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THE CHILD'S WAY OF COPING: A LONGITUDINAL STUDY OF NORMAL CHILDREN

LOIS B. MURPHY, PH.D.

All growing children during their developmental years have to cope with problems. Some of these problems grow out of things that are done to or happen to the child: operations; accidents; childhood diseases and virus infections; the uprooting from a familiar neighborhood as the father gets a job in another town or the family moves into another house in a very different neighborhood; tensions bouncing onto the child from international relations, war anxieties, or actual absence of the father for military service; separations from parents because of trips, social activities or illness; separations when the child starts to nursery school, or is hospitalized; tensions between parents, which increase at times of ill health; competition with one parent for the other.

Some of the problems arise chiefly within the child, as from discrepancies between the child's abilities and his goals; vulnerability or instability related to imbalances in the structural equipment of the child; anxieties and anger aroused by the arrival of a brother or sister, a competitor for the parents' affection; or feelings of being different from brothers and sisters or other children who may seem to receive more attention, love, or approval.

These problems and many others are normal expectable sources of stress for children growing up in our culture. They frequently contribute, along with ups and downs in the stability of the organism during the shifting sequences of body development, to the "behavior problems" or

"symptoms" commonly seen as children grow up. But even while they are experiencing the normal stresses of life and are trying to cope with them, often in ways which adults regard as problem behavior, children keep on growing. Unrealistic concepts of "good adjustment," and set "norms" ignore the question of how well adjusted it is possible to be under the conditions of growing up in our society. Sensitivities which contributed to "problems" when children were small have sometimes blossomed before our eyes into creativeness as these children matured with support and opportunities provided by school and family.

Some children, whose development has been recorded in different longitudinal studies, were able to come through in a well-integrated way when they were free from the early pressures and were able to make decisions for themselves. These observations lead to the question: How did these children cope with their problems? What contributed to their increasing strength and ability to outgrow the behavioral difficulties and symptoms which they showed at various points during their developmental years? With this in mind, in 1953 The Menninger Foundation, with the support of a grant* from the Public Health Service of the United States Department of Health, Education, and Welfare, began to study the coping patterns and resources of a group of normal children of preschool age. These children had already been studied during infancy by Drs. Mary Leitch and Sibylle Escalona so that certain information about the families, the personality of their mothers, and the characteristics of each child in the early months was already available in the files. This work is now being carried into the prepuberty age, giving us a chance to see the children as they move into a wider world.

Thirty-one of these children studied during infancy by Dr. Sibylle Escalona and her associates have been observed at home and in a variety of testing situations including medical examinations during the preschool and latency years. Most of them are middle class children of families with modest incomes; many of them have grandparents whom they visit. The stability of their families has probably given them a better than average start in life although from an economic or cultural point of view most of them are not above average.

Our purpose was to focus on the child's range and ways of coping with everyday problems, the processes and sequences involved in development of new ways of coping with new problems as well as persistent and

* Grant M-680.

old ones, continuing styles of coping, and, if possible, relationships between the child's equipment (including temperament) and his style of coping and coping capacity. We included his ways of handling impacts from outside events and also from conflicts and stresses within himself.

During their preschool period we saw these children coping with: separation from their mothers; new situations; the pressures and demands from male adult testers and examiners, as compared with the kinds of pressures presented by female adults; the threat of invasion of their privacy by an adult; authority pressures such as limits, demands to be quiet, demands for compliance; competition from siblings, mother's pregnancy and the anticipation of a new baby; sex-role confusions; threat to body image and traumata of illness such as polio or an operation such as a tonsillectomy; aggression and competition from peers; special external events, such as the tornadoes that raged in Kansas in the spring of 1956.

To study the child's resources and their use in patterns of coping, including the resultants of interactions between different aspects of the child's equipment and between the child and his environment, we decided to utilize standard procedures which would permit us to compare the children with other children. The research work included interviews with mothers, by Dr. Grace Heider; pediatric examinations by Dr. Patricia Schloesser; psychiatric interviews by Dr. Povl Toussieng; projective tests and observations of spontaneous behavior outside of test situations by Drs. Lois Murphy, Walter Kass, Alice Moriarty, Lila Weissenberg, Baljeet Malhotra, Wilma Miller and others.

In addition, "natural history" descriptive records were made of the total behavior observable as the child coped with the examiners and their procedures; interviews were held with mothers regarding the child's ways of dealing with situations at home. We also recorded observations of the children going to and from these testing sessions, at parties, at the zoo, and at home. Body photographs, and the Witkin tests of field-independence, have been added to these. In the next period of study we are hoping to use methods developed by Drs. Gardner Murphy and John Santos, Riley Gardner and Martin Mayman, in collaboration with them.

Examples of Findings

Most of the individual children tend to develop more mature coping resources within the same general coping style from one year to another, sustained by dominant functions (rooted in their basic equipment and infantile experience) which have been reinforced in the interpersonal

experience of the child in his environment. We are finding statistically significant correlations between salient features of infancy behavior—such as the ability to protest and to eject unwanted tastes or foods—and later capacity to fend off pressures from the environment. We shall briefly review a few children normal in infancy and from normal families at that time, who developed different styles of coping.

In some instances we find the rating of a child on certain standard characteristics very important in the total longitudinal picture of development. For instance, Rachel, one of the rather quiet babies to begin with, passively accepted the drastic treatment of severe eczema to which she was exposed: she was confined to bed from the age of twelve months to approximately twenty-two months, three months of this being in the hospital during a period when the family was away from home because of a flood. She had a great deal of physical care from her mother who put on salves and ointments, and did everything she could to get the severe eczema under control. Rachel enjoys most the sessions with the pediatrician or the Witkin experiment, such as the tilting chair, which demand chiefly cooperation with very structured requirements. In these very structured situations she concentrates well and gets obvious satisfaction from her ability to meet the requirements of the situation and also from the manipulations involved, such as the ride in the "tippy chair," being turned in the "tippy chair" and so on. She seems to think of the world as a place where things are done to you. In keeping with her passive cooperation, she has never developed active ways of defending herself. She is quite at a loss when confronted with an unstructured situation which can only be handled by spontaneous efforts of her own, such as those required to describe what she sees on a Rorschach ink blot. At the same time she has real ego strength in the sense of maintaining a high degree of internal integration in the face of the severe experiences she has been through.

Her pattern of development is in marked contrast to that of Ronald, who was a sensitive and somewhat suspicious but very determined baby and who at the age of five still had low thresholds for startle; we saw him approach each new situation hesitantly and from behind the sheltering figure of some adult. Sensitive as Ronald is, and vulnerable to impacts from the environment, he still has a strong active drive to master his fear and anxiety. In one experiment, while he jumped and blinked every time he pulled the trigger of a large toy gun, he persisted in shooting over thirty times until gradually the startle reaction to the loud noise

almost disappeared. He has never refused to participate in the experimental session, although over and over he has been very hesitant to move in at the beginning or even to leave home in order to come. In other words, here is great sensitivity combined with a strong drive toward mastery both of which have persisted from infancy to the present.

Another sensitive boy, Vernon, was as a baby cautious and deliberate, for instance, when confronted with the Gesell pellet. He would delay any action until he had observed it carefully and then made one decisive movement and successfully picked it up. Reserve, delay, cognitive mastery, and lack of overt expressiveness of affect have continued to be characteristic of Vernon to the present. His greatest expressiveness comes through quiet, warm smiles which appear occasionally when he is enjoying something very much. His approach to play situations tends to be objective and abstract. He does not act out concrete, dramatic ideas in the manner of most of the other boys. In other words, the affective restraint and reserve coupled with consistently taking the time to achieve cognitive clarity which characterized him from the beginning have shaped his response to the experiences of each developmental level.

One of the most striking illustrations of a child's continued use of a specific pattern which appeared in infancy is that of Susan. When she was a twenty-eight-week-old baby she would laugh to make herself stop crying. She was an active, responsive, vigorous baby. She has continued to retain the vivid charm which this alert, enthusiastic responsiveness to people and the world around her creates. She was desperately ill with polio at the age of three. At this time she was very responsive to the efforts of the nurses to help her bear the painful treatments which she had to have by carrying on fantasies with her. A little rabbit in a red suit who ran up and down the hall was one of the favorite imaginary characters in her hospital life. She made extraordinary efforts to cooperate with all treatment and all the exercises; and although the doctors had wondered whether she could live through the polio and never expected to see her able to get out of bed, she is now at school, and is even able to dance.

At the age of five when we saw her for many tests, it was quite clear that she was strongly denying anxiety about her physical condition and her future. Instead of worrying or facing the legitimate fear to which she would have been entitled, she used all her energy to mobilize her forces to get well. Fantasy continued to play a large part in this. When we saw her in the Witkin experiment at the age of seven she still had a

pattern of gayly denying any uneasiness about the experience even though she has enough problem of balance and management of her body to make the tippy house and tippy chair a source of greater anxiety than it was for the other children. Her strong drive to conquer stress, anxiety and difficulties is also extended to a general trend toward leadership and dominance. This creates some problems, for instance, in relation to a younger sibling.

While persistent characteristics are extremely important as we have just seen, we also find dramatic changes in overt coping style in certain children like Ray who blossom with the new developmental resources offered by school or new environmental opportunities or supports, and children who fade or lose their grip under new environmental stress or external intensification of inner problems managed comfortably before the new stress.

Throughout the study of both continuity and change we find it productive to focus on the child's way of using his resources in meeting the challenges, stresses, opportunities of life as he experiences them in his individual way—in short his way of coping with his personal experience of the problems of each developmental stage.

