views. To prove which is responsible for the behavior pattern, the disorder or the resulting environment, or to prove exactly to what extent each one plays a part is a difficult, if not an impossible, undertaking. The evidence found can offer no more than an associational relationship between the handicap on the one hand, and the personality on the other.

Page (36) found a very close relationship between their coded traits "withdrawn personality" and "lacking in self confidence." The findings of this study, however, offer no reliable statistics directly relating either aggression or withdrawal to auditory and visual handicaps. But the general term "physical inadequacy" was linked with withdrawal, at least in the typical case.

In an administration of the Roger's Test of Personality Adjustment to a group of deaf children, Brunschwig (165) found more social maladjustment in boys and less in girls, but his statistics were not reliable enough to support either of these contentions. His study did reveal, however, reliable indications that deaf boys daydream considerably. Habbe (166), in administration of personality inventories to deaf children, was also faced with results that were of little significance but did tend toward a slight indication of withdrawal.

Gregory (167), using parts of the Minnesota Interest Blank, the Rogers Test of Personality Adjustment, and the Woodworth-Cady Test of Emotional Stability, came to the conclusion that "the most characteristic difference between two groups of institutionalized children (one deaf group and one control group) was the tendency on the part of the deaf to withdraw from social participation and from accepting responsibilities. This tendency is shown in their desire to be younger and more dependent, and to isolate themselves from social pastimes."

Madden, Rabinovitch, and Wells all attribute lack of initiative and personality maladjustment to deaf children. Pintner classes them more neurotic, more introverted, and more submissive. The National Research Council summarizes the material for us, saying that there appears to be agreement that the deaf child is somewhat apathetic and listless as compared with the average child. It is true that deaf children at times show outbursts of uncontrolled motor energy and present a picture quite the opposite, but taken as a whole, the contrast with normal children is marked.
Visual Defects

In studies with blind children, Maxfield and Fjeld (168) administered the Vineland Social Maturity Scale, using the first 77 items of this test and including the years from zero to ten. The test was administered to 101 visually handicapped children ranging in age from nine months to six years and ten months. The validity of the scale was checked against case histories of seventeen visually handicapped preschool children for each of whom a series of social maturity recordings had been obtained. There were also behavior notes and records of physical conditions and emotional factors available on these seventeen. The results from this study indicate that these visually handicapped children, on the average, appeared more docile, less active, and displayed less initiative than seeing children of corresponding ages. These characteristics were found to be more striking in the blind than in the partially seeing.

The California State School for the Blind has also published its findings in "Psychometric and Personality Studies of Blind Children." (169) Using 105 subjects, they discovered definite fears in 96, or 91.5%, anxiety and worry in 91, or 86.7%, tendency to become discouraged in 92.4%, and considerable dreaming and phantasy. Of the phantasy, 80% was wish-fulfilling. Feelings of inferiority were also very evident. Among those exhibiting inferiority, they found eight over-compensated in many ways such as exaggeration, boldness, seeking limelight, etc. Contrasted to this were 48 who showed no compensation in any form. These 48 displayed intense self-consciousness in a crowd, fear of being conspicuous, fear of failure, and similar characteristics. Of the entire group in the study, criticism was met with extreme sensitiveness in all but 16. Practically no suspicion and very little malice was found. And, significant in the light of being quite opposed to anti-social aggression, disorderly habits were found in only four of the 105. In summary, the study revealed suggestibility, marked phantasy, a feeling of inferiority, many fear reactions, but practically no hatred or suspicion.

In the light of these studies, visual and auditory handicaps seem to result in a personality that tends toward withdrawal. Whether loss of sight or loss of hearing is the problem from a physical standpoint, it results in the same general frustrations and limitations to the individual child and brings about much the same environment; and the child reacts in fundamentally the same way to both handicaps. The limited activity in comparison to normal children, the dependence fostered by special schools and teachers, the added attention in the home, the limitations in recreation, and many other factors attending these handicaps lend themselves readily to the development of a withdrawn child.

The Crippled Child

There seems to be a dearth of material dealing with personality traits of crippled children, possibly due to the fact that there is a marked difference of opinion as to the existence of any so-called "crippled personality." What few studies have been carried on have, for the most part, failed to show conclusively either aggression or withdrawal to any greater extent than is found in any unselected group of children. In a study of crippled children, Kamerer (170) concludes that, "those with physical handicaps do not as a group seem to present any more or any different problems than any unselected group of children. There is no evidence that a 'crippled personality' inevitably results from physical defects."
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Gates (171), in a study of the opinions on the subjects of crippled children and the bases for them, sent a questionnaire to the director of each state department in charge of services to crippled children. In answer to the 44 questionnaires, 45.5% were of the opinion that social and emotional adjustment was a major problem in the education of crippled children. Twenty seven and three-tenths percent felt it did not offer any problem. The remainder did not reply or stated "no evidence." As to evidence, of the 44 only eight offered any evidence. Of the eight, three had published materials, four formed their conclusions from observations and case histories, and one did not reveal the source of evidence.

