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THE EFFECT OF ENVIRONMENT ON THE MENTALLY RETARDED CHILD

A Special Study

Presented to

Dr. Weldon Vogt

Ouachita Baptist University

In Complete Fulfillment
of the Requirements for the Course
Special Studies in Psychology

by

Patricia L. Greene

January 1970

The Effect of Environment on the Mentally Retarded Child

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Introduction

Mental retardation is one of the most challenging problems of childhood. It affects not only the child but also the parents, siblings, and the community. The retarded child needs the help of the physician, the psychologist, the social worker, the teacher, and even the lawmakers.

The question of mental retardation, fortunately, is now being brought into the open. The child who is mentally retarded is no longer kept behind closed windows and locked doors. Mental retardation, formerly, looked upon as a stigma, is now considered a disease, like tuberculosis, diabetes, and heart trouble.

Mental retardation has been designated by various terms and defined in many ways. Reduced to its simplest form, however, mental retardation stands for a subnormal intelligence and a reduced capacity for learning. There are so many degrees and types of mental retardation that there is no single definition that all of them cannot be included.

For deeper insight into the problem of mental retardation, the problem is first defined and classified. Several definitions are provided from various sources for a listing of their common elements and differentials.

Various investigators have indicated general community and family characteristics that are correlated with intellectual functioning. They have cited low socioeconomic status, disorganized family life, isolation, a crowded home, and lack of stimulation as factors in inadequate functioning. When these investigators have found mental retardation among persons living in conditions such as those listed, they have labeled these people as having suffered from cultural deprivation, social or cultural disadvantage,

exogenous mental retardation, or environmental-psychological deprivation. This study describes the relationship between cultural characteristics and mental retardation.

The scope of this study extends from the definition of the problem to the point in the life of the child when he is first influenced by his environment. This period is limited to the early age of the retarded child from birth to pre-school age. Information is restricted to the home environment of the child with reactions of parents to the child.

Illustrations, in the form of case studies, in addition to printed information are provided for clarity in presenting the study, also for aid in relating the facts from the writer to the reader.

Mental Retardation Defined

The American Association on Mental Deficiency proposes the following definition of mental retardation:

Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior (Heber, 1961).

A more recently proposed modification of the official definition (Kidd, 1964) reads:

Mental retardation refers to significantly sub-average intellectual functioning which manifests itself during the developmental period and is characterized by inadequacy in adaptive behavior.

The definitions are quite different from the older ones. Coll, in a widely quoted statement, indicated six criteria as essential to an adequate definition of mental deficiency: Social incompetence, due to mental subnormality, resulting from developmental arrest, which obtains at maturity, is of constitutional origin, and is essentially incurable.¹

The term mental retardation incorporates all of the meanings that have been ascribed historically to such concepts as amentia, feeble-mindedness, mental deficiency, mental subnormality, idiocy, imbecility, and moronity. Choice of the term mental retardation was predicated on the basis that it appears at present to be the most preferred term among professional personnel of all disciplines concerned. Though the separate words mental and retardation both have meanings not always consonant with those of their present context, it is felt that the combined term mental retardation, will prove adequate if all personnel will consistently utilize this term according to the criteria set forth.²

The definition specifies that the subaverage intellectual functioning must be reflected by impairment in one or more of the following aspects of adaptive behavior: (1) maturation, (2) learning and (3) social adjustment.

These three aspects of adaptation assume different importance as qualifying conditions of mental retardation for different age groups.

Rate of maturation refers to the rate of sequential development of self-help skills of infancy and early childhood such as sitting, crawling, standing, walking, talking, habit training, and interaction with age peers. In the first few years of life adaptive behavior is assessed almost completely in terms of these and other manifestations of sensory-motor development. Consequently, delay in acquisition of early developmental skills is of prime importance as a criterion of mental retardation during the pre-school years.

Learning ability refers to the facility with which knowledge is acquired as a function of experience. Learning difficulties are usually most manifest in the academic situation and if mild in degree may not even become apparent until the child enters school. Impaired learning ability is, therefore, particularly important as a qualifying condition of mental retardation during the school years.

Social adjustment is particularly important as a qualifying condition of mental retardation at the adult level where it is assessed in terms of the degree to which the individual is able to maintain himself independently in the community and in gainful employment as well as by his ability to meet and conform to other personal and social responsibilities and standards set by the community. During the preschool and school-age years social adjustment is reflected, in large measure, in the level and manner in which the child relates to parents, other adults, and age peers.³

Problem: The Discovery of Mental Retardation

Discovery at Birth

The end of pregnancy is a strain in all families. The increasing discomfort of the mother and anticipation of an addition to the family present

many problems. The actual process of terminating pregnancy is a serious medical matter and raises anxieties of a special sort. Apart from the intrinsic unpleasantness of delivery, a complex of fears and superstitions exists which can only be allayed by a completed and successful delivery.

The expectations which people hold for newborn children include a faulty conception of normality. Generally speaking, parents assume that a normal child is a perfect one. Such standards do not apply to themselves at the time; for example, most people are aware of some infirmities but do not consider themselves "un-normal." Few of us are wholly sound in mind and limb. Yet we expect perfection in babies. This expectation that babies are usually born without disorders is not supported by the facts. But the expectation persists, and anything less than perfection shocks and frightens the parents.

The identification of mental retardation at birth comes at a time when parents are vulnerable physically and psychologically. Since mental retardation is usually inferred from severe physical disorders, the combination of symptoms and parent vulnerability creates havoc.