Several studies have been completed. Grace Heider as co-author with Sibylle Escalona completed a comparison of the children's behavior as recorded at ages three to five by the Coping Project with behavior predicted on the basis of the infancy records by Escalona. This book, *Prediction and Outcome: A Study in Child Development,* is published by Basic Books. Grace Heider's analysis of *Vulnerability to Stress in Infancy* is in multilith form, and when this year's extension of the study into the preschool and latency years has been completed, will be published as a monograph. Alice Moriarty's analysis of coping patterns in structured tests is in press as a Genetic Psychology Monograph. A sequel on the latency period is being prepared. Lila Weissenberg's monograph *Relation Between Previous Effort and Attractiveness of Goal Object* is on file at the University of Kansas. Keith Bryant and Lois Murphy are making a study of the development of these children in latency which will take the form of a small book to be completed next year.

A book by the entire group will deal more fully with several aspects of the study; it will present examples of developmental sequences of coping methods, infantile origins of the coping approaches of individual children, a comprehensive conceptualization of coping devices and methods, a statistical analysis of factors contributing to effective coping

at the preschool age level, and a theoretical formulation of the relation of coping to certain aspects of equipment and experience in the environment.

In addition to the core staff of the Coping Project which has included Lois B. Murphy, Ph.D., as director, Grace Heider, Ph.D., Alice Moriarty, Ph.D., Marie Smith and Eunice Nachtigall, a major contribution was made especially in the early stages by Nelly Tibout, M.D. Also Povl Toussieng, M.D., Keith Bryant, M.D., Patricia Schloesser, M.D., and Walter Kass, Ph.D. have made major contributions at different stages. Much of the value of the basic data is owed to the sensitively recorded observations of Baljeet Malhotra, Wilma Miller, and Lila Weissenberg, Ph.D.

In the following articles in this issue of the *Bulletin,* we are presenting samples or vignettes of several different kinds. These have been selected in order to give the reader a preview—within a limited space—of some of the approaches used, the behavior observed, and some of the theoretical implications of our work. First, the reader will find an approach to the study of vulnerability in infancy formulated by Doctor Heider. Next comes an article illustrating Doctor Moriarty's studies of coping methods observed as the child confronts the tasks and difficulties of the intelligence test; then a sample of the approach of the psychiatrist to a study of the problems and coping methods of a normal child (Doctor Toussieng). The last two articles deal with theoretical aspects of variables which have emerged as important (Doctor Murphy).

VULNERABILITY IN INFANTS

GRACE M. HEIDER, PH.D.

During the sessions of the Coping Project different children appeared to experience different degrees of stress in the same situation; also, one child rather consistently showed stress effects in one functional system, others in another. Diane, for example, a relatively stress-resistant child, stuttered during a trip to project headquarters at a time when there was unusual tension in her home. Gordon, who had enjoyed project sessions with a friendly woman examiner as permissive as his own petite, very feminine mother, suddenly seemed like an awkward adolescent when he was met by a smiling but very tall man; his postures became stiff and clumsy, he seemed too large for the little chairs in which he had previously sat, and he bumped into objects in the room as he moved about. Other children showed the strain of project sessions in loss of spatial orientation, finding it hard to lead the way to the examiner's parked car or to know which side of the street their own houses were on when they returned to the familiar neighborhood.

Observations like these raised basic questions about normal children under the ordinary stresses of life, in other words about children's vulnerability, both as to a general threshold for disintegrative and constrictive reactions, and as to specific areas in which a stress effect is seen. In trying to answer these questions we examined material about children at two different age levels, when they were originally seen in the Escalona-Leitch Infancy Study[1*] and when they were seen again as preschool children in the Coping Study. In this paper we discuss an approach to the analysis of the Infancy data in relation to differences in vulnerability as they showed themselves in children who ranged from four through thirty-two weeks of age. An analysis of the preschool material will be presented in another report of the work.

As sources of vulnerability in infancy, we distinguished three general factors or categories of variables, designated as (a) equipment, (b) environment, and (c) the infant's ways of handling himself and the world. Under equipment variables came body build, general health, sensory reactivity, autonomic stability, strength of affect, developmental level, drive, and those factors close to the physiological level usually thought of as constitutional factors. Some of these, at least, have their roots in the child's inheritance, but it is impossible to know, even in a baby four weeks old, how far this is the case.

Among environmental variables, we selected principally the quality of the social relationships that affect the infant—the aspects of the environment with which he has interacted and which have left their imprint on his functional systems.

When we speak of the infant's ways of handling himself and the world, we include a great deal of what is called coping and defensive behavior at a more advanced age level, but to which we give a different name at this stage to distinguish between behavior related to ego functioning and earlier modes of behavior that belong more nearly to the physiological level. In distinguishing these three kinds of factors, we assume that vulnerability is a function of the individual's assets and liabilities with regard to equipment and environment, and to his ability to handle himself and the world. Our thinking about these variables may be called quasi-quantitative in that we use a certain rough quantification.

We assume that equipment and environmental variables may help the child in the processes of growing, of utilizing his own resources and those of his world, and in resisting the strains imposed on him, or that they may handicap him. A robust physique and a high level of energy are thought of as favorable; physical fragility with restricted energy is expected to contribute to vulnerability.* A mother who enjoys her child and takes pride in his qualities favors his growth and resistance to the strains of life, while the effect of maternal rejection is in the opposite direction. In thinking about the infants' ways of handling stress we have assumed a factor whose presence may lessen the degree of vulnerability that a particular constellation of equipment and environmental factors would otherwise involve. If we assume that two children have equally low sensory thresholds and equally high autonomic reactivity (two factors usually thought of as making for susceptibility to stress); if their mothers are equally insensitive to their needs (an environmental factor thought of as stepping up susceptibility); yet one infant may be able to draw back and give himself a respite when life gets too strenuous, while the other may continue to push himself on, to become more and more engaged in the situation until he reaches the breaking point. In such a case we postulate a difference in vulnerability between the two children and attribute it (as far as this over-simplified analysis goes) to the difference in the ways in which the two handle themselves in a stressful situation.

* These generalizations leave out of account the psychological processes by which certain kinds of handicap may result in secondary gains or the possible toughening of behavioral systems that sometimes results from an initial weakness. These factors were considered in dealing with individual cases.

The list of variables under each category included some from the data of the Infancy Study, others suggested by current studies of these children by other members of the project staff; and still others that emerged as significant in our own analyses of the infancy data. That our records were of relatively free behavior rather than controlled experimental situations added to the problems of the analysis, but gave us a broad base of observations of the infant and of mother-baby interaction on which to evaluate sources of susceptibility and resistance to stress. The ratings and notations for each variable were based on the records of psychological and pediatric examinations that were part of the project procedures;* detailed observations of behavior with emphasis on the child's responses to his environment; changes in bodily functions such as changes of color, flushing and paling; changes in rate of respiration; changes in level of performance, such as loss of motor control or deterioration of functioning.

Among the principal equipment variables studied were the following: physique, assessed from characteristics such as body build, energy of movement, and fatigability as described in the records; vegetative functioning, rated on information (from the mother chiefly) about sleep, digestion, elimination, and susceptibility to infection (Erikson's discussion of trust[3] suggests that comfort and consistency in these experiences are important for the development of a rudimentary sense of ego identity); sensory reactivity, whether a matter of threshold in a physiological sense or of affective responses to a fairly wide range of sensory experience. Freud[4] saw the sensory apparatus as a "protective barrier" that provided a buffer between internal and external worlds, making possible a relatively favorable internal environment for the development of the ego. Low thresholds leave the individual open to stimulus effects beyond those experienced by the individual with stronger boundaries between himself and the external environment. Bergman and Escalona[5] have discussed the developmental significance of constitutional differences in sensitivity in this sense, in regard both to the ego and the systems of defense. Less discussed in the literature are the possible effects of high threshold, which provide a less rich experiential setting. On this account, reactivity was viewed as a nonlinear variable, with the point of optimal functioning somewhere between the two extremes of the normal range.

Cases were also noted in which tactile stimulation, whether or not it

* The psychological examination included the Gesell Developmental Schedules which rated the child's performance in four areas designated as Language, Personality-Social, Motor, and Adaptive.

appeared to be an area of maximal sensitivity, was a special source of pleasure, of discomfort, or of both. Sheila, at four weeks, was a robust baby who cried when she was wet or started if her feet were touched; Donald, at sixteen weeks, showed both pleasure and displeasure in tactile experience; Molly, at eight weeks, seemed to find it largely a source of pleasure. Tactile receptors are among the first to be fully operative, and just because the young child cannot move freely, he is especially exposed to what impinges on his skin. The infant who enjoys tactile experience is presumed to have available, from an early age, this added avenue for satisfaction, and will find support in the bodily contact offered by others. For the infant to whom it primarily brings discomfort, tactile sensitivity produces frequent experiences of irritation.

The psychological literature supports the idea that touch may have a special role in early personality development. Shirley[6] mentions the often dramatic individual differences observed in response to her textile test for infants; Hoffer,[7] in connection with the development of what he calls the body-ego, and Stevenson[8] in writing about the way in which the infant utilizes fetishes as transitional objects in freeing himself of dependence on the mother, discuss the importance of tactile experience. Lois B. Murphy[9] early introduced toys with varying sensory qualities, including the tactile, into her play sessions with young children. L. K. Frank's monograph[10] on "Tactile Communication" offers a comprehensive review of the subject.

Activity level was rated by each investigator at the time of the Infancy Study observation taking into account the infant's percentile position in his own age group. Our assumption is that the child who can readily go into action will be able to communicate his needs and deal with his environment, but for activity level, as with threshold, the optimal point probably lies between the two extremes. Both the child who shows very high activity and the one whose activity level is very low may miss something of the quality of the outer world. A second item here deals with the relationship between the child's rank in his own age group for overall activity and his rank for activity and reactivity during sleep. In the group of children studied, it appeared that those whose vegetative functioning had progressed easily tended to show approximately the same relative activity awake and asleep. Those with vegetative difficulties tended to show a different activity level during sleep.