The results of the above study reveal what is generally true on the subject of the crippled child, that there is conflicting opinion and a real lack of any verified information. What little information exists shows no real difference in aggression and withdrawal between the crippled and "normal" child.

Neuropathological Factors

An extensive statistical study carried out at the Institute for Juvenile Research in Chicago presents material on 5,000 cases of brain-injury. A total of five behavioral syndromes were revealed which correspond with those described in a previous study by Jenkins and Ackerson (79). The entire picture is one of restlessness and aggressive behavior. The brain-injured child is found to have characteristically motor disinhibition, and as part of the same picture, hyperactivity and restlessness. (180)

The behavior disorders of the encephalitic child range from mild to severe. In a clinical study, from a total population of fifty-four cases, twenty displayed behavior that could be classified as aggressive. (181)

Mahler (186) finds three types of tic syndrome, of which two are of interest here. First, the tic syndrome resulting from a conflict between a vicariously used, and therefore, an overtaxed affective motility, and the claim for control; and second, the tic syndrome which seems to develop after the child has entered school and has made a fair adjustment. "Children of the first type are often characterized by an abundance of expressive motility, while the representatives of the second group are gravely inhibited in their involuntary expression so that it is sometimes very difficult to get them to talk or to initiate activity."

Out of thirty-three tic cases examined by Mahler (186), twenty-nine had an exceptional position in the family setting. Twelve were "only" children; seven were the "baby" (often of old parents); ten were the first living children (in six cases after habitual abortions, death of older siblings, and miscarriages).

It is believed that the tic syndrome is accompanied by "conspicuously tense (pant-up) behavior, with proneness to explosive tempers or erotic aggressive outbursts." (189, p. 433) Case histories are to be found which substantiate this above evidence (190) and outbursts and echolalia of profane and obscene language and words are often found.

In another study (188) the authors state that "Temper tantrums in sixty-three percent of our cases indicate that the clash between the child's active aggression and impulses to expand and the restrictive environment formerly essentially external, had started to become an internal conflict between active and passive tendencies." (p. 645)
The evidence from the above studies indicates that aggression or withdrawal may be associated with a lesion in the cerebral cortex, and there is also evidence to support the contention that behavior which one might suspect has its etiology in brain pathology is actually psychogenic.

Left-Handedness

As a part of the Page study (36) on aggression and withdrawal, the relation of handedness to these behavior patterns was investigated. The present author made a survey of the literature dealing with left-handedness, covering the Psychological Abstracts, 1927 through 1946 inclusive; the Child Development Abstracts, 1935 through 1945 inclusive, and many books and other periodicals from 1891 to the present date in an attempt to discover if Page's work supported any previous findings. Unfortunately, we found no studies which had investigated the relation of handedness to aggression and withdrawal. The fact that no other psychological study (as far as we could discover) has been made on this subject is very interesting as some rather amazing results were obtained from the Page study. The findings of the Page study will be shown in Table XX.

<table>
<thead>
<tr>
<th></th>
<th>Withdrawn</th>
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<th>Aggressive</th>
<th></th>
<th>Stable</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N.</td>
<td>Percent</td>
<td>S.D.%</td>
<td>N.</td>
<td>Percent</td>
<td>S.D.%</td>
</tr>
<tr>
<td>White Boys</td>
<td>19</td>
<td>10.3</td>
<td>2.2</td>
<td>36</td>
<td>8.6</td>
<td>1.4</td>
</tr>
<tr>
<td>White Girls</td>
<td>4</td>
<td>3.9</td>
<td>1.9</td>
<td>9</td>
<td>16.7</td>
<td>5.1</td>
</tr>
</tbody>
</table>

**DIFFERENCES:**

<table>
<thead>
<tr>
<th></th>
<th>Aggressive-Withdrawn</th>
<th></th>
<th>Aggressive-Stable</th>
<th></th>
<th>Stable-Withdrawn</th>
<th></th>
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</thead>
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<tr>
<td></td>
<td>Diff.</td>
<td>S.D.Diff.</td>
<td>C.R.</td>
<td>Diff.</td>
<td>S.D.Diff.</td>
<td>C.R.</td>
</tr>
<tr>
<td>White Boys</td>
<td>-1.7</td>
<td>2.6</td>
<td>0.7</td>
<td>-2.8</td>
<td>1.5</td>
<td>1.9</td>
</tr>
<tr>
<td>White Girls</td>
<td>12.8</td>
<td>5.4</td>
<td>2.4</td>
<td>7.7</td>
<td>5.2</td>
<td>1.5</td>
</tr>
</tbody>
</table>

With the numbers rounded for clarity, 4 percent of the withdrawn white girls were left-handed; 9 percent of the stable white girls were left-handed; and 17 percent of the aggressive white girls were left-handed. The withdrawals fell below the stables by 5 percent with a standard error of two, so the critical ratio of the difference is two and one-half. The withdrawals fell below the aggressives by 13 percent with a standard error of five, so the critical ratio of this difference is also about two and one-half. From this the conclusion can be drawn that among white girls of the population represented in this study, left-handedness is associated less with withdrawal than it is with either "stability" or aggressiveness.
"Of the withdrawn white girls, 96.1 percent were right-handed, and of the aggressive white girls, 83.3 percent were right-handed. Of the girls who were neither withdrawn nor aggressive, 91.0 percent were right-handed. The difference of the aggressive minus the withdrawn was -12.8, and the critical ratio of the difference was 2.4. The difference of the aggressive minus the stable was -7.7, with a critical ratio of 1.5, and the difference of the stable minus the withdrawn was -5.1 with a critical ratio of 2.4." Here we find that the factor of right-handedness in white girls is positively associated with withdrawal.