There are several ways in which parents may learn of the tragedy. The most helpful way is through a family physician who knows the couple and can break the news to them gently. Such a method of discovery in no way lessens the ultimate damage to parents, but it is the least overwhelming method under an almost impossible set of circumstances. Occasionally no mention of the subject is made, and the mother discovers for herself the nature of her child's disorders. Since parents expect normality, the result is catastrophic. In one such case the mother simply fled from a hospital, never to return.

A group of Scottish mothers of mongoloid children have provided information on the process of early identification and its consequences.

Drillien and Wilkinson asked seventy-one mothers to recall the occasions on which they learned of their children's status and to reflect on their attitudes and subsequent reactions. The better reactions were associated with comparatively early disclosure together with support in the ensuing months and years. Resentfulness and current dissatisfaction were more commonly associated with a pattern of evasion or denial by physicians. A number of mothers said they could have been spared " . . . months of uncertainty and unexpressed fears" by earlier disclosure of the problem. Keeping in mind the visible symptoms of mongolism will be helpful in relating these findings to the total problem of early diagnosis and counselling.⁴

Discovery in the Pre-School Years

Mental retardation is not always gross, nor are mentally retarded children necessarily any different in appearance from other youngsters. As a result, mental retardation may often go undetected for some time, emerging several years after the birth of the child. The discovery by the parents may be less sudden, less overwhelming, than discovery at birth, but its long-range effects may be just as profound.

In recent years most parents have acquired a smattering of knowledge about child development. Apart from this, people usually make comparisons using other people's children as standards. Thus, parents may discover that their child does not reach the developmental stages of growth attained by other children. Sitting may come slowly, language may be slow to emerge, or the youngster may appear dull and unresponsive. Setting aside the tyranny of child-growth norms so often misused by parents, there are cases where children do not grow at the proper rate. This delayed maturation is recognized by parents, and suspicions of retardation slowly develop.

Parents should test these suspicions by taking slow maturing youngsters to competent sources of help. A pediatrician may give insightful advice based on serious evaluation. The probabilities of this have increased in recent years as physicians have become more aware of the scope of the problem. This increased sensitivity is largely the result of parental willingness to discuss mental retardation. Apart from a degree of disinterest in the condition, physicians traditionally have not had the opportunity to consider mentally retarded children, largely because they were not asked to. Today the best single source of information and guidance is probably the general practitioner.

Other sources of help are the child-study clinics which have diagnostic, counselling, and training functions. The availability of these multidisciplinary units, which are designed to deal with all the problems of the family with a retarded child, is not great. On the other hand, such is the impact of having a young child suspected of mental that parents often do not use clinical facilities when available. Such parents do not wish validation or rejection of their suspicions; they feel suspended judgment is preferable to confirmation of their fears. The same understandable aversion to an unpleasant reality can take a very different form when parents visit many clinics hoping to hear what they want to hear. In the absence of interagency pools for exchanging records and information, it is possible for several agencies in a metropolitan area to see the same set of parents and child in sequence, apart from innumerable visits to pediatricians and even chiropractors.

In an interesting and informative study Caldwell, Manley, and Seelye analyzed the reactions of parents to the series of a diagnostic clinic attached to a medical school. The majority of eighty-eight sets of parents clearly found the services of the clinic helpful, while about twenty parents were dissatisfied. The investigators formulated their subsequent analysis

in such a way that the administrative and family-centered bases of reaction could be analyzed. The administrative variables generally did not distinguish satisfied from dissatisfied families; the exception was a more positive reaction from parents who made more visits to the clinic. A highly significant family variable, one beyond rectification by a change in procedures, emerged. Dissatisfied parents generally had children with a greater degree of retardation. The investigators could not explain this finding, but its existence was well beyond chance expectations and indicates a need for greater care in assisting parents of seriously retarded children. ⁵

The Family

Personal Reactions to the Retarded Child

The tragedy of mental retardation strikes the parents much harder than it does the child. In fact, the more retarded the child, the less he realizes his condition. More often than not, he is blissfully unaware of the cloud under which he is living or the suffering he has innocently inflicted on his family.

Parents go through many reactions in the rearing of a retarded child and in their struggle with their misfortune. Confusion, shock, guilt, bitterness, envy__parents have felt them all at one time or another as they have grappled with their problems.

Confusion. Although parents often suspect that something is wrong with their child and even have tangible proof of the fact, many of them are afraid to face the truth. Like people in the early stages of cancer, they fear reality, and because of their fear they put off seeing the doctor as long as they can. Instead of meeting the situation they go through a lot of wishful thinking:

"It can't be! I'm sure he'll outgrow it. He's just a little slow, that's all."

They are in a state of indecision, bewilderment, confusion.

Shock. A time comes, however, when parents can no longer blind themselves. Then they decide to see a physician. They consult the physician because they feel that something is radically wrong with their child's mental make-up. Yet, when they hear the verdict from the doctor, they are terribly shocked. Although the doctor's diagnosis merely confirms a suspicion they themselves have had for a long time, they just "can't take it."

It is an ordeal that parents go through when they are told their child is mentally retarded, for it is an ordeal just to have to break the tragic news to them. No matter how tactfully, no matter how gently the situation is explained, it is worse than a death knell to many parents. Some never recover from the shock; others go about dazed for weeks and months, unable to make peace with their tragic situation or resign themselves to it.

Refusal to Accept Verdict. The reactions of parents following the shock depends upon their physical and mental make-up and their general outlook on life.

Parents of mentally retarded children, like all individuals, differ in temperament. Some are so tense that one cannot even discuss their problem with them. Some seem calm outwardly, but seethe inside and are so pent up that they often collapse after their first visit to the doctor.