Developmental balance—Leitch and Escalona[2] suggested, on the basis of clinical observations, that developmental scatter extending below the

infant's age level might be related to psychological disturbance, and Hellersberg[11] has discussed unevenness of growth as a factor contributing to vulnerability in children. The data of the Gesell tests were analyzed for balance in the developmental pattern of these infants; some of them received the same rating in all four areas of functioning; others showed a wide range, *e.g.* as much as twelve weeks.

The term drive level was used to indicate the degree to which the infant was reaching out, perceptually and physically, toward the external world, his interest in bodily activity, and in his own body as a perceptual object. This was a dimension in which striking individual differences were observed, and like activity level, one in which both extremes seemed relatively unfavorable: the infant with very high drive often failed to interpose the delay between perception and response that has been considered as favoring the development of fine motor coordination and more abstract levels of thought. The infant with low drive often failed to engage himself sufficiently with objects and activities to produce maximal development. Sheila, at four weeks, seemed to struggle to obtain a visual grasp of her world while her brother Steve, at the same age, was relatively passive in relation to it. Thirty-two-week-old Tommy avidly seized each object that came within his reach, with a whole-body response; Barbie, at 24 weeks, made less effort than any baby within her general age range to deal with objects. Terry and Ronnie, at 32 and 28 weeks, were strenuously engaged in mastering motor skills.

By degree of functional stability was meant the extent to which the infant's observable behavior resisted gross bodily change under conditions that otherwise seemed stressful, specifically the shifts in autonomic, affective, motor, and perceptual functioning to which some infants are especially subject and which some handle more effectively than others. Thus, fatigue in one infant was recognized by evidence of superficial irritability while another showed massive autonomic change. Our tabulation also included the situations which were characteristically disturbing for each child. Molly, at eight weeks, showed greater strain with objects than with social stimulation; Lennie, at four weeks, reacted to loss of autonomy or being held in one position rather than another; Diane, at 28 weeks, seemed undisturbed by anything but cumulative fatigue.

Areas of maximal and minimal differentiation of perception and behavior were also noted. Ray, at 16 weeks, responded differentially to people, yet in a relatively stereotyped way to objects; Steve, at four weeks, showed an especially high degree of differentiation in motor activity. Tommy, at 32 weeks, rated high in adaptive behavior, probably because of the energy and decisiveness with which he grasped objects and manipulated them, yet it was noted that he treated one object more or less like another.

Similarly, systems in which stress effects showed themselves in each infant were noted. When Sheila became upset her crying was accompanied by deep purple flushing that involved her whole body; Steve's arms and legs became rigid and his movements showed a jerky, quivery quality; Susan's vocalizations changed in quality and became less differentiated. In many cases several systems were affected, but one or two usually more so than others.

Among environmental variables special attention was given to different aspects of the mother-child relationship; first, awareness of the baby's needs and sensitivities. One mother seemed to shift the baby's position merely because she herself was restless, regardless of whether the baby might be falling asleep. Another would restrain the movements of an infant for whom freedom of movement was clearly important; another, in an almost mechanical way, would tune her own activities to the baby's momentary state. Nor did the mother's sensitivity in this sense tell the whole story about her handling of the baby; the basic physiological and temperamental compatibility between mother and infant is very important. Lennie's mother showed a certain "toughness" in handling her sturdy, well-knit, four-week-old baby who fully satisfied her desire for a male child; she seemed to take pleasure in offering him a little less support than most mothers would have given an infant of that age. The basic compatibility between this mother and baby seemed sounder, as regards their relationship, than mere sensitivity would have been. From the same point of view, one can see the relationship between Tommy, at 32 weeks, and his mother as less favorable. The mother was everything that the usual stereotype of a "good" mother would suggest. She was gentle, sensitive, and tender; but Tommy was an apparently high threshold, active baby with an insatiability for experience that might have been reduced by the stimulation of somewhat rougher handling.

Degree of respect for the baby's autonomy needs was a measure of the extent to which the mother followed clues the baby seemed to offer. One mother assumed that she knew the position in which the baby should sleep, how much he should eat and the like. Others, in an equally matter-of-course way, adjusted their approach to that of the baby as they fed him and dressed him. Similarly, notations were made of the extent

to which the mother was able to accept the baby's own developmental pace instead of pushing him to keep up with what "the book" suggested that he should be doing or what her neighbor's baby had done at the same age. Her skill in handling the baby was sometimes a useful clue, though it had to be considered in relation to her basic manual dexterity. For example, a cold and coercive mother might show a high degree of skill while a warm and tender young mother might fumble in handling her child for the first time before strangers.

An over-all estimate was made of the degree to which the mother seemed to accept her child. The mere fact of participating in two studies probably served to eliminate cases of open rejection from our sample, but even with this degree of selection there were striking differences between the mother who showed some kind of special pleasure and delight in her child, mothers who showed a warm matter-of-fact acceptance, mothers who seemed coolly neutral, and some who expressed doubts, for example, asking how early you could tell whether a baby would have a good disposition. The degree of satisfaction with the baby's sex often coincided with degree of acceptance, though in some cases it seemed irrelevant. When it was strongly expressed it was important. Lennie's parents, for example, had been so eager for a boy that they hardly dared admit it even to themselves while Gordon's mother had wanted a little girl whom she could treat as a doll and her disappointment remained in spite of the satisfaction that she expressed in her baby.

Another group of environmental variables referred to the mother as a person. Her level of adjustment was evaluated from impressions recorded by the psychologists and the psychiatrist who participated in each project session. Degree of acceptance of bodily functions in general was judged by what the mother said, or seemed unwilling to say, about the physical side of life, for example, by her handling of a soiled diaper. Acceptance of breast feeding was included in the somewhat broader item regarding bodily functions but dealt more specifically with the mother's behavior if she needed to nurse the baby in the strange situation of the project session or the reasons and the apparent feelings connected with her initial decision about breast feeding. Success in breast feeding often involved more than psychological factors but what the mother told about it indicated a good deal about underlying attitudes. Reported ease of pregnancy and delivery again went beyond what was psychological, but what the mother told and what she appeared to avoid in answering questions on this subject added to the picture of her feelings about bodily processes.

The infants were at an age when the father's contact is limited, but he was important to the baby, at least as he affected the mother's functioning and three variables concerning the relationship between the parents were included, although they had to be judged, in most cases, chiefly from what the mother said. Her report often provided a basis for an estimate of temperamental compatibility between the parents. Disagreement in hopes expressed for the baby's sex shed further light on underlying incompatibilities and strains between the parents. Agreement on handling the baby and on early discipline has been shown by later contacts with the families to be a sensitive item, even when the baby was only four weeks old.

Aspects of the infant's own behavior designated as ways of handling himself and the world were seen as potential precursors of later styles of coping and defensive behavior. They were treated under three headings, as passive forms of behavior, as active, and as behavior that involved the utilization of support. Among the items of behavior classified here as passive was escape. Even the very young baby used escape as a means of dealing with external stimuli that brought discomfort: a deliberate closing of the eyes, as contrasted with more reflexive blinking, may be a first indication of this kind of protective mechanism; at later ages cases where an infant closed his eyes and went to sleep in the face of the test demands were seen. Instances of this kind seemed clear cases of leaving the field, much as an older child or an adult does when he removes himself bodily from a situation.

Avoidance was perhaps a somewhat more differentiated kind of behavior, occurring when an infant seemed to disregard one kind of stimulation while still responding to others. Darlene, at eight weeks, showed mild distress when the shiny cup was first shown during the psychological test, then paid little attention when it was presented again, apparently looking at things other than the cup, but attending immediately when a red cube was offered. Unwelcome food was avoided at later ages. In some cases another activity, for example sucking, seemed to be used as a protective screen against unwelcome stimulation.

There were marked differences between babies in the ease with which they were able to accept substitutes. Most of them, once they had reached the age of manipulating objects, found a certain degree of difficulty in relinquishing anything with which they had engaged themselves, but some babies would easily shift to another if something new and equally attractive was offered. Terry was almost unable to give up an object in

which he had once become interested and Tommy was always ready to exchange one for another.

Most infants used some form of active protest in the face of discomfort or external pressure. Like the ability to escape and avoid, it probably has its roots in early reactions of an automatic, physiological level.

It was often possible to distinguish active rejection from avoidance. In the case of unwanted food we spoke of avoidance when the child merely turned his head away, but of rejection when he spat food out, firmly closed his lips, or at a later stage pushed a bottle or a spoon away.

Some infants showed a high degree of ability to act to attain or to structure an environmental situation to meet their own desires. Sally, at 28 weeks, started rocking activity and slid off her mother's lap and made walking movements. Karen, at 20 weeks, initiated social contacts with members of the project staff.

Babies differed in their use of sources of support. When upset, some responded to comforting ministrations; others seemed less able to do so. An evaluation of this factor included the mother's capacity to offer support as well as the baby's ability to use it. At 16 weeks, we saw an ideally adapted mother-baby pair, with Ray's mother easily offering what the child needed from moment to moment, and the baby able to melt into her arms and accept what she gave. Terry, 32 weeks old, was offered less by his mother, and he accepted comfort only when he was in extreme distress.

Some babies, also, obtained more support from their own functioning than others. The child who could obtain comfort from eating, from sucking his thumb, or at a later stage from touching his own body had an important resource. Patsy and Terry, 32 weeks old, presented contrasting pictures in this respect—Patsy enjoying food and often engaging in thumb sucking and rocking, Terry taking little pleasure in eating or any bodily activity of this sort.