In comparing the left-handed white boys with the left-handed white girls, 10.3 percent of the boys were withdrawn whereas only 3.9 percent of the girls were withdrawn. This would seem to indicate that left-handedness in white boys is associated more with withdrawal than is left-handedness in white girls. Just the opposite is shown in connection with aggression. With the aggressive, the left-handed white boys were 8.6 percent and the left-handed white girls were 16.7 percent. Therefore left-handedness in white girls is associated more with aggression than is left-handedness in white boys.

Left-handedness in relation to aggression and withdrawal in Negro boys and Negro girls is apparently unrelated to either withdrawal or aggression. The withdrawn, aggressive, and stable were not reliably different in the percentage with left-handedness or right-handedness.

It is interesting to note that the apparent effect of left-handedness is to reverse the usual proportional occurrence of aggression and withdrawal in the two sexes, at least in the white race.

As only one study has been made on the subject of left-handedness in relation to aggression and withdrawal, this should prove to be a very fruitful topic of study for future research.

The Speech Defective

The child who is physically handicapped has long been considered a fertile field for the development of a wide range of personality and behavior maladjustments. In view of this fact, it would seem that the speech defective would be particularly apt to react in an unacceptable manner, since the presence of such a disturbance interferes with his chief means of social communication. That the speech defective child has many psychological and emotional conflicts is a well accepted fact, but we are not here concerned with the general personality and behavior deviations resulting from speech disorders, but rather are attempting to discover whether the child, handicapped in this particular area, reacts to his defect through the mechanisms of withdrawal or aggression.

In making the present study the term speech defect will be limited to disorders which are believed by most authorities to be psychogenic in origin, namely, stuttering and the articulatory disorders. This has been done because in cases involving an organic etiology such as cerebral palsy, cleft palate, defective hearing, or the aphasias, the speech involvement constitutes only one phase of the personality picture and, therefore, it would be impossible to determine whether the speech defect was the operative cause of the behavior pattern. No differentiation will be made between stuttering and stammering. Stuttering may be defined as "a disturbance, either tonic or clonic, of the function of speech characterized by the interference with the flow of speech. The tonic manifestations are in the nature of blocks: the clonic are marked by repetition of speech sounds. It rarely happens that the speech
disturbance presents itself in the pure form of tonic or clonic manifestations. However, the defect usually is either predominantly tonic or predominantly clonic, the former being more frequently observed, or at any rate more frequently brought to treatment, since it is a greater social handicap. The speech disturbance is often associated with involuntary movements of the face, shoulder, arm, and even the whole body. It may also be associated with respiratory and vasomotor disturbances." (172) The articulatory disorders include sound substitutions, omissions, oral inactivity, lisping, and baby talk.

As has been stated, it is generally agreed that the speech defective is not merely a speech case, but has many concomitant psychological problems as well. Baker states that, "as a group, they tend to have more psychological and emotional conflicts than any other type of physically handicapped, since speech is the chief avenue of social communication." (173) The child whose speech is seriously interfered with feels thwarted, embarrassed, and is soon made to realize that he is different from other children. Baker and Trehafgen (174) believe that these feelings increase with age until "he reaches adulthood with a deep-set belief in his inadequacy and inferiority. As a result he either loses his normal initiative and withdraws into himself or he develops mechanisms through which he becomes overly aggressive."

Van Riper (175) has advanced the theory that the speech defective will react to his disorder in one of the three following ways: 1) by aggressive behavior, 2) by withdrawal behavior, and 3) by an understanding but unemotional acceptance of his defect. The last he considers to be the desirable attitude since it is the only one of the three reactions which makes it possible to face the handicap with realism. The withdrawn or aggressive reaction is set up when the individual attempts to adjust to his defect by ignoring it.

According to this author, when the speech defect is so conspicuous that the individual is rejected by the group, he may demonstrate one of a number of withdrawal behavior patterns. In the first place he may isolate himself from others, he may not accept reality and will retreat into fantasy and daydreaming. Or he may overcompensate for his defect to such a degree that "the over-compensation itself may be evaluated as a weakness by the group." Another phase of this behavior may be a regression to a former level where he can find satisfaction in his former achievements and abilities.