Some parents at first refuse to accept the statement of the doctor that their child is below par mentally. They even try to convince the doctor that there is nothing wrong with their child, that he is just not understood. There was a child brought to a physician who was obviously retarded, but his parents argued with the physician and tried to convince

him that he was bright. Finally the doctor asked them why did they bring the child to see him if nothing was wrong with the child. Only then did they admit that they thought "there might be a little something" the matter with him. These are the parents who suffer the most.

The following is an excerpt from a letter written by a mother which is so characteristic of the attitude of some parents of retarded children that it shall be quoted verbatim.

All the doctors told us that our little girl is a Mongoloid and that she will never grow mentally but we just can't believe they are right. To us she looks like our other two children when they were babies. She does have a look about her eyes, though, that kind of worries us, they're slanty like. And sometimes we even think she may be blind, because she doesn't respond or smile like most babies her age. There is something we feel, but we pray that the doctors are wrong.

Over and over again, this paradoxical reaction among parents has been encountered. On the one hand, there is the refusal to accept the doctor's verdict and, on the other, there is the realization that something is wrong with the child. ⁶

Shame. The most frequent complex parents of mentally retarded children develop is one of shame. They are ashamed to face their neighbors, their relatives, their friends. It is the shame complex that makes some parents hide their child behind closed doors. They do not realize that you cannot hide your troubles, that in trying to do so you only arouse suspicion. The next thing you know a whispering campaign gets started and all the gossips' tongues begin to wag. In other words, you encourage the very thing you wish to avoid.

Guilt Complex. Many parents of mentally retarded children suffer from a guilt complex that really has no foundation. They dig up all the skeletons in their family closet in their anxiety to find the source of their trouble. Epilepsy three generations back, a granduncle who was in an asylum, a cousin

who married her first cousin, a nephew who had syphilis__they try to hang their present misfortune on anything and everything.

Parents frequently blame each other for their affliction and disagree on what should be done for the child. "My husband thinks I'm crazy running from doctor to doctor, that it's a hopeless case from the beginning. But I'll never give up hope and I'll continue to try in spite of all opposition." The tragedy that should bring parents closer often ends in quarrels, separation and even in divorce and the breaking up of families.

The guilt complex is often accompanied by a sense of inferiority, of inadequacy, of failure. This results in withdrawal from society, The mother, who may have been a very social person previously, shuts herself up with her trouble. She becomes a recluse, refusing to see or to be seen by friends and neighbors.

Bitterness and Envy. The outstanding reaction on the part of many parents is one of bitterness, resentment, and envy.

"Why did it have to happen to us?"

"Why is everybody else's child normal?"

The higher the intellectual or social scale of the parents, the more resentful their attitude.

"My husband and I were both Phi Beta Kappas. We were both honor students right through college. We have teachers, doctors, lawyers, and writers in our families on both sides. I just can't understand it! It doesn't make sense!"

Overprotection and Rejection. The attitude parents take toward their mentally retarded child varies considerably. Some are so sorry for him and so overwhelmed with pity for him that they overprotect him and shower him with affection. Others go to the opposite extreme. They reject their child and show their displeasure and resentment toward him. 7

Rejection is not limited to the father. Some mothers also reject their retarded child. Recently, a mother brought her boy to the clinic for examination. She insisted that he be institutionalized. Even after we convinced her that the boy was definitely educable, she still was adamant that he be sent to an institution. Later was learned that she was planning to remarry and didn't want to be encumbered with a child that required so much of her time and attention.⁸

Adjustments

There was a time, and not so very long ago, when parents of a retarded child found it almost impossible to adjust themselves to their trouble. They looked upon their tragedy as an affliction, a curse, a mark of shame that only death could erase. For the few that resigned themselves to their trouble uncomplainingly and without rancor, there were thousands who went about with feelings of envy, broken pride, guilt, and resentment.

This certainly cannot be blamed after hearing of the agonizing experiences they went through in seeking help and cure for their child__how they ran from doctor to doctor and how often they were dismissed with a shrug of the shoulders and the cold ultimatum, "Send him to an institution and forget about him!"

Parents do not forget about their child so easily. The more helpless the plight of their child, the more they remember him and care for him. They are not anxious to get rid of their child no matter how much trouble he may give them. That is why they do not act on the first cruel order that sends a shudder through their hearts. They start on a long, exhausting trek to seek more advice, more hopeful counsel. They carry with them, hundreds, often thousands of miles, the child, hard to manage, hard to keep quiet; the child who doesn't know what it is all about; the child who evokes pity and scorn and curious glances everywhere.

From one city to another they trudge, from one clinic to another, from one specialist to another. Everywhere they are confronted with the same verdict. "There is no hope. There is no cure for your child. Send him away as soon as possible!"

No wonder parents become despondent, discouraged, heartsick. And yet they refuse to give up. They grasp at every straw; they try out every remedy held out by quack and charlatan who wax rich on their affliction.

There seems to be no end to their misfortune. They lose not only their courage and their misfortune. They lose not only their courage and their morale, but all the financial reserve they have. Many of them pile up debts which take a lifetime to pay.

Now, however, this dismal picture is giving way to a much more hopeful one. People everywhere are becoming interested in the problems of parents with retarded children. Physicians, educators, research workers, and the public generally are awakening to the realization that the question of mental retardation is one for which they must supply the answer for the parent who has the problem in his home.