Each of the infants in our sample was rated or described in terms of all the variables for which we had information under the three categories, equipment, environment, and ways of handling stress. In each case we studied the picture presented by ratings and notations for the variables in a given category and assessed the case as positive or negative for that category, then evaluated over-all vulnerability in terms of the balance among the values assigned in the three categories. Thus, Martin, 20 weeks old, with relatively low thresholds and a marked imbalance between high drive and low energy resources, was given a negative rating

on equipment: it was assumed that his liabilities outweighed his assets in that category. He was also given a negative rating on ways of handling stress, but environment received a positive rating; his mother was unusually sensitive to his idiosyncratic needs and handled him in a way that made it possible for him to avoid tension and to utilize his positive resources beyond what he could otherwise have done. When these three values were considered in their relationship to each other the case was evaluated as falling at a middle level of over-all vulnerability at that stage.

Cynthia, 16 weeks old, had a history of physiological difficulty, was easily fatigued, showed evidence of low sensory thresholds, and a high degree of variability in both behavior and muscular tonus. Her mother was inhibited in showing affect, often insensitive to the baby's fatigue, often coercive, and anxious about her own stability. The baby's ways of handling stress (both from her own functioning and her environment) seemed quite inadequate. Cynthia was given negative ratings in all three categories, and was seen as very vulnerable. Sally, 24 weeks old, was a tough, vigorous baby who combined high thresholds with high drive and great enjoyment in each area of functioning. Equipment factors were largely positive. Little stress occurred during the time when she was seen. She showed unusual capacity to reach out and to structure a situation to meet her own needs. In this sense her ways of handling herself were positive. Her mother, in spite of being mildly coercive at times, was warm and loving with the baby, happy at having a child of her own sex. Sally was considered minimally vulnerable at this stage.

Each of the 31 children of the Coping Project who had been seen in infancy was studied in this way in terms of equipment, environment, and ways of handling stress. A five-level scale of vulnerability was used for a final evaluation, with Level I including the five infants like Cynthia who were seen as especially vulnerable. Level V included eight infants like Sally where assets seemed to outweigh liabilities in every area. Three were classified with Martin in the middle at Level III and the remaining divided between Levels II and IV.

These were all infants who had been selected for Infancy Study as "normal, healthy, well-developing babies" and all were classed within the normal range at the time of the study. Each of the five judged most vulnerable had definite areas of strength; Cynthia and Karen showed comfortable pleasure in social contact with members of the project staff; Terry, whose urgent drive toward mastery of the external world and his own motor equipment was a source of special strain, had the skill that was

necessary to reach many of the goals that he set himself, and goal attainment was a major source of satisfaction to him. Similarly, each of the "low vulnerability" babies of Level V showed areas of susceptibility in spite of qualities that made for high over-all resistance to stress.

A few generalizations can be drawn about factors that seemed related to high or low vulnerability as judged in this preliminary survey, generalizations which can best be thought of as hypotheses to be tested in further studies under more controlled conditions:

1. Physiological factors like robust physique, good energy resources, and easy vegetative functioning were related to low vulnerability.
2. A good mother-child interaction was related to low vulnerability, especially when this was seen as including the extent to which a particular mother met the needs of a particular baby.
3. Certain functional patterns seemed related to degree of vulnerability; a high drive in a given area, coupled with ease of functioning in that area and good performance seemed related to low vulnerability. High drive in an area in which performance involved special effort made for high vulnerability.
4. Babies whose vegetative functioning had proceeded easily tended to show the same activity level in relation to their own age group whether awake or asleep. While this factor did not show a statistical relationship to vulnerability level, the direction of difference between sleeping and over-all activity seemed related to other factors, *e.g.*, children whose relative activity level increased during sleep were often those whose waking activity may have been restricted by controls from within and from the environment. Children whose relative activity level decreased during sleep tended to be those who drove themselves beyond the limits of comfortable functioning when they were awake.
5. Several factors appeared that might be related to high vulnerability. These included narrowness of range of interest, *e.g.* in an infant who focused his attention on objects to the exclusion of the people of his environment, or an infant who engaged in motor activity and paid little attention either to objects or people. Experiential inconsistency may also be linked with high vulnerability, where the same functional area is a source of both pleasure and of discomfort, where physiological factors like energy level show a wide range, and where environmental factors like maternal warmth are variable. All these forms of inconsistency may affect the development of trust [illegible] Erikson has defined them.[8, 15]

CHILDREN'S WAYS OF COPING WITH THE INTELLIGENCE TEST*

ALICE MORIARTY, PH.D.

Intelligence tests were used in the Coping Project not only to assess the child's general level of mental functioning as summarized by his "mental age" or "I.Q.," but for a detailed study of the role of functioning intelligence as it is implemented, modified or controlled by affective factors in the behavior of the individual child, and by the situation with which the child is trying to cope.

As structured tests are ordinarily used, test scores provide normative data about the current level of cognitive functioning considered broadly as an over-all measurement of capacity to learn and of the level of development of such cognitive skills as memory, perception, verbal and numerical reasoning and comprehension, as well as a gross estimate of fine motor skills. Beyond patterns and organization of thinking, we were interested not only in a comparative analysis of part scores, such as of memory, vocabulary, ability to abstract, differentiate, compare and integrate, but also in the development of theoretical formulations of how and why a specific pattern was evolved and in what form it emerged.

For example, we sought to record how much the child remembered of the context of stories, the length of his memory span for digits, words, or sentences, and how he used his capacity to remember to cement social relationships by reporting colorful memories from his own experience, or to piece together and reorganize his thinking in relation to current test demands. We noted the number of words he knew, examined his choice of words reflecting his interests and values, the fullness and richness of his perceptions, the ease with which he talked, and something about his feelings and attitudes toward his family, peers, the examiner and people in general.

The child who defined the word "orange" as "Well, it's something that has juice in it and you squeeze it in the squeezing room and then you get the whole juice" alerted the examiner to the child's awareness of uses and values of things and to his original and full verbalization. In contrast, the equally correct response, "that you eat," suggested a characteristic brevity of response which might reflect efficiency, inhibition in verbal-

* This article is part of a monograph by Doctor Moriarty "Coping Patterns of Preschool Children in Response to Intelligence Test Demands," now in preparation for publication.

izing, or a functional orientation in the pattern of thinking. A single response raised questions; an accumulation of similar responses gave a basis for inference and generalization as to how a child used his skills.

Similarly, we attempted to examine a child's capacity to differentiate or to compare objects or to integrate facts in pointing out absurdities, and his use of these functions in perception of himself in his environment, *i.e.*, whether he was predominantly cheerful, optimistic and openly positive in his expectation of pleasure and success, or suspicious, pessimistic and inclined to expect disappointment and struggle in his contacts and in himself and how he defended himself or coped with his own failure to understand or to respond correctly. (The child who differentiated wood and coal by saying, "Wood isn't coal, silly," was attributing his failure to the examiner's foolishness in asking the question, whereas the child who answered, "I think them's both black," was tentatively feeling his way with an indirect request for reassurance.)

Several factors considered in the role of intelligence, as it was evaluated through test scores along with the clinical observations of the children, were:

1. What does the intelligence test situation mean to the child?
2. How does he express and utilize the skills he has?
3. How are his patterns of self-expression related to personal ways of perceiving and to temporary or long-standing affective states?
4. How does he cope with difficulty or failure in the tests?
5. In what ways are the behavior patterns observed in this specific test situation related to sustained and individually appropriate patterns of coping with other forms of stress or challenge?

While the intelligence test sessions most nearly approached the "ideal" controlled experimental situation, we found ample evidence for our feeling that we must concern ourselves not only with how the child behaves in response to a standard situation, but also with how he perceives the situation.

The intelligence tests were regarded as one challenging, demanding, difficult or frustrating situation which provided a sample of the child's behavior. We observed his cognitive efficiency, his way of orienting himself to the situation—including how confident he was in his capacity to meet and handle the tests—his willingness to cooperate with an unfamiliar adult, his ability to ask for and accept help from the examiner, his readiness to accept the limits of his own skills and the capacity for modifying

or restructuring a situation so as to satisfy and protect his own autonomy needs, and his wishes to comply or conform.

While psychologists have tended to think of structured tests as relatively simple and unthreatening procedures, we were forced to realize that there were numerous pressures in the situation which might make it an exceedingly difficult one for a young child of three, four or five years of age who has seldom been away from home. At first he faced the relatively new experience of separation from the mother. For about half of the group, this meant driving away from home with two adult strangers, to go to a new place for purposes which must have appeared odd, vague, and possibly frightening. While half of the mothers accompanied the children to the testing rooms, only a few mothers stayed with the child throughout the examination.

Testing was usually conducted in a second-floor room of a private home. Most mothers who came waited downstairs until the examination was finished. Although the child was encouraged to leave the mother, he was free to go to her if he wished or to invite her into the examining room. In a few instances, as when the child was unable to climb stairs easily (one child used crutches as a result of polio), or when the family had moved out of town, testing was done wherever convenient, as in the examiner's home.

While family responsibilities often prevented the mother from leaving home, this may not always have been clear to the child; particularly where there were younger siblings, separation may sometimes have been interpreted as rejection, or displacement in the mother's affection. Separation from the mother at the examining room door reflected the child's social ease in some cases, but in others it occurred only because the small child could not override adult pressures for separation.

Some children in the sample had attended Sunday School, but only three attended nursery school. Most were used to family visits, but few had traveled and many were unfamiliar with different parts of the city. This was particularly striking in the poorer children such as Rachel, who marveled at the big homes and beautiful lawns and flowers of some of the unfamiliar sections of the city through which we drove to reach the examining room.

A trip with new people to a new place, particularly for the shy, retiring children, must have been somewhat confusing insofar as it was different from previous experiences and left no room to predict what might happen. Only a few children cried. They usually came along

quietly with their uneasiness reflected in facial solemnity and bodily stiffness. Verbal communication was limited initially and rarely did a child display instantaneous warmth in relating himself to the examiner. Of course, the time required to establish a relationship with a child varied considerably. Some children seemed to be open and free in five or ten minutes. Others were not entirely comfortable even after two or three sessions of an hour each. Some children prolonged separation from the mother while a few insisted that she must remain in the room with them. Others were content to know that she was in the same house. A few children who did not require the mother's presence were able to delay testing itself by physically or visually exploring the room and surroundings. The point is that while the children varied in the quality, intensity and duration of resistance to testing, nearly all required some orientation time to survey and feel out what was wanted and what was offered.