Aggression in the speech defective may also manifest itself in various ways, such as projection, focusing undue attention on himself, through refusal to cooperate in any way, and through direct and overt attack. "Among the speech defectives the author has examined, the behavior problems which seemed due to a protest reaction against the group's penalty include: lying, enuresis, constipation, temper tantrums, stealing, arson, suicide, use of obscene language, cruelty to pets, truancy, fighting, destruction of property, disobedience, attempted suicide, sexual promiscuity, and feeding difficulties." (175)

While the agreement among authorities concerning the emotional and psychological maladjustments of the speech defective seems to be general, it is apparently not based on results obtained from any specific studies, but rather from personal observations and case histories. A review of the literature concerning this subject reveals that there has been very little research instituted to determine the extent or kind of personality maladjustment which may be found to exist as a result of speech disorders. Berry (176) states that "unfortunately, except in the case of stutterers, there is little
experimental evidence of any sort that touches on the possible influence of speech defects on personality, . . .". The majority of experiments which have been made have had college students as their subjects since the methods devised for measuring personality traits are more suited to adult age levels than to the child's level. No studies were found concerning the effect of the articulatory disorders on the personality, however, several experiments have been conducted with stuttering children as the subjects.

McDowell's study (177) represents the first attempt to determine the educational and emotional adjustment of the stuttering child. The sixty-one stutterers who were selected for the study were taken from the speech centers of seven schools in New York City. The equivalent group type of experimental procedure was used, with the control group being equated for chronological age, mental age, intelligence (as determined by the Stanford-Binet test), sex, language, and racial backgrounds. The stutterers and their controls were submitted to the following battery of tests:

1. Pintner-Patterson Shorter Performance Scale
2. Stanford Achievement Tests
3. Woodworth-Mathews Questionnaire
4. Woodworth-Cady Questionnaire
5. Kent-Rosanoff Free Association Test
6. Wood-Rowell Health and Growth Examination
7. Special pronunciation test of vowels and consonants devised by McDowell.
8. Scale for judging personality traits used by Terman in his study of exceptionally bright children.

The section of the study which concerns us here has to do with the emotional and social adjustment of the stutterers. In an attempt to determine this adjustment, three tests were used: (1) a combination of the Woodworth-Mathews and Woodworth-Cady questionnaires for identifying individuals with psychotic tendencies, (2) the Kent-Rosanoff Free Association test, and (3) a rating by teachers on the basis of the personality trait inventory used by Terman in his study of gifted children.

The results of the first two tests revealed no significant differences between the experimental and the control groups. In the third test, only one trait showed a difference which might be of statistical value. This one trait was "self confidence." McDowell (177) states: "Here the difference is .7482 and the S.D. of the difference is .2339, giving an experimental coefficient of 1.15 certainty. This finding is quite in accord with the popular opinion that stutterers are shy, timid, and lacking in self confidence." The use of the trait scale as a valid measurement in this instance is doubtful since it was impossible to eliminate the subjective element. The teachers who made the ratings were acquainted with the children and knew which ones stuttered. Many of these teachers were doubtless well aware of the "popular opinion" concerning stutterers and were perhaps influenced by this in their rating.

The final results of McDowell's work showed no significant differences in the emotional and educational adjustment of the stutterers, other than the one just cited. However, these findings cannot be considered conclusive for several reasons. Bender has criticized the study on a number of points, including the relatively small number of cases used, and the fact that varying
degrees of the stuttering disorder were demonstrated by the experimental group. He also feels that the value of testing children with personality questionnaires is doubtful and states further that lower reliability is reported for these tests when they are used in child studies. He particularly questions the use of the Kent-Rosanoff Free Association test with stutterers, since the response time is of fundamental importance in its administration. The testing techniques employed were not always adequate, McDowell (177) herself says: "The technique of testing is known to be at fault in certain instances and was probably at fault in certain others."

A study using an entirely different technique was conducted by Meltzer (178) who hoped to gain further insight into the personality differences of the stutterer as compared to the non-stutterer, through the administration of the Rorschach Ink Blot Test. Meltzer felt that a projective technique such as the Rorschach represented a more adequate means of investigating personality differences than the personality questionnaire type test used in previous experiments.

Stutterers who were receiving speech therapy at fifteen different speech centers were examined as possible subjects for the project. The experimental group consisted of fifty stutterers who were then carefully equated with fifty controls as to sex, age, grade, school, and intelligence. Data other than that supplied by the results of the Rorschach test included intelligence test results, school, family, and developmental histories, including speech histories.

The usual method of administering the Rorschach was used. Of the four categories used in the Rorschach, the one which is of interest here is the one designated as quality of response. It is in this particular area that significant differences between the stutterer and non-stutterer were found. The factors included in this category are those which "reveal insight into the emotional functioning of the individual examined." More specifically these factors are as follows: The M factors which are revealing of inner feeling, indicative of inner prompting to phantasy life, and either a withdrawal into self or a capacity for creative thinking. The C factors present an index of egocentricity, irritability, manic trend, affective lability, and impulsiveness. A study of the interdependence of the M and C factors gives insight into the introversion or extroversion (extroversion) of the subject. The F factor in itself is not important here, but combined with C it is indicative of absorption in the far away. The results with which we are concerned are reproduced in the table below.