Best of all, however, the parents themselves are finding their personal adjustment and salvation in the efforts they are making for their own children and those of others similarly affected. They are banding together everywhere, establishing schools, organizing study groups, holding conferences, disseminating information. In doing so, they have got a new lease on life. They have become leaders in a movement that is bringing them and their children out of the shadow and into the sunlight of a new world—a world that offers warmth and help and hope for their child.⁹

Inadequate Care During Infancy and Early Childhood

The Importance of Early Experience

Numerous experimental studies with mammals have attested to the impor-

tance of early maternal experiences. Bernstein, for example, found that young rats which had been fondled frequently by their human caretakers learned more rapidly and assimilated their food more efficiently than did rats which had not had such experiences. The best-known work in this area is that by Harry Harlow and his associates in the psychological laboratories of the University of Wisconsin. In a series of experiments, newborn monkeys were separated from their mothers and reared with various mechanical mother facsimiles. Some of these mother surrogates were made of wire mesh, and some were covered with soft material; some rocked, and some were stationary; some provided milk, and some did not. Monkeys reared with terry-cloth mother surrogates who provided "contact comfort" were found to be emotionally more stable than monkeys reared with unyielding wire mothers. None of the monkeys developed into normal adults, however, possibly because their ties to the "mothers" were not diminished, possibly because they lacked normal play experience with other young monkeys, or perhaps for other reasons.¹⁰

Indifferent Maternal Care

An unstable or indifferent mother, a mother who is overburdened with the care of many children, or a mother who is antagonistic toward her baby or her role as mother may provide minimal physical care unembellished by personal warmth or by an environment in which there is variety, stimulation, and responsiveness. MacMillan (1961) has reported the case of a mentally retarded boy who had been isolated during much of his infancy. His parents had been overly concerned with his colic and had attempted to keep him undisturbed by isolating him in his buggy. Increased stimulation brought social improvement but no increase in his scores on a series of intelligence tests over a period of years. Bourne studied sixteen severely defective young children who exhibited no evident organic cause for their deficit. In each case, he found that the infants had begun to show symptoms at

about the age of two and that prior to that time they had been cared for by disturbed persons or had been deprived of a mother figure for long periods. None had been raised in institutions. These children were by no means typical of children with similarly retarded mental ability (average IQ, about 40). Physically, they were more graceful and well developed, but they exhibited striking mannerisms, such as head banging, screaming, destructiveness, and an air of remoteness and even deafness. ^{II}

Sensory Deprivation

The interpersonal relationship between the mother figure and the baby may in itself be a very important variable, but recent experimental studies have directed suspicion as well to the crucial role of the amount of variation and stimulation in the baby's environment. As we have seen, deprivation in the maternal relationship is accompanied by a reduction in sensory stimulation, and the common result is intellectual retardation.

Studies made of adult human subjects in which stimulation of the sensory receptors has been much reduced demonstrate that even brief periods of such deprivation can rather profoundly disturb intellectual functioning. Animals reared with restricted stimulation tend to be timid, dull, and stereotyped in their behavior and apathetic even to pain. Under conditions of inadequate sensory stimulation, the sense organs may even fail to develop.

Another source of evidence about the effects of minimal stimulation concurrent with minimal human contact is found in the observation of so-called "attic children" who have been reared in dungeonlike surroundings, hidden from public view, usually as an expression of psychotic rejection by the adults responsible for their care. Such children continue to be discovered sporadically even today. K. Davis, for example, has reported two such isolated girls. Anna was a neglected, illegitimate child who was confined in an attic and was discovered immobile and in a emaciated condition at the

age of five. She lived for five years and recovered to some extent, but she gave the picture of a congenitally defective child, as perhaps she was. Isabella, another illegitimate child, was locked up for her first six years by an irate grandfather who could not bear to be confronted with his daughter's baby. She seemed feeble-minded when she was first discovered, although she was superior to Anna, but she recovered rapidly and within sixteen months had a vocabulary of 2,000 words. A significant difference between these cases is that Isabella's mother, a deaf-mute, was isolated with her much of the time, perhaps furnishing a much-needed human relationship and the stimulation which established the foundation for future growth.¹²

Rejection

The unwanted or disliked child in the family setting may be rejected in numerous ways. One form of rejection is, of course, indifference and impersonal care, such as that described in the above topic. Other expressions of rejection tend to be more active and to be reflected in hostility in the emotional atmosphere and in mishandling rather than in ignoring the child. Apparently, these situations tend to produce symptoms which are expressed primarily by tension and conflict and only secondarily by intellectual deficit. Although there is little dependable literature concerning rejected children, most clinical workers seem to agree that while actively rejected children constitute a very heterogeneous group, they seldom show the limited intelligence found in institutional children. Bowlby for example, noted personality defects but not limited intelligence in a group of delinquents who had experienced irregular rejection and deprivation during infancy. This was also true in the study of home atmosphere which will be mentioned later.

Although the picture of the rejected child is more optimistic, it is far from happy. Tension and conflict do not ordinarily permit maximal

intellectual growth, and many rejected children who would otherwise have achieved normal intelligence may function within the mildly subnormal range. Severe rejection may seriously damage their capacities for planning, striving, understanding, and control.