In the testing room, the child met many bright and shiny objects (such as crayons, stopwatch, puzzles, blocks, toys) to which he was expected to be attentive for a long period (forty-five to sixty minutes), but which he must use in an orderly fashion as the new and unfamiliar adult directed. He was often asked to defer his wishes to continue playing or to control his spontaneous enthusiasm in order to go on to less interesting objects or tasks which he was required to handle in specific ways, sometimes repeating or working rapidly when the reason was not immediately obvious to the child. Such concentrated attention was unusual and test structure, even when it was made as flexible as possible, was clearly confining and in some cases irritating to children their age. In addition, the test—a long series of discrete tasks without extended intermissions for play—was at times boring and fatiguing. How much this was true depended, of course, on complexly interrelated factors, such as cathexis for the materials offered, physical health, level of affective interaction with the examiner and over-all attitude toward new things and new people. (Tommy, Martin, Patsy, Cynthia complained of fatigue. Brenny once nearly fell asleep. Susan denied fatigue saying, "I never get tired." Teddy and Gordon, who were suffering respiratory difficulties prior to tonsillectomies, did not verbally object to testing, but looked tired and frequently rested their heads on the table.)

Lest we present too black a picture of how the test must have appeared to the children, we should add that many children indicated that they felt test materials were both stimulating and pleasant. The short-term nature of the assignments given the children was an asset, as well as

the variety of material shown to the child. Sometimes children admired the freshness and newness of the toys or puzzles or eagerly anticipated what might be shown next. (Steve wistfully remarked, "Wisht I could have these. Maybe I could come back someday." Chester admired the brightness and sturdiness of the small table and chairs. A number of children specifically asked to come back for a second session.)

A special aspect of these tests was the continuous note-taking by two adults, one actively involved with the child, the other sitting at one side. Nearly all children indicated awareness of being observed, but feelings about it varied. For example, Susan interpreted the lowered head of the parallel observer as "going to sleep" and withdrawal of attention from the child. Greg objected to the recording of answers he considered inadequate or partially formulated. Karen and Cynthia checked to be sure that the examiner recorded everything they said. Terry teased the examiner by suggesting she would not be able to put down everything he said; his loud, rapid, poorly articulated speech appeared to be a form of hostility of which he was at least partially aware. Molly avoided looking at notes or at the observers. Patsy and Vernon eyed notes with some suspicion and embarrassment.

Perhaps a major difficulty for the child early in the session was vagueness as to what would be demanded of him. In this sense, structured tests differed from all other sessions. The pediatric examination, even though it might be fearsome (some children were apprehensive about getting a "shot"), was a familiar experience. The psychiatric play session and the Miniature Life Toy session, where toys were obviously to be used as the child wished, did not impose time limits or restrictions as to how the toys should be used. A number of children referred to the structured tests as "work" or "school," in contrast to the unstructured sessions which they considered "play." Barby, for example, mumbled accusingly at the end of the session, "play, play, we haven't played." Karen interrupted a test she did not like to suggest that we play instead.

For many children in our sample the structured test was probably the child's first encounter with an adult who persisted in learning what the child knew. On the whole, our families were not inclined to be concerned with achievement and with a few exceptions were not familiar with the norms and standards of Gesell. Most children were more at home with performance tests. It was doubtful, for example, whether any of the children had ever been asked at home to define a word or to point out

absurdities or missing parts, but nearly all of them had strung beads, played with blocks or put puzzles together. When verbal concepts were limited, or terms lacking, or when shyness and inhibition made verbal communication uncomfortable for the child, the examiner's repeated and continuous requests for small bits of information must indeed have seemed strange, as well as arbitrary. The children liked to be clear, to understand, to relate test material to known experiences and to have definite answers from the adult. (For example: Terry refused to be put off with an indefinite answer and challenged, "Well, is it or isn't it?" Many questions were asked about how things were made and how things might be used. When Joanne was presented with colored discs, she asked, "Say! This isn't a poker game, is it?" Chester, in response to the verbal absurdity about Bill Jones said, "Who's Bill Jones? . . . My daddy knows a guy named Jones—Jones-Mack." Teddy strove to express himself clearly: "I weigh 65 pounds. That means I'm taller . . . I mean stronger than he is." Some children, when they had no ready answer, referred to supernatural forces. Sally, for example, looked wide-eyed when she was asked "how are wood and coal alike?" and in a moment replied, "Dod makes it." Or Gordon, when he was asked who discovered America, answered, "I don't know—ah, God!")

With a few exceptions, these children had been allowed to go along at their own tempo without need to meet someone else's speed standards. It was doubtful, therefore, whether many of the children had ever been required to sit at a table for as long a time as the Stanford-Binet Test required. Confusion about time limits must also have arisen because most of the children had only primitive notions about telling time or about the length of time intervals.

A further area of potential stress, particularly important to some of the children, was the need to interact with an authority figure. While most of the children casually accepted the authority of the adult, almost all of them at times resisted adult interference or direction. With some of the younger children, this was undoubtedly related to developmental level. With some of the older children, reaction to authority was related to feelings and attitudes toward their own parents. With the exception of a few grossly inhibited children, the sample was able to maintain a neat balance between positive cooperation and spontaneous expression of their own needs and wishes.

Coping with Difficulty

A final way the structured tests differed from other sessions with the child was that each child was forced at some point to fail. The children's responses to cognitive difficulty or failure provided some of the most striking and idiosyncratic differentiations in children's coping patterns. Here we saw most vividly the range of behavior a child used in mobilizing his resources, the extent to which he could organize and manipulate both his own skills and his interpersonal relationships, the extent to which he could fend off or protect himself from frustrations or directly seek a solution. Here, too, we most often observed inter- and intra-child behavior differences or shifts which meant something to the child. It was clear from our records that most children were equally concerned with maintaining their own integrity or equilibrium and in finding an objective solution to the test task presented. Whether these coping efforts were direct and active, or indirect and at times even passive and undesirable from the adult's point of view, nevertheless, when examined in relation to the total context of the child's development, they were seen to be useful.

While most children employed a range of coping techniques, nearly all preferred and more frequently used techniques which seemed to be related to their total life style. For example, Teddy, a bright, sober, pedantic child who was proud of his reading skill prior to entrance into the first grade, handled the tests with major reliance on mobilizing cognitive resources. He had a strong drive to know and to be clear, and while he asked for help, usually in terms of clarifying the demands rather than seeking physical help, he was more likely to focus his attention, survey, evaluate, classify, concentrate deeply, integrate and utilize previous experience. Motor reactions were primarily functional postural changes and ways of elaborating precise verbalizations with effective pantomime and meticulous manipulation of materials. He expressed himself independently by creative restructuring and occasional subdued humor. Affectively toned down in comparison to many five-year-olds, he met intellectual challenge with zest and rebounded from any temporary setback with renewed efforts. Unlike many children, he did not need to escape the difficulty because it was in itself highly stimulating.

Other children, like Vernon, coped with difficulty or failure mainly by various forms of avoidance, keeping communication and interaction at a minimum. Although Vernon was a superior child intellectually, he never

made full use of his cognitive resources. He talked as little as possible in a soft voice with little inflection. He often turned his head away or covered his work with some part of his body as though to conceal both his thoughts and feelings. Whenever he was asked to express his ideas in the form of pictures, he was particularly uncomfortable. He worked in a slow, unhurried, meticulous fashion, but never showed pleasure or spontaneity. He remained independent mainly by ignoring the examiner's comments or offers of help. He seemed to find some self-support in careful and clear visual perception and in family identification, especially with a cuddly and more vigorous baby brother. Aside from the warmth of this relationship, which he allowed the examiner to see but not share, he remained restrained and passively hostile.

In contrast to both of these boys, Joanne used a wider range of coping techniques without showing any marked preference for one over another. Even though she was much lower in tested intelligence level than either of the two boys, she was much more actively involved in the tests and more responsive to the examiner as a person. She used her cognitive resources far more efficiently than the much brighter Vernon and displayed a wider range of affective responses than the serious and sedate Teddy. Vigorous physical exploration and aggressive self-assertion occurred frequently. Her test performance involved considerable trial and error, but this was tempered by skillful sizing up of the situation, use of environmental cues, self-evaluation and casual recognition of her own limits. She quickly became oriented to testing as something comparable to school and assigned the examiner the role of a permissive, friendly teacher whom she expected to be helpful and understanding. Speech and movements were quick and energetic; she enjoyed changing and modifying the situation, sometimes taking over the role of the teacher, sometimes shifting to an easier, more satisfying task, sometimes critically projecting her difficulties. She found support mainly in pointing out where she did well and in establishing a warm, comfortable social relationship within which she felt free to criticize or delay at will. Occasionally, when frustration mounted, she suggested termination of the task or left the field of stress by walking away. She not only employed more ways of handling the test than either of the boys, but shifted more flexibly from one type of coping to another.

Roddy, on the other hand, handled the tests with emphasis on motor adjustment. An engaging child of average intellectual ability, he moved toward and away from the tests with spurts of interest and although the

driven quality of his hyperactivity made him incapable of steady application of effort or energy, the warmth of his social interaction and his intense need to please and be liked were strong levers to elicit cooperation. He often roamed about the room in a restless fashion. He handled much of the test material with quick and aggressive movements and used a great deal of motor trial and error. His bravado and enthusiastic confidence were modified by wistfulness and occasional persistence, terminated when, aware of failure, he asked for help, shifted to easier tasks, made a joke of failure or ultimately escaped frustration by proclaiming thirst or fatigue, disposing of test material, or leaving the field altogether. While he had a smaller range of behavior than any of the preceding three children, was less interested in intellectual pursuits than Teddy and less effectively used his potential cognitive resources than Joanne, Roddy, nonetheless, was able to handle the tests with greater resilience and flexibility than Vernon and with vastly greater freedom of movement and affective warmth than Teddy.