<table>
<thead>
<tr>
<th></th>
<th>F(c)</th>
<th>S</th>
<th>1.24</th>
<th>0.89</th>
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<th>0.26</th>
<th>0.17</th>
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<tbody>
<tr>
<td></td>
<td>C</td>
<td>0.98</td>
<td>0.78</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>S</td>
<td>1.76</td>
<td>1.62</td>
<td>92.05</td>
<td>0.40</td>
<td>0.32</td>
<td>1.25</td>
<td>29.41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>1.36</td>
<td>1.55</td>
<td>113.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>1.54</td>
<td>1.20</td>
<td>77.92</td>
<td>0.18</td>
<td>0.27</td>
<td>0.67</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>1.36</td>
<td>1.47</td>
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</tr>
<tr>
<td></td>
<td>M:C</td>
<td>0.97</td>
<td>1.15</td>
<td>118.56</td>
<td></td>
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</table>
In interpreting the results of this category, Meltzer states that the stutterers, in comparison with the control group of non-stutterers, have less control over their emotional releases and demonstrate less voluntary control over their intellectual functioning. The non-stutterers also scored higher on the responses which were indicative of good social rapport and adjustment. The stutterers rated higher on the remaining responses in this grouping which, according to Meltzer, "is to say that the stuttering children have more of a tendency to withdraw, more irritability, egocentricity, manic trend, score higher in their productivity of both an introversive as well as extraverted nature, are more absorbed in the far-away, manifest more of tendency toward depression." (176) He further reports that there are children in the experimental group whose M responses are not only indicative of their creative ability, but also show a tendency to withdrawal and fantasy.

Although it could not be conclusively determined on the basis of this one study that stuttering children manifest a tendency toward withdrawal behavior, it does seem that the use of a projective technique for testing these children can be used advantageously. If additional studies of this type, using larger numbers of subjects could be made, statistical results of real worth might be found.

In Page's study (36) on aggression and withdrawal in children, speech disturbance was one of the factors investigated as a possible frustrating element which might result in aggressive or withdrawn behavior. A speech disturbance was interpreted as stuttering, stammering, and the articulatory disorders. Page's findings indicate that the presence of a speech disturbance is not a causal factor in either withdrawal or aggressive behavior in children. The results of the antithetical group sorting, do not reveal any data of statistical significance in regard to this particular factor. The summary concerning the isolated factor sorting states that there were no reliable trends with respect to aggression, there were some indications of freedom from withdrawal, and that there were no reliable trends with respect to any other trait which was used in the coding.

While this study has what might be considered a more adequate sampling, other factors tend to make the findings inconclusive. The principal objection lies in the fact that there was no actual diagnosis of speech defect, and the classification was based simply upon ordinary observation of the child.

An unpublished survey by Crandell was used in a further effort to determine whether a speech disturbance might result in withdrawn or aggressive behavior. Sixty case histories taken from the files of the Speech Clinic of the University of Illinois were examined for evidence of either type of behavior. The sixty cases used for this purpose were all stuttering or articulatory disorders and ranged in age from four to twelve years. The material which contained any significance for this study was found mainly in the progress reports which were written by the student clinicians in the Speech Clinic. Of the sixty cases examined none showed evidence of aggressive behavior and only one could definitely be said to exhibit withdrawn behavior. One other case, a male stutterer age seven, avoided speech situations and spoke chiefly in monosyllables, but did not show avoidance or withdrawal in any other area. The one case found to be withdrawn was a twelve year old girl with a diagnosis of indistinct articulation and faulty rhythm. The case history reports her as a severe case of inferiority complex, no interest in anything, very nervous, fearful,
with strong feelings of insecurity. She dislikes and distrusts people and complains of the treatment she receives, but cannot think of anything specific when asked. No other case histories reported findings of a similar nature.

From a study of the experiments which have been made, it has not been possible to determine whether the presence of a speech defect will result in withdrawn or aggressive behavior in children. In the first place, sufficient studies on this subject have not been made. Secondly, those studies which do exist do not present data of a statistically significant or conclusive nature. Three of the experiments do not contain adequate samplings, while the one which does have a more significant number of cases is partially invalidated due to previously discussed factors. That there is a great lack of experimental evidence concerning the personality traits of the speech defective child is obvious. Since the majority of authorities believe that the child handicapped by a speech disorder is maladjusted psychologically or emotionally, it would seem that additional and more adequate research should be instituted to determine both the extent and type of maladjustment which exists in these cases.

Body Type

Many investigators have probed into the problem of determining what relationships exist between certain manifestations of the physique and a particular temperament. In spite of the failures of many of them, there has persisted the idea of a fundamental connection between physique and temperament.