Retarded youngsters, too, show the ill effects of rejecting homes and conflicted environments. Mary Woodward, for example, found that severely retarded children who had come from conflicted or adverse homes were likely to respond with distress to an unfamiliar person, while this was not true so often of retarded children without such histories. Adolescent and young adult retarded persons from very adverse homes have improved markedly in everyday behavior and learning facility when they have been removed to the more neutral institutional setting, lending support to the view that to some extent the rejected child retains a potential for adjustment.¹³

A Possible Conclusion

On the basis of the considerable evidence now available, it seems altogether likely that developmental changes in the infant and young child account for some of the variation in points of view and in research findings which characterize this field. Schaffer, for example, has postulated a three-stage progression in the development of attachments of babies for other human beings, a formulation which to us makes a good deal of sense. He postulates that during the first phase of development the child needs stimulation of his senses, not necessarily by human stimuli but by movement, change, and novelty in what he sees, hears, feels, smells, and tastes. This requirement is supplemented in the second stage of development by the necessity for human stimulation, whether the need is inborn or learned. The human beings caring for the baby may be one or many. It is not until the third stage, which begins sometime during the second half of the first

year, that the child begins to develop a specific attachment to a single person or a few persons. At this time, he needs to be cared for by at most a few stable figures; changes at this stage can severely disrupt his ability to relate himself to others.

This progression would nicely account for the finding that the breaking up of an established mother-child relationship during the second half of the first year often has dire consequences for the child. Separation of the child from his mother during the first six months apparently need have no ill effects if the child is given adequate mothering and stimulation. The evidence indicates, however, that without adequate stimulation both the emotional and the intellectual development of the child may be severely retarded. When separation is delayed until the infant has established a firm attachment to the mother and has achieved a rudimentary use of language, he can survive the separation or shift in maternal figures with much greater equanimity. Basic cognitive processes have apparently developed to the point at which they are less dependent upon the maternal relationship. Moreover, the child's greater mobility when he is two or three years old ensures at least a minimum of novelty in the environment, and profound stimulus deprivation is not likely to ensue. This three-stage interpretation is a tentative one, even as proposed by Schaffer, but it is clear that some such developmental changes must be taken into account in one way or another. In addition, there seems to be no doubt that the quality and kind of environment in which the infant lives are of vital importance to his later intellectual development.

It should be noted, however, that some children apparently escape unscathed from the most severe deprivation, while others who are subjected to a very mild degree of deprivation react with profound disturbance. The nature and degree of symptoms they show obviously do not depend entirely

upon the deprivation, although this is an important variable. We need to know a great deal more about individual differences in this respect than is now known. ¹⁴

A Case Study

That certain child-training practices and experiences during the first year of life have a deleterious effect on intellectual and emotional growth has been revealed by clinical and experimental studies. The prolonged absence of the mother or the effects of the lack of "mothering" seem to reduce the degree of the child's responsiveness or awareness of ongoing activities. Since the mother is the almost exclusive source of the child's external stimulation, it would be expected that his responsiveness would be a function of the degree of stimulation by her. In the absence of gratification, responsiveness is more likely to be extinguished than reinforced. The following illustrative case is taken from Ribble.

"Little Bob was born in the maternity hospital where the writer was making studies of infants at the time. He was a full-term child and weighed six pounds three ounces at birth. During the two weeks' stay in the hospital the baby was breast fed and there was no apparent difficulty with his body functions. The mother, a professional woman, had been reluctant about breast feeding because she wished to take up her work as soon as possible after the baby was born, but she yielded to the kindly encouragement of the hospital nurses, and the feeding was successful. Both mother and child were thriving when they left the hospital.

"On returning home the mother found that her husband had suddenly deserted her—the climax of an unhappy and maladjusted marriage relationship. She discovered soon after that her milk did not agree with the baby. As is frequently the case, the deep emotional reaction had affected her milk secretion. The infant refused the breast and began to vomit. Later he was taken to the hospital and the mother did not call to see him. At the end of a month she wrote that she had been seriously ill and asked the hospital to keep the child until further notice.

"In spite of careful medical attention and skillful feeding, this baby remained for two months at practically the same weight. He was in a crowded ward and received very little personal attention. The busy nurses had no time to take him up and work with him as a mother would, by changing his position and making him comfortable at frequent intervals. The habit of finger sucking developed, and gradually the child became what is known as

a ruminator, his food coming up and going down with equal ease. At the age of two months he weighed five pounds. The baby at this time was transferred to a small children's hospital, with the idea that this institution might be able to give him more individual care. It became apparent that the mother had abandoned the child altogether.

"When seen by the writer, this baby actually looked like a seven months' foetus yet he had also a strange appearance of oldness. His arms and legs were wrinkled and wasted, his head large in proportion to the rest of the body, his chest round and flaring widely at the base over an enormous liver. His breathing was shallow, he was generally inactive, and his skin was cold and flabby. He took large quantities of milk but did not gain weight since most of it went through him with very little assimilation and with copious discharges of mucus from his intestines. The baby showed at this time the pallor which in our study we have found typical of infants who are not mothered, although careful examination of his blood did not indicate a serious degree of anemia. He was subject to severe sweating, particularly during sleep. A thorough study showed no indication of tuberculosis. The child's abdomen was large and protruding, but this proved to be due to lax intestinal muscles and consequent distention with gas and to a greatly enlarged and distended liver, which was actually in proportion to that of the foetus. There was no evidence of organic disease, but growth and development were definitely at a standstill, and it appeared that the child was gradually slipping backward to lower and lower levels of body economy and function.

"The routine treatment of this hospital for babies who are not gaining weight is to give them concentrated nursing care. They are held in the nurse's lap for feeding and allowed at least half an hour to take the bottle. From time to time their position in the crib is changed and when possible the nurse carries them about the ward for a few minutes before or after each feeding. This is the closest possible approach to mothering in a busy infants' feeding. This is the closest contact allowed. Medical treatment consists of frequent injections of salt solution under the skin to support the weakened circulation in the surface of the body.