Coping patterns in these four children suggested that each child used some modes of behavior more frequently than others. While level of intelligence may have partly determined both range and efficiency of coping with difficulty, it was clear that other personality factors had much greater effect in determining coping style. The impressive variety of ways in which individual children coped with cognitive difficulty or failure included the following maneuvers.

Cognitive efforts, such as:

Thinking out in a logical way, calling upon past experience to meet intellectual challenge.

Categorizing: classifying, comparing, differentiating, qualifying; naming, counting; insisting that examiner explain in these terms.

Taking time out to survey, explore, feel out tactually, visually, motorically, or verbally; looking ahead to avoid errors: verbal clarification and self-orientation.

Relating tests to personal experience: Buttons: "I can't. I'm sure I can't. I can button my coat. I have to put my finger in there." (The child was explaining that since he could button his coat, he could probably also handle the test buttons.)

Staying with known success in the test, often continuing beyond satiation. ("We ought to do that some more." Repeating Seguin formboard four times and offering to do it again.)

Using humor to cover up embarrassment, distracting examiner by "cute" verbalization; laughing at oneself; teasing examiner; exaggeration, tall tales.

Changing the subject or ameliorating potential frustration by reporting fantasies.

Efforts directed toward staying in control of the situation by:

Asserting wishes, refusing to be bound by prearranged plan, making wishes known: "I want to make it zissaway." "Do you have something else? Don't want to play with these."

Assuming examiner's role: asking questions for examiner to answer, sitting in her chair, "explaining"; shifting responsibility: "You tell me"; sharing responsibility: "You do two of these and I do two of these."

Delay or stalling as "I couldn't do that right now." "I'm not ready yet. I gotta tie it. Pretty soon I'll be ready."

Setting self-imposed time limits, for example, suggesting examiner count to ten and that the task would then be done.

Modifying instructions: turning around or looking at ceiling instead of closing eyes as asked, short-cutting directions.

Making failure more tolerable by admitting difficulty: "I can't do it best. . . . It's a little hard for me." "I said it was too hard."

Asking for legitimate help or reassurance: seeking more information, clarification or assistance; physical contact: rubbing or patting examiner, placing head in lap, pressing close; in one child, making examiner a virtual mother-substitute.

Arising to challenge: "I don't know how to make a foot, but I'll try."

Making failure less obnoxious by pointing out where success occurs: "I can't build this, but I got that."

Efforts to concentrate on motor aspects of demands:

Becoming over-meticulous: excessive deliberation in making choices; unusual care in handling test equipment; pedantic verbal expression; wish for correctness, completeness. About one half of the children increased precision with difficult tests, whereas half passively gave up. Boys seemed to be somewhat more persistent than girls.

Efforts to avoid by:

Shifting to easier or more familiar but related task: as cutting out a smaller piece of paper than the one requested, building a tower instead of a bridge, making a circle instead of a square, counting instead of repeating digits.

Shifting to easier, different task: (Asked to copy a star, one child said, "I'm making a garage. I'm making a garage. I can't make that one. It's too hard. I ca-a-an't").

Verbally shifting attention to less ambitious project: ("Do you want me to do something I *can* do?") "I can do something else."

Substituting task in which confidence and skill were established in past experience. ("I can wink all by myself.")

Suggesting items be omitted altogether or that an activity be terminated: "That's enough." "That's all I want to say."

Actively protesting: "I can't . . . 'cause I don't want to." "I don't care. I just don't want to."

These devices appeared to be useful to the child in his efforts to handle test difficulty. Other devices served to maximize gratification or to control or decrease tension level.

Strong familial identification as a kind of refuge. Clinging to mother. Talking in some detail of mother's skill in sewing, or father's athletic prowess. Identification with examiner: "We got nine points."

Building up self-esteem by citing superiority over sib: "I can stay inside the lines. That little kid goes outside the lines." Superficial self-assurance; bravado.

Emphasizing acquisitions: a desperate need for things, competitively demanding more than sibling.

Minimizing, or excusing failure, sometimes with projective overtones, as: "There ain't any" (similar pictures); "Well, I'll tell you. I never made a kite." (copying a diamond); "I forgot." "Mother didn't tell me." "I bet no one can make one like that." Minimizing failure by anticipating success in the future: A child who could not tell time said, "No, but I will some day."

Self-critical: comments as, "I gotta think first. . . . That's crazy that I don't know." "What's the matter with me?"

Criticism of examiner: "You didn't give me enough blocks"; "I can put it away more neatly"; "Hook, what's the mattah? Am you teasing? I can't believe this. There's no horsey. This was never a cut-up horse."

Critical of tests or materials: "They can't cut, can they? . . . I don't like your scissors"; referring to test items as "silly," "nutty," "crazy," "dumb." Implied criticism of procedures by expressing hostility motorically: jabbing pencil into paper; handing materials to examiner with sharp thrusting movements.

Enjoyment of sound effects, which often seemed to have release value. Imitating animal or mechanical sounds, nonsense sounds, excited squealing, singing, humming, remarking on the clatter of blocks or other noises from manipulation of equipment by examiner or child. Varying intensity or speed of speech with soft, low sounds occurring more often when child was failing. Conscious use of baby-talk, almost as though child were saying, "I'm little yet. Why do you expect so much of me?"

Sensory facilitation: Tactile-pressure sense: rubbing, patting, tracing, fingering materials or own body; orienting spatially; native alertness to sound: to satisfy curiosity, potential escape, an expression of well-being, autonomy; delight in visual detail: expressing pleasure in many rarely noticed details of room, test, objects seen on trips to session.

Avoidance of difficulty by: Disposing of, shoving away, scattering, dumping, hiding unpleasant or unsatisfying objects: accidentally dropping objects; pushing; squeezing, crumpling, biting, mutilating test materials or handling roughly; concealing work; physical removal of person

from situation (leaving the field by turning away, lowering eyes, averting head, going to sleep). Keeping affective relationship at a low level by remaining aloof. (Nearly all children, even those most active, were sometimes quiet and uncommunicative.)
Offering an acceptable reason for termination: "I'm getting tired. I've got a headache."

The quantity and variety of maneuvers the children used to cope with structured tests clearly supported our view that while tests may be unthreatening much of the time and even gratifying and pleasant at times, they do present some stress to nearly every preschool child. It seemed equally clear that stress was ordinarily greatest when cognitive difficulty or failure was encountered. On the other hand, there were some children who welcomed structure, particularly if inhibitions and fears made freedom of choice and release of fantasy uncomfortable.

Assuming that structured test behavior was a sample of a child's personal way of handling any situation (including his attitudes and feelings about adults, and about himself), we rated certain aspects of behavior such as quality of participation, degree of warmth expressed, capacity for autonomous behavior, awareness of one's own limits and positiveness of self-feeling, and correlated these ratings with global ratings on effectiveness of coping as we observed it in many different situations, such as pediatric and psychiatric examinations, perceptual tests, trips to the zoo, or group encounters with other children in the group.

We were able to show that patterns of behavior observed in the structured tests closely resembled those observed in other situations. Furthermore, ratings of noncognitive aspects of behavior (especially feeling pride and confidence in oneself and being able to accept one's own cognitive limits) were more closely related to general effectiveness of coping than were I. Q. scores in themselves. Factors such as richness in expressing thoughts and feelings, the capacity to transcend the narrow limits of the tests—to enjoy the situation and to make it interesting by fantasy, tall tales or comparing it to other experiences and to feel pride and confidence in one's own adequacy—to regress or to become passive when it is appropriate, not only facilitate utilizing potential cognitive skills but contribute to fullness of life in general and especially to rewarding interpersonal contacts.

High intelligence as measured by tests did not necessarily and automatically lead to effective coping. On the other hand, certain cognitive functions, such as perceptual clarity, contributed greatly to some aspects of coping, such as resilience following stress or capacity to mobilize energy under stress. Good memory seemed to be a definite asset, especially for boys. Interestingly enough, general intelligence as measured by tests seemed to play a larger role in maintaining inner integration (which we called Coping II) than it did with handling the external environment (which we called Coping I).

We also found complex interrelationships between reality testing and self-insight. We have recently begun a more careful and refined analysis of a theoretically exciting statistical cluster suggesting that perceptual clarity (including perception of self, as well as clarity about the nature of objects in space) is a fundamental basis for a capacity to tolerate unreality or to achieve satisfaction from fantasy. We saw supporting clinical evidence for this finding in that children who in the structured tests were able to remain perceptually clear when pressed by cognitive demands, at or near their top level of functioning, were also able to mobilize their resources, to focus their attention and to refine differentiation.

In essence, we are saying that "general intelligence" as the term is commonly used, is as much of a wastebasket as the layman's conception of "nervous breakdown." As an isolated numerical score, it offers normative information. As we consider functioning processes, such as perceptual clarity and memory, we begin to see complex interweaving of cognitive and affective development. As we further examine creative and affectively appropriate use of intelligence for meeting and acting upon the environment, we need to keep in mind the level and quality of problem-solving in relation to the uniqueness of experiencing and ongoing development of ego patterns. In other words, we should like to go beyond the old formula that intelligence is what intelligence tests test, to a broader concept of behaving intelligently in relation to resources, internal needs and external demands. For any individual, appropriately intelligent behavior would therefore be unique and could be evaluated only in terms of the total personality as it responds to the challenge or stress of the environment as it is uniquely perceived.