Kretschmer (192), after making observations on psychotic patients formulated his theory of constitutional types. He also found a great proportion of leptosomes among the schizophrenics, and pyknics among the manic depressives. Werthheimer and Hesketh (193) in America, corroborated Kretschmer's findings. Later studies by Garvey (194) and Burchard (195), where the age factor was controlled, gave similar results but the differences were not large enough to be significant.

Mohr and Gundlach (196) in a study conducted on a group of male convicts in the Illinois State Prison obtained striking differences between body type groups that were typed according to Kretschmer's technique. Each subject was given the Army Alpha along with other simple psychological tests. Such tests were included as speed of tapping and of writing, visual reaction time, cancellation, substitution, color fusion, Rorschach ink blots, etc. The Alpha and the Information test showed the most striking differences between groups. The slender individuals tended to obtain the higher scores. The social data of the study showed that a marked preponderance of the crimes committed by the athletic and aesthetic groups are crimes against property. While this was true also of the pyknik group, the proportion of crimes against the person (assault and sex offenses) is much greater. These latter crimes are generally considered characteristics of a low grade of intelligence.

Rees and Eysenck (197) concluded that their leptomorphs (Sheldon's ectomorphs) showed a marked tendency towards the affective group of symptoms, i.e., anxiety, depression, and obsession, while their eurymorphs (Sheldon's endomorphs) show a marked tendency towards the hysterical group of symptoms.
In 1944, Fiske (198) with the aid of Sheldon somatotyped a group of private school boys but failed to get any significant findings and concluded that even with Sheldon's improved procedure for classifying physique there still remained the same paucity of significant relationships to physique that has been found in some of the earlier studies. This failure may be due to lack of valid and reliable psychological or behavioral tests. This latter conclusion is drawn because in Sheldon's work (199) the correlations for different temperaments with the different components were quite high.

Cabot (200) in 1938 reported a study conducted on school children; however, the total number of subjects was almost too small to be significant. His results on the whole were considered negative and this could easily be due to the lack of sufficient number of subjects. His total number was 62, divided into Kretschmer's types as follows: 9 pyknics; 28 leptosomes; 25 athletics.

In spite of the lack of more positive results some of his conclusions are as follows:

"Athletosome are significantly more ascendant than either the pyknosome or leptosomes."

"The athletosome in relation to the average leptosome is more ascendant, extroverted, responsible, influential and a better social leader."

"Compared with the pyknosome the athletosome is more ascendant, creative and imaginative, and less socially introverted."

Another study conducted on school children, mentioned by Cabot (200) was that of Krausky (201) reported in Germany in 1927. This study was on 100 male children whose ages ranged from eight to fifteen. Of the total group, Krausky was able to diagnose 29 as pyknics, 23 as asthenics and 43 belonging to a mixed group. He concluded his observations with some very definite statements which included a verification of Kretschmer's classification of people into physical and temperamental types. He also added that,

"The explication of the fundamental types of physique among school children has greater significance for both teaching and medicine. As the teacher and doctor may know, the individual child can be treated according to whatever constitutional group the characteristic traits of temperament he belongs."

He divided them into two classes:

1. Those who were active, energetic, and expansive, and who strove to dominate others in work and play.

2. Those who were weak and passive and who had a marked capacity for phantasy or autism.

He was able to correlate a clearly described cyclothymic temperament with the pyknik constitution and an equally clear schizothymic pattern in the case of the leptosome. Among other characteristics the pyknics had a tendency to dominate others and were lively in their expansive moods.
Aggression, according to Alexander, may be studied by observing more closely criminality and delinquency. Sheldon (199) in quoting Dr. Franz Alexander of the Chicago Institute for Psychoanalysis, calls our attention to a phrase for what seems to Alexander to be the dominant type of American criminal. He calls him the type who is "tough on the outside, soft on the inside." Sheldon (199) also reports that their preliminary studies, carried on chiefly in juvenile courts and institutions in the Chicago area, indicated a distinctly higher gynandromorphy (a secondary component of Sheldon's that indicates the bisexual ratio), as well as other dysplasia, in delinquent boys than in nondelinquent boys of the same age.

A digest of a hypothesis by Sheldon (199) is as follows:

Delinquents frequently display a type of behavior which indicates the trait that Dr. Alexander has indicated above. The youths displaying this trait often have a feminine element and a gynandromorphic dysplasia accompanied at the behavioral level by an abnormal dependence upon affection and security and upon emotional support from without. Those individuals who are strong and masculine receive much more social approval than the others. The gynandromorphic (bisexual) boy has a strong need for affection and approval but it sometimes proves to be a source of frustration. A man may either prove his strength or acquire approval through various channels of sublimation. The boy, on the other hand, sees no way except through feats of spectacular daring and heroism. His soft, feminine element however blocks his masculine fulfillment. The feminine aspect may not be pronounced but Sheldon indicates that one can usually find it detectable somewhere.

CONCLUSIONS

The evidence given thus far has not been directly connected with aggression and withdrawal but certain synonyms, such as ascendance, have been used which may infer aggression. Withdrawal likewise has been inferred by the use of synonyms.