"With this treatment the child began to improve slowly. As his physical condition became better, it was possible for our research group to introduce the services of a volunteer 'mother' who came to the hospital twice daily in order to give him some of the attention he so greatly needed. What she actually did was to hold him in her lap for a short period before his 10 A.M. and 6 P.M. feedings. She was told that he needed love more than he needed medicine, and she was instructed to stroke the child's head gently and speak or sing softly to him and walk him about. Her daily visits were gradually prolonged until she was spending an hour twice a day, giving the baby this artificial mothering. The result was good. The child remained in the hospital until he was five months of age, at which time he weighed nine pounds. All rumination and diarrhea had stopped, and he had become an alert baby with vigorous muscular activity. His motor coordinations were of course retarded. Although he held up his head well and looked about, focusing his eyes and smiling in response to his familiar nurses, he could not yet grasp his own bottle or turn himself over, as is customary at this age. The finger sucking continued, as is usually the case with babies who have suffered early privation.

"In accordance with the new hospital procedure, as soon as the child's life was no longer in danger, he was transferred to a good, supervised foster home in order that he might have still more individual attention. Under this regime, his development proceeded well and gradually he mastered such functions as sitting, creeping, and standing. His speech was slow in

developing, however, and he did not walk until after the second year. The general health of this child is now excellent at the end of his third year; also his 'I.Q.' is high on standard tests, but his emotional life is deeply damaged. With any change in his routine or with a prolonged absence of the foster mother, he goes into a state which is quite similar to a depression. He becomes inactive, eats very little, becomes constipated and extremely pale. When his foster mother goes away, he usually reacts with a loss of body tone and alertness, rather than with a definite protest. His emotional relationship to the foster mother is receptive, like that of a young infant, but he makes little response to her mothering activities except to function better when she is there. He has little capacity to express affection, displays no initiative in seeking it, yet fails to thrive without it. This lack of response makes it difficult for the foster mother to show him the affection which he so deeply needs. Without the constant friendly explanations of the situation from the visiting nurse, she would probably have given up the care of the child." 15

The Concept of Cultural Deprivation

Although the term "cultural deprivation" is now a frequent one in our everyday speech, it is by no means clear what meanings it connotes or denotes. It is, in fact, somewhat surprising to find how, when challenged to define the term, most people have great difficulty explicating the concept in a way satisfying to them or to others. In the minds of many, cultural deprivation is synonymous with slum culture, i.e., it refers to undefined modes of existence in certain areas of our cities. It is not unusual to find even greater specificity, i.e., cultural deprivation refers to Negro slum or ghetto culture. Such usages are both unrevealing and unduly restrictive. It is apparent, for example, that restricting the concept to a particular geographical unit in our cities or to a particular group within that unit, does not allow one to understand the wide variation in intellectual development and functioning one inevitable finds. 16

General Cultural Factors Involved

The research studies of the past thirty years have shown quite convincingly that measured intellectual level is influenced by the child's

cultural background. A long series of studies has shown that children continuously deprived of general cultural stimulation (comparable to that of the average American middle-class child) show progressively greater intellectual retardation, as they get older (Gordon, 1923; Jordon, 1933; Asher, 1935; Edwards and Jones, 1938; Tomlinson, 1944; Anastasi, 1956; McCandless, 1964).

These studies have shown quite convincingly that intelligence, as measured by conventional tests, progressively declines in children who lack the general cultural and educational experiences of the normal white groups used as standards. Many such children will therefore appear mentally retarded by psychometric criteria. However, in the absence of any definitive large-scale long-range studies, the question of the extent to which cultural impoverishment may produce irreversible mental retardation still remains unanswered. 17

Home Environment

There are a number of research studies on the effects of home environment on intelligence level. However, none of these studies separates home influence proper from the broader cultural and educational influences already discussed. Adoption into a home of a given type typically involves being introduced into a given culture, social class, and educational milieu. This means that the studies of the effects of home environment include these other factors as well.

Studies of the effects of being raised in various types of homes on the intelligence test scores of children began in the late 1920's. Since then a number of such studies have been reported (Freeman, Holzinger, and Mitchell, 1928; Burks, 1928; Skeels and Fillmore, 1937; Speer, 1940). From these and similar studies, the following generalizations seem to be warranted:

1. Children adopted into and residing in homes which were superior to their own homes showed an increase in the IQ's over comparable children residing in their own homes.
2. The younger the children when placed in the superior homes, the greater was the increase in their IQ's.
3. The longer the period of residence in the superior home, the greater was the increase in their IQ's.
4. Unrelated children residing in the same home resemble each other in intelligence as much as do siblings raised in separate homes.

The type of home in which a child is raised does seem to influence his intelligence test scores, and certainly contributes significantly to his general level of functioning. ¹⁸

Social Background

The generally low level of intelligence, income, occupational level and education characteristic of families with familiarly mentally retarded children leads to modes of living and social behavior that causes society to reject them. They frequently become social outcasts. The family background is often enough to turn society against the children from the very beginning. Evidence that this absence of social acceptance is compensated for by the great understanding and acceptance within the family structure is lacking. Actually, the reverse seems to be more nearly true. Rejection by the community is frequently accompanied by parental and familial rejection or neglect. Town (1939) reports from his study of 141 defective families that 28 of the marriages were broken by desertion, abandonment, separation, annulment, or divorce. Illegitimate maternity was found in 51 families, incest in 7 families, and prostitution in 14 families. Imprisonment of one form or another was reported for 38 families. Twenty families had children removed from their custody, and an equal number habitually practiced physical violence toward each other.

Not all studies of parental or maternal care of the mentally retarded are so bleak, but those that report adequate maternal care tend to deal with supervised cases or to be made in rural areas where adjustments are probably not as difficult to make.