THE PSYCHIATRIC EXAMINATION AS PART OF THE COPING STUDY

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In the Coping Study, the psychiatric examination necessarily took place under somewhat unusual circumstances. The psychiatrist and his playroom equipment were considered part of a new situation to which the children were exposed for observational purposes. Dr. Grace Heider (in the reports referred to as G. H.) brought the children to the sessions, introduced them to the doctor, and then withdrew to a corner with a notebook to record her observations of the children's reactions to each aspect of the situation, as well as their interactions with, and their ways of coping with, the doctor. To avoid contamination of the research data, the psychiatrist was not told anything about the children except their names and ages. Until his own psychiatric report was finished, no further information was given to him, though, of course, he sometimes did discover some facts about the background from the children themselves.

A number of children were seen for two two-hour sessions, and a physical examination was then performed in the last session. Because of limitations in psychiatric time, the physical examination was transferred to a pediatrician for the majority of children, and these children were then seen only once by the psychiatrist, for a two-hour session. However, in order to compare these children with the first group, medical instruments used for an ordinary physical examination (such as a stethoscope) were kept in the room where the psychiatric examinations were made. The child who is described here, was one of the children who was examined by the pediatrician and who was seen only once by the psychiatrist.

The room was equipped with a fairly large assortment of toys, appropriate to preschool children, which were used for observing the skills of the children, or which represented a silent invitation to them for self-expression. A large inflated clown, Bobo, and a smaller inflated toy, Bugs Bunny, were essential parts of the equipment, as they somehow fascinated children in this age group, and tended to bring out the children's basic anxiety and projections better than most of the other toys.

The psychiatric write-up utilized Doctor Heider's minute-by-minute descriptions of the children's behavior along with the psychiatric notes on the child's functioning. At the same time, it necessarily had to rely heavily on inferences, bold interpretations and at times seemingly wild

guesses or hunches. The main emphasis was on pinpointing the child's coping patterns and integrated functioning, but much attention was also given to qualities of the child's cognitive, intellectual, and emotional part-processes of psychological functioning. Here, too, there was much emphasis on the use the child made of these functions in his total coping efforts—as well as on the influence of the functions on the choice of coping patterns and their effectiveness.

In order to organize the data, the author utilized a free and slightly modified version of Dr. Karl Menninger's 1952 outline for psychological examination.* This outline proved to be very useful for the purposes of the Coping Study and especially made it easier for other participants in the study to quickly check on the aspects in which they were most interested.

The following report is published mainly to illustrate the contribution of the psychiatrist to the Coping Study. It may also have some interest because it turned out, in spite of the author's anxiety and trepidations, that rather bold and far-reaching interpretations and inferences based on detailed data from just one session surprisingly often yielded a picture of the basic functioning of the child which was compatible with the overall picture obtained from the total study. The author was impressed with the advantages of focusing on a child's strength and integrative functions, rather than on his weaknesses alone, as professional people sometimes tend to do when they examine very sick children.

Case Report

Identification

With a drawn pistol in one hand and nibbling a cracker held in the other, four-year-old Brennan swept into the playroom, grinning sociably and yet somewhat self-consciously. He certainly did not need the pistol to make one surrender to his charm, his refreshing vitality, his warmth and friendliness.

Brennan was short and stocky, sturdily and harmoniously built. One's attention was immediately caught by his radiant, expressive, eager large face with its full cheeks, high forehead and relatively small mouth and chin. His short blonde hair and fresh complexion made his face look

* See Karl A. Menninger: *A Manual for Psychiatric Case Study*. New York, Grune and Stratton, 1952, pp. 91–97. This outline will be changed in the coming second edition, but had not as yet been changed at that time.

somewhat immature and babyish. It was always in movement, always reflecting the many moods and feelings which he showed in a short time-span. But whatever mood was uppermost, his face always remained friendly and warm.

Brennan's gait was rolling, and broad-based as a cowboy's or a sailor's. His balance was excellent and his body postures were always well-adapted, relaxed, and efficient. His movements were decidedly masculine, quick, easy, smooth and carried out with excellent gross and finer coordination. He was left-handed but used his right hand well, too. Characteristic of his movements and of his interests were many abrupt turns and shifts of attention. These were not frequent enough to speak of restlessness or distractibility, but Brennan never stayed with anything very long, even when he was intensely interested in it. He rarely completed a task in one spurt, but interrupted his work to return to the task later and there might be several interruptions before the task was finally completed.

These observations may be colored by the fact that I was a complete stranger to Brennan and his behavior could, therefore, have been a result of the pressure of the situation rather than characteristic of his activities. As Brennan became more at ease with me, he stayed noticeably longer with his activities, but even then sudden shifts occurred before the completion of his tasks. I would, therefore, assume that these shifts were characteristic of Brennan.

Brennan himself offered the possible explanation for these shifts. While playing with the Jack-in-the-Box, he let the Jack, of whom he was somewhat scared, come out slowly and said, "I know how to get scared." By his shifts and later return to interrupted activities he slowed down his contact with them. In this way, he apparently kept his anxiety down to a level which made it possible for him to stay in the situation and eventually master it.

His speech had a childish pitch but was remarkably well-articulated and clear. He spoke rapidly, but was always easy to understand. His voice expressed every shade of his extensive register of rapidly changing moods. Constant in his verbalizations was a wish to share his experiences with others and he had a certain warmth which did not even disappear while he was ill at ease. He had a silly and slightly uneasy giggle in the first part of the hour until he had come to know me. It then disappeared to make place for quiet smiles and delighted laughter.

Though Brennan obviously was somewhat embarrassed and ill at ease

with me during the first few minutes of our session, he approached me without fear to show me his gun. A few minutes later he went to the bathroom with me to fill the baby bottle and he soon seemed to enjoy the interaction with me without hesitation. Yet it was important to him for me to stay within certain bounds just as he kept himself within certain voluntary limits which made it unnecessary for me to impose limits on him. I only had to do this once when he tried to go into the next room. A verbal protest was enough. The phases of our relationship are nicely demonstrated by his use of play with the telephones, all of which took place in the span of ten minutes in the beginning of the hour.

He suddenly shifted to the telephone from the baby bottle and assigned the blue telephone to me. When I called him up he giggled in a silly fashion. He finally answered in a clowning voice, "Hello, Pussy," and hung up immediately. He then stepped out of the play situation to give me an explanation as an observer rather than as a participant, but indicated that he wanted the contact continued. When I called up again he did answer my questions, but suddenly shifted his attention to the pegboard. After a while he again returned to the telephones. When I suggested that we exchange telephones because the dial on his telephone did not work so well, he protested and pointed out that the blue telephone was the one I talked on, implying that I should not challenge this arrangement.

The rest of the session he interacted freely and warmly with me to the point that he was reluctant to leave. Despite this, he remained conscious of the difference in size between us, partly in a competitive way, partly as a threat to him. This came out in subtle ways only. For example, he assigned Bobo to me to box while he boxed Bugs Bunny, but immediately put Bugs Bunny on top of Bobo indicating that the little one could win over the big one. It also came out when he told me he had a Bobo at home, but hastened to assure me that he would not take my Bobo away with him as if he wanted to appease me and also reassure himself against his impulses. He originally did not want to play with the clay because he was afraid I might consider it an activity for "little kids." When I indicated it was all right to play with it, he gave me a little piece of clay and assigned a big piece to himself though he said he was going to give me the big piece. Later he telephoned me that he would have to knock the Jack-in-the-Box down, so that the little planes wouldn't get scared.

This further points out that this last phase of our session was a period when Brennan increasingly projected his own impulses onto the environ-

ment and to me. While he obviously had gotten hungry, he insisted that I was hungry. After having knocked down the Jack-in-the-Box, he reassured me "I just knocked him down so he wouldn't scare you." This suggested a need to share with others through his projections. It was as if he were afraid to put himself apart in any way from the environment. He carefully put crayons and clay aside for G.H., too, whenever he assigned some of these to himself and me. He offered me one of his crackers, though at the end of the hour he was concerned enough to remember to take them with him again. Similarly Brennan seemed to need to share his feelings with others and to make sure that they felt the same way as he did. When they did, this reassured him.

This does not mean that Brennan did not have a definite personality or that he had no personal integrity, for he did. It merely means that it was essential to him to find that his impulses were the same as those of others and that his personal security depended on this to a large extent. This was, for example, apparent from the way he would inquire about a boy doll and at the same time by the inflection of his voice indicate that he was asking for permission to play with it without asking directly.

Part Processes

Brennan's attention was easily gained but could be maintained only till he chose to shift his attention. These shifts had a certain quality of finality in that he made it quite clear after such shifts that he was through with the previous topic, until such time as he might choose to return to it. While he stayed with a topic, he absorbed himself in it with remarkable involvement and concentration. He was a sharp observer and his visual discrimination was impressive and superior. He immediately noticed and commented on the pictures on the Mexican ball. He noticed that one of the toy cars was gray like G.H.'s car and he noticed and enjoyed other colors. He very soon had commented on everything in the playroom, even the stethoscope which most children either ignored or asked about later in the session. His auditory sense was also sharp as, for example, he immediately learned the word "stethoscope" after I had used it once. He may not be musical as he did not notice the lack of melody when he turned the handle of the music box the wrong way. This might also be due to his obvious anxiety about the Jack. His sense of humor was good and ever-present.

Brennan's intelligence was probably at least in the bright normal range. It is difficult to convey the richness and variety of observations and play

which this boy showed in a short time span. His vocabulary was large and his general knowledge and information extensive. He several times mentioned England and was aware of having to cross an ocean to get there. This may be due to a relative having gone there, but he still was aware both of the distance and the obstacles in getting there. In just a few minutes he found out everything about the pegboard, also how one gets out the pegs from the inside. This usually takes children quite a while. His resourcefulness was demonstrated many other times, for example, in his quickly finding ways to deal with the Jack-in-the-Box and make it less scary. His memory was excellent as demonstrated by his remembering his crackers on leaving, though at the time he was preoccupied with something else. His judgment tended to be distorted by his emotional state but was always corrected eventually. For example, he started drawing and became offended when I did not immediately recognize that the face he drew was mine. Soon after, he became friendlier and said he really could not draw very well, yet.

His thought processes were rapid, coherent, relevant, and goal-directed, but tended to be interrupted whenever he shifted his attention and were then completed later or not at all. Sometimes this shift was merely apparent as when he switched from one metaphor to another which stood for the same idea.

In Brennan's verbalizations one constantly heard oedipal concerns in the theme of danger, danger because he was little or danger if he was not careful. Planes, pilots, trains, cars, crashed repeatedly. His concerns came to the surface more openly when he drew snakes and said they might bite you. Water snakes could, for example, "eat neckties or glass." Later he spoke much about the Jack scaring the baby plane. One time the Jack also scared the mommy plane. Brennan then became the "police that works on planes," and gallantly rescued the mother plane by pushing the Jack down who then immediately wanted to pop up again. A moment later Brennan talked over the telephone and said he would have to "knock him (the Jack) down so little planes won't get scared." At this moment the fantasy became too vivid and he became quite silly over the phone, talking baby talk in a clowning fashion. He suddenly shifted to the train, commenting that the caboose was in the wrong place because it was in the middle of the train and not at the end. He unhitched the cars and the train wrecked. Three people were injured and killed. The train was put together again, still with the caboose in the wrong place. Another wreck followed and the caboose rolled over and over. Suddenly

it climbed up Bobo and hit him in the nose repeatedly. Brennan called my attention to this and called the caboose a "hitter," after which he suddenly threw the caboose far away from him and turned to the clay, commenting on a big piece of clay and a little baby piece.

This play has been retold at such length to demonstrate how many of Brennan's shifts were only apparent. He merely turned to another vehicle to further express the same concerns or feelings.

Considerable preoccupation with the difference between sexes was also apparent in Brennan's undressing the boy and girl dolls. He undressed the girl first and said vaguely that she was a girl because "she knows what she does." Later he picked up the clothes and stressed which ones belonged to the girl (whom he called "Silky") and which ones to the boy (whom he called "Bobby").

Brennan's emotional life was rich and had many nuances despite the fact that he struggled with ever-present anxiety. He found sufficiently effective ways of keeping this anxiety within reasonable bounds and was, therefore, capable of entering even unfamiliar situations with poise and enjoyment. Through the shifts he pulled himself away from anxiety-provoking agents, but as soon as he recuperated, he returned, determined to master his fear through greater knowledge about the fear-arousing topics. This indicated that he felt basically quite secure in the world despite the disturbance and fears his impulses caused him.

Integrated Functioning

Brennan obviously saw himself as a person who could demand certain rights and respect. He could, therefore, turn back undue interference into his privacy comfortably, as when he pointed out to me that the telephone or car he had chosen for me were mine, but that the rest were his. He saw many advantages in being big but was alarmed about his oedipal impulses which were directed against the very people on whom he depended. He struggled hard to keep these impulses in check. Only very rarely did he try to deal with the problem by regressing and become a small boy again. Most of the time he tried to enlist the help of adult figures and maintained their approval and reassurance by stopping himself every time his impulses threatened to get out of hand.

He was helped in his struggle by a strong superego which, however, appeared not to be too strict or unreasonable. Though Brennan did not like to get his fingers wet or dirty, he still played with the nursing bottle and with the clay. He also liked to have cars parked in rows and to

have the train cars hitched up in proper order, but he could tolerate it when they deviated from the standard.

While Brennan did not mention his parents, it is safe to assume his relationship to them was essentially a comfortable one. He handled the dolls gently while feeding and undressing them, and thought warmly of G.H. every time he distributed toys among us. He had many frightening fantasies about his father but he seemed basically sure that his father would not retaliate, just as none of the big figures in his play ever retaliated angrily when they were attacked by smaller ones. His ability to quickly verbalize and play out his concerns, even with strangers, further confirms this impression.

Brennan dealt effectively with his difficulties by normal devices such as humor, fantasy, acting to alter, activity and increased integrative efforts. Only when the stress became severe did he revert to greater efforts at self-control through hypersuppression, projection, the formation of new reaction formations, identification with the aggressor, or regression occasionally supplemented by mild counterphobic maneuvers and compulsions.

Summary

In summary, Brennan was a gifted, resourceful boy struggling with oedipal impulses. The fears aroused by his struggle had not by any means paralyzed him for he was basically secure in his major relationships to the environment. He was already well on his way toward working out a healthy, constructive solution to his problems by identifying himself with his father's masculine role. Even now he is capable of deriving great satisfactions and pleasure from his contact with others, and will probably be able to do so even more when he has overcome his present concerns.

PRIDE AND ITS RELATION TO NARCISSISM, AUTONOMY AND IDENTITY

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Throughout the Coping Study we were impressed by the fact that many of the children who cope most readily with the environment, and also those who seem most resilient and integrated, are children who express a spontaneous, naïve pride in themselves and often in their families. This pride seems to flow naturally into a positive cathexis of the environment generally and includes responsiveness to people and capacity for love.

No conflict exists, apparently, between strong cathexis of self and strong cathexis of the environment and of objects. Contrary to the strict economic assumption of a fixed quantity of libido, there seems to be a mutually energizing or contagious effect here. The child's capacity to enjoy himself arouses a response from others which is invigorating to both; the response from others reinforces the child's investment in the environment which provides gratifications supporting his enjoyment of himself and appreciation of his mastery and specific skills in dealing with the environment. This mutually energy-releasing effect attracted our attention and suggested the value of considering the relationship between narcissism, autonomy and identity together, vis-a-vis object relationships and object love. In the happy child, spontaneity is expressed both in warmth toward the environment and delight in himself.

This observation came first as a global intuitive impression of a number of children among our "best copers" and led us to reconsider pride and its relation to the three concepts which are the topic of this discussion. The productive and invigorating pride of the Kansas children had evidently not been inhibited by that aspect of Western tradition from Biblical proverbs and Sophocles which thinks of pride in terms of the aphorism "pride goeth before destruction and a haughty spirit before a fall." Antisocial and self-destructive aspects of excessive pride or haughtiness which contribute to detachment from or rejection of others is discussed in literature and philosophy, not only in the Old Testament and New Testament, Sophocles and Shakespeare, but in Spinoza's thoughtful reflections. But Schopenhauer[12] makes the following statement:

"Pride is an established conviction of one's own paramount worth in some particular respect; while vanity is the desire of arousing such conviction in others. Pride works from within; it is the direct appreciation

of oneself. Vanity is the desire to arrive at the appreciation indirectly, from without."

Van der Waals' article on narcissism[13] showing, as it does, the growing aspects of Freud's concepts of narcissism and in particular the room which is allowed for what he terms "healthy narcissism" as an aspect of every personality, also emphasizes the importance of positive self-regard.

The implied healthy self which does not have to be aggressively defensive is expressed in Woodrow Wilson's "too proud to fight." Pride in this sense is related to a secure sense of self-worth which does not have to be defended except when it is genuinely in danger. Realistic discriminations regarding the conditions and times when it is necessary to be aggressive, granted that successful aggression is well within the possibility of the individual, and confidence in one's capacity for self-defense, contribute to the strength of this type of pride.

Helen Lynd[14] points out the relationship between pride and shame on the one hand, and the sense of identity: The undermining of the sense of identity which occurs when the child is shamed, humiliated, made to feel helpless, and the importance of supporting the kind of pride we have just been discussing. Alice Moriarty's article in this issue describes the role of positive self-feeling in some children's capacity to cope with failure or difficulty in tests. Other examples from our group of Kansas children illustrate the contribution made by a vivid sense of an appreciated self to ego strength and to the ability to master inner as well as outer problems.

Erik Erikson[15] speaks of the early subjective experience of recognition and being recognized as dating probably from the beginning of the baby's smiling recognition of the mother's smiling face. Among our research group* this baby smile was very apt to occur during or after feeding or immediately after some other gratifying care involving sensory pleasure —including the baby's experience of being cleaned and dried and having his diapers changed, and the bath, being cozily wrapped up and tucked into blankets. The experimental approach used by investigators who have shown that the baby will smile even to a mask showing eyes and mouth, on a blank drawn face, or even parts of such a mask face, lures us away from the usual experience-setting of mutual gratification and stimulation in which the smiles of the baby normally take place, and which are of the deepest importance for the development both of object relationships and of narcissism.

* See page 104 this issue for a brief explanation of the relation between the Infancy Study and the Coping Project.

Erikson's comment leads us to reconsider the relation of the earliest beginning of narcissism and autonomy as well as identity, to Gardner Murphy's broad integration of the contribution of all sensory, kinesthetic, visceral, action experiences to the development of the self-image.[16] Here we meet certain paradoxes: we talk of the helplessness of the young baby and also of his sense of omnipotence without adequately dealing with the realistic relation of these two. The fact is that the baby experiences both, often in relatively quick succession and that growth consists of a modulation of each, not the elimination of either. That is, again on the basis of the direct observations of infants in the Escalona-Leitch study, the baby moves from the omnipotence assumed to be the inner quality of sensation accompanying objectless satiation, or the moments after feeding or being cared for which have led to a temporary freedom from need for a feeding or caring person, to periods of the opposite.

The omnipotent feelings in a tension-free or blissful state alternates with the helplessness of the tiny baby when he cannot satisfy urgent needs. However, this helplessness does not describe his total experience, for as soon as the mother is in contact with the baby, he is apt (although it differs from one child to another) to start an active rooting for the nipple, as instinctive as the rooting done by a kitten or puppy or any other young mammal; instinctive as it is, it still involves persistent, active, goal-directed effort which is rewarded with gratification by the food; Schachtel,[17] Spitz[18] and others have developed this point fully. Consequently, the baby, almost from birth, can participate in the process of gratifying his needs and to this extent his helplessness is already reduced or modified by some dim sense of