Exact evidence of relationship between body type and aggression and withdrawal, as such, does not seem to exist. Perhaps information to help the clinician in studying body type as an auxiliary aid in withdrawal and aggression cases can be derived from such evidence that has been presented.

The discussion of physical factors discussed above indicates rather clearly that no unquestionable proof has been established as to the relationship between these factors and withdrawn and aggressive behavior. That organic dysfunctions are causative factors in some instances of behavior still remains to be proven. As has been repeatedly stated throughout this chapter, an associated relationship between the physical factors and the behavior is all that may be claimed at present.

This chapter has been restricted to a discussion of what was felt to be the major physical disorders that might underlie conduct deviation. However, one must be aware that other organic problems not considered here may well possess pertinence to behavior adjustments.
BUREAU OF CHILD STUDY INVESTIGATION

Abstracted From

R. M. Page, "Aggression and Withdrawal in Relation to Possible Frustrating Factors in the Lives of Children"

A detailed analysis of educational, mental, personality, health and social factors is recorded on a single Hollerith tabulating card for every child examined by the Bureau. Aggressive and withdrawn behavior are two of the many items which may be recorded by the Bureau psychologist making the examination. After the data were obtained and coded on the Hollerith card, the cards were then sorted by the electrical counting and sorting machine for all the cases which were coded "aggressive" or "withdrawn." Then any factors in the lives of children which might be associated with these two behavior manifestations were sorted out from the cards comprising the original sortings. For purposes of comparison a control group was also drawn out which had not been coded either "aggressive" or "withdrawn." This control is referred to in later discussion as the "stable" group.

The sorting which comprised the bulk of this study was called the "antithetical-group sorting." The population for this portion of the study was aggressive and withdrawn groups drawn from a pool of more than twenty thousand cases examined by the Bureau of Child Study in the years 1937-1940. (Only half of the 1937 and the 1940 cases were used.) As only two to four percent of the cards were coded for either aggression or withdrawal, the residual groups would have been too unwieldy to use for purposes of comparison, so the so-called "stable" groups were taken from the 1939 cases alone. Cases with intelligence quotients below fifty were not used. The aggressive, withdrawn, and stable groups were further broken down into white boys and girls, and Negro boys and girls as indicated below.

NUMBER OF CASES IN THE ANTITHETICAL-GROUP SORTING

<table>
<thead>
<tr>
<th></th>
<th>WITHDRAWN</th>
<th>AGGRESSIVE</th>
<th>STABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Boys</td>
<td>N-185</td>
<td>White Boys</td>
<td>N-418</td>
</tr>
<tr>
<td>White Girls</td>
<td>N-103</td>
<td>White Girls</td>
<td>N-54</td>
</tr>
<tr>
<td>Negro Boys</td>
<td>N-48</td>
<td>Negro Boys</td>
<td>N-133</td>
</tr>
<tr>
<td>Negro Girls</td>
<td>N-17</td>
<td>Negro Girls</td>
<td>N-45</td>
</tr>
</tbody>
</table>

White Boys     | N-3162    |
White Girls    | N-1315    |
Negro Boys     | N-621     |
Negro Girls    | N-262     |

Since it was not the purpose of this study to determine the true extent of any certain factor but merely its relative magnitude among the various groups compared, the following method of statistical analysis was used. The various proportions found in the tabulations were expressed as percents and the standard error of each percent was determined by the formula

\[ \sigma_p = \sqrt{\frac{pq}{N}} \]

\( p = \) percentage of times event occurs
\( q = 1-p \)
\( N = \) number of cases)
Differences between percents were obtained wherever relationships were to be determined and the standard errors of the differences were computed according to the usual formula.

Comparisons using the above technique were made between the various aggressive and withdrawn groups, (sex and race always held constant) the aggressive and stable groups, and the stable and withdrawn groups. A hypothetical example might clarify this method.

Let us assume fifty percent of the aggressive white boys are from broken homes, thirty-five percent of the withdrawn white boys are from broken homes, and forty percent of the stable white boys are from broken homes. Let us also assume that the standard error of the differences in each case is five (this would never occur in actual practice). Then the difference between the aggressive and the withdrawn groups is fifty percent minus thirty-five percent, or fifteen percent in the direction of aggression. Our standard error of the difference is five so in this case we have a critical ratio of 3.0. There is a ten percent difference in the direction of aggression when comparing the aggressive and stable groups. In this case we have a critical ratio of 2.0. There is a five percent difference in the direction of "stableness" when comparing the stable and withdrawn groups. This gives us a critical ratio of only 1.0.

The results from this study were considered positive if they were supported by a minimum critical ratio of 2.0 in two of the three differences. That is, one group must show such a difference when compared individually to the other two groups as to be supported by a critical ratio of 2.0 in each of two directions. This means that instead of one control group there are actually two. In the above example, the aggressive boys from broken homes exceeded both the withdrawn and stable boys from broken homes and the differences in each case is supported by a critical ratio of 2.0 or better. We could therefore conclude from the hypothetical example that aggressive boys are more likely to come from broken homes. If the difference between the aggressive and stable groups had been supported by a critical ratio of only 1.4, the criterion of reliability would not have been met and the results would have been considered unreliable.