Sarason (1943) found themes of loneliness, desire for affection, fear of rejection, aggression, and ambivalence toward parental figures from an analysis of stories of institutionalized defectives (mainly diagnosed as garden variety) on the basis of the Thematic Apperception test. Abel's (1945) findings were essentially the same. These findings are rather understandable in view of the findings of a study of parental attitudes toward mental defectives (Thorne and Andrews, 1946). There were 291 institutionalized subjects in this study which extended over a five-year period. Twenty-five per cent of these children received no gifts or visits from parents during the entire period. Forty-five per cent received gifts but had no visitors, and another 8 per cent had visits but did not receive gifts. Only 22 per cent of the children received both gifts and visits. Sarason (1959) suggests that these data are not only revealing of parental attitudes toward the institutionalized child, but are suggestive of the nature of the parent-child relationship before the period of institutionalization. He formulates hypotheses of child-rearing practices in defective homes that, if proven to be true, would make for an environment in which it would be extremely difficult for any child to develop, even if he were well-endowed. He hypothesizes that the defective mother does not possess adequate knowledge of child care, is negative in her attitude toward the child, does not adequately mother it, and does not respond consistently or promptly to the usual crying signals of childhood distress. He further hypothesizes that the mother's low level of intellect and consequent poor judgment interferes with feeding, care, and the ordinary attention received by most children.

The lack of encouragement in verbalization and locomotion, and the absence of stimulating toys, games, and puzzles, add to the maternal ineptness to form a rather gloomy picture of the early life of the familially mentally retarded child. It has been pointed out by various investigators that an early adverse environment has a "crippling" effect on mental development (Clarke and Clarke, 1955). 19

The Behavioral Variables

Extreme Environmental Deprivation

Two types of deprivation are often involved in studies of extreme environmental deprivation. One is an affectional deprivation. Many workers in the fields of mental hygiene, clinical psychology, and psychiatry believe that continuous affectional relationships with other people are necessary for the child's normal emotional, social, intellectual impairment resulting from this type of deprivation has not been established.

The second type of environmental restriction studied is general sensory deprivation. There is evidence, principally from the lower animals, that the individual's functional level is lowered when sensory deprivation is extreme and chronic. The extent to which this lowering of adjustment level is permanent still remains to be determined.

The deprivation characteristic of many of the mentally retarded, particularly those of the familial type, involves both the "material," or affectional, and the general environmental or sensory types. There is some evidence that some children who are institutionalized as mentally retarded, and who come from very adverse social conditions, continue to improve mentally beyond the age at which mental development normally ceases (Clarke and Clarke, 1958). This suggest that the deleterious effects of early deprivation may not be irreversible.

A more recent study has extended these findings. Children in an institution were placed into arbitrary groups according to the extent to which their early life was one of deprivation. A follow-up study over a period of six years showed that the group of children whose pre-institutional life had been "most deprived" had gained 16 IQ points on the average, while a group of children judged to have suffered a lesser degree of deprivation gained an average of 10 IQ points in the same period (Clarke and Clarke, 1958). These results also suggest that the deleterious effects of early deprivation may, to some extent at least, be overcome in later life. ²⁰

Effects of Environmental Enrichment

One study may serve as an illustration of the kind of research which may yield valuable dividends. Kirk (1958) studied children living in the community and in institutions, some of whom were given special preschool experience for one to three years before entering the first grade and some of whom purposely were not. He found that the overall effects of the preschool experience were positive: 70 per cent of the children who were afforded this opportunity improved in mental and social development by an average of about 10 points on various measures of intelligence and social maturity, and they maintained their gains during a follow-up period, which for some was as long as five years. After a year of school, however, many of the control children who were living in the community tended to catch up with the experimental preschool group. This was not true of the community children from very deprived homes or of the institutional control group. For them, the preschool experience provided a special advantage which accelerated their progress or at least prevented the decline in ability levels which was typical of their siblings or of the control group in the institution. Of particular importance was Kirk's finding that children without known brain damage, those who presumably best fitted the criteria for

cultural-familial retardation, were precisely the children who profited to the greatest extent from the preschool experience.

This evidence suggests that, by providing early enrichment experiences for children from very deprived backgrounds, we may make considerable headway against mild mental retardation. This piece of research, though well designed and well executed, is only a tiny step in the right direction. It is to be hoped that future workers will explore different avenues, perhaps with even younger children as well as with older ones, to counteract the effects of deprivation and discouragement.²¹

A Brief Synopsis of the Human Research

The study of mental retardates has provided a natural laboratory in the search for knowledge on the development of intellect. Within this laboratory, it has been convenient to compare the performances of mentally retarded persons with the performances of intellectually average or above-average subjects and also to compare institutionalized retardates with noninstitutionalized retardates. In the latter strategy one can avoid the confounding of intelligence levels with the effects of institutionalization. The usual finding is that continued residence in a large public institution for the retarded results in further depression of ability. A study of this sort is that of Stedman and Eichorn (1964), who compared 10 healthy mongoloid children (between 15 and 31 months of age) in an institution with 10 paired-matched mongoloid children living at home. Both mental and social maturity scales revealed significant differences in favor of the home-reared children. Stedman and Eichorn (1965) reported that ". . . eight of the 10 home-group subjects were found to be walking, while only two of the 10 in the hospital group walked." Of 14

anthropometric indexes, the home-reared children were significantly larger in calf circumference, full length, and weight. There were no statistically significant differences in favor of the hospitalized children. On 13 of the 14 measures the observed differences were in favor of the home-reared group. The unique significance of this study lies in the fact that the hospital-reared children were preselected, avoiding some of the unspecified selective biases in sampling deriving from factors which might have caused them to have to be placed in an institution. In addition, both groups were ". . . located through community agencies and selected for freedom from severe physical handicaps other than mongolism." Even more striking data are reported by Dennis, who observed Iranian children from 1 to 3 years of age in public and in private institutions. The institutions differed widely in stimulation value, with the private institution providing much more attention and fondling. Children in the public institution were found to be quite severely retarded in motor development, but this was not true of the children in the private institution. 22