The second part of this study consisted of "isolated-factor sortings." Three thousand three hundred and twenty-seven white boys who had been examined by the Bureau in 1939 formed the primary pool from which cases were drawn for the sortings. This technique involved the sifting out of a control group composed of children free from handicapping factors in a given area such as the health area, and then comparing groups of children with just one of the various factors in that area, as "Unfavorable Health History," to the control group. The same statistical method was used in analyzing these data as was described for the antithetical-group sorting.
BUREAU OF CHILD STUDY
ROLL-ERITH-CODE DEFINITIONS

Nationality -- Nationality is coded on the basis of any reasonable evidence, and refers to parental descent, whether recent or not. Two or more nationalities may be coded.

Jewish -- Purely Jewish children are not coded for other nationalities, regardless of birthplace of parents.

Left-Handed -- Includes ambidextrous.

Reading Disability -- In general, if ratio of reading achievement to mental age grade expectancy is .60 or lower, particularly if reading falls below other achievements.

Repeated Grade -- Repetition of one semester or more.

Skipped Grade -- One semester or more.

Unsuitable Placement -- Coded if discrepancy between mental age grade expectancy and actual grade placement is one year or more, unless use of individual materials has eliminated this gap.

Interrupted Attendance -- Average absence, three weeks or more per semester. Does not include truancy or excusal by the Bureau of Child Study.

Varied School Experience -- Two or more schools within first three years; three or more within four to eight years.

Late Entrance -- Entered 1B grade at the age of 6-10 or more.

Half-Day Sessions -- Attending school half days only, now or earlier.

After-School Activities -- Any kind of extra schooling, work, or other activities, whether they seem to be affecting the child or not.

Defective Vision -- Farsightedness, 20/10 in one or both eyes, or nearsightedness, 20/50 in one or both eyes, or other evidence of disturbed vision or eye strain. Included corrected eye conditions, even if adequate.

Defective Hearing -- Whispered-voice test. Does not include ear conditions if hearing is not affected.

Defective Teeth -- Caries, deformed teeth, wearing braces on teeth.

Poor Work Habits -- Listlessness, inability to concentrate, lack of interest, lack of attention, etc. Teacher's report is supplementary to observations of the psychologist.

Emotional Instability -- Diagnosis by psychiatrist principally; not a general descriptive term.
Speech Disturbance - Stuttering, stammering, defects of articulation.

Social Immaturity -- Babyish beyond expectation for chronological age and mental age.

Lacks Self-Confidence -- Includes timidity, shyness.

Lying, stealing -- All varieties of dishonesty. School reports accepted after reasonable checking.

Sex Irregularity -- Masturbation, exhibitionism, exaggerated sex interest, obscenity, other abnormal sex tendencies. School reports accepted after investigation.

Enuresis -- Bed wetting, clothes wetting, bowel incontinence.

Adolescent Maladjustments -- This is a diagnosis. May include items marked elsewhere as well. Gang tendencies, serious disobedience, rebelliousness, stubbornness, included.

Nervous, Hyperactive -- Judged by psychologist; not mere statement of teacher.

Attention-Getting Devices -- This is a diagnosis. Some items marked elsewhere may be included.

Discipline problem in Class -- If not already listed elsewhere.

Aggressive Antisocial Behavior -- (The "Aggressive" group in this study) Fighting, bullying, malicious mischief, inability to get along with other children.

Withdrawn, Unsocial Nature -- (The "Withdrawn" group in this study) Withdrawn, makes no friends.

Poverty -- Social data supplemented by observation of child's physical condition. Family not considered poverty-stricken merely because on relief or in poor district.

On Relief -- Includes family supported by social agency, but not WPA.

Foreign Language -- Foreign language spoken in the home, whether child understands it or not.

Crowded Home -- In general, if there are more than two persons per room, excluding the kitchen.

Unwise Parental Direction -- Uncooperative with school, inadequacies of discipline, overprotective, quarrelsome nature or temper display in the home, inharmonious family relationships, no adult care for child, refusal to provide proper care.

Inadequate Parent -- Drunken, drug addict, insane, feeble-minded, extremely ignorant, invalid, criminal.

Broken Home -- Any deviation from pattern of child living at home with his true father and mother.
Sibling Rivalry -- Definite evidence of jealousy or rivalry between children in the family, whether true siblings or not. Also rivalry encouraged by parents or teachers through frequent comparison.

Overage for Grade -- One year or more discrepancy between actual grade placement and grade expectancy from chronological age, using ideal scale.

Only Sib of Opposite Sex -- Even when there are only two children in the family.

Only Child Among Adults -- Including the case of child and mother living alone.

Parent or Sib Retarded -- Coded only on actual evidence.

Foster or Boarding Home -- Includes orphanage. Not adoptive or in home of sibling, aunt, or other close relative.
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