A few studies have been conducted with human subjects using both specifiable and replicable stimulation treatments, with untreated control groups. McCandless (1964) cited unpublished data gathered from the Pine School, where a "total push" program was undertaken with the families of "socially disadvantaged" children. These children received the services of social workers, psychologists, pediatricians, nurses, and nutritionists, and attended nursery school and kindergarten. The children were divided into two age groups (5 years or more, and under 5 years). "The gain in IQ for the younger and total group was significant at less than 0.05 level. The younger group gained significantly more than the older group, while the gain for the older group was not significant. . . the younger a child is when he undergoes such experiences, the greater the effect they have on the child's development." 23

Another study was done by Kirk (1958). Preschool children between 3 and 6 years of age and ranging in IQ from 40 to 80 were selected from the community and from two institutions for the mentally retarded. Experimental groups both in the community and in one institution received 1 to 3 years of nursery school experience, including individual tutoring tailored to specific needs. During the period of preschool attendance, the community experimental group showed an average gain of 11.2 IQ points, while the community contrast group (children who did not receive the nursery school experience) dropped an average of .6 IQ points. Among the institutional children, the experimental group gained an average of 12.0 IQ points, while the contrast group dropped an average of 7.2 points. Following the nursery school experience, all of the children entered either first grade or an ungraded primary class. In school, the community experimental group did not gain significantly in IQ (.5 points), but the community contrast group did (7.5 points). Hence, the overall gain from the beginning of the study through the first year in school for the community experimental group was +11.7, while for the community contrast group it was +6.9. Among the institutional children, neither group changed significantly in IQ during the first year of school. Over the whole study, the institutional experimental group gained 10.2 IQ points, while the institutional contrast group lost 6.5 IQ points. The children who received preschool experience gained significantly on the Stanford-Binet, the Kuhlmann Tests of Mental Development, and the Vineland Social Maturity Scale. Such formalized preschool experiences may be especially important for "culturally deprived" children, since Kirk reported that children from adequate homes who do not have preschool experience show accelerated mental and social development after entering school, but children from inadequate homes do

not show such acceleration, i.e., even after entering school "deprived" children retain their lower level of mental and social performance.²⁴

Conclusion

Considered in this study has been the effect of the environment in the life of the mentally retarded child with the personal and group reactions of the family playing the dominating role. The importance of the mother in the growth of the child has been discussed and sketches of case studies undertaken by psychologists have been provided. A series of issues emphasizing content rather than techniques was discussed. Both deprived and enriched environments have been presented with factual evidence and results of both situations.

While mental retardation poses challenges to teachers and physicians, it poses problems of infinite complexity to parents. Mentally retarded children are studied because they are an educational problem, or a scientific enigma. To consider the entity in this light is to misconstrue its nature. Mental retardation is primarily a problem in human terms. If the study were approached with the right set, it must first be seen as a people-centered problem from the beginning.

This report can not deem a conclusion in its truest sense as a solution to a problem, nor can a final statement be issued. Hypotheses can be formulated as they have been in the past, but a law cannot. Experiments and studies are being done in this area. Much has been discovered but there is yet many questions unanswered. The problem yet has many challenging technical problems to offer.

Footnotes

¹Charles W. Telford and James M. Sawrey, The Exceptional Individual (New Jersey: Prentice-Hall, Inc., 1967), p. 156.

²Jerome H. Rothstein, Mental Retardation (New York: Holt, Rinehart and Winston, 1965), p. 9.

³Ibid., p. 10-11.

⁴Thomas E. Jordan, The Mentally Retarded (Ohio: Charles E. Merrill Books, Inc., 1966), pp. 36-37.

⁵Ibid., pp. 37-39.

⁶Abraham Levinson, The Mentally Retarded Child (New York: The John Day Company, 1952), pp. 21-24.

⁷Ibid., pp. 21-26.

⁸Ibid.

⁹Ibid., pp. 26-28.

¹⁰Halbert B. Robinson and Nancy M. Robinson, The Mentally Retarded Child (New York: McGraw-Hill Book Company, 1965), pp. 183-184.

¹¹Ibid., p. 186.

¹²Ibid., pp. 187-188.

¹³Ibid., pp. 187-188.

¹⁴Ibid., pp. 190-191.

¹⁵Seymour B. Sarason, Psychological Problems in Mental Deficiency (New York: Harper and Brothers Publishers, 1953), pp. 136-139.

¹⁶Seymour B. Sarason and John Doris, Psychological Problems in Mental Deficiency (New York: Harper and Row, 1969), p. 64.

¹⁷Telford and Sawrey, op. cit. p. 183.

¹⁸Ibid., p. 183.

¹⁹Ibid., pp. 225-226.

²⁰Ibid., p. 184.

²¹Robinson and Robinson, op. cit., pp. 221-222.

²²Norman R. Ellis, Research In Mental Retardation (New York: Academic Press, 1966), pp. 131.

²³Ibid., p. 132.

²⁴Ibid., pp. 133-134.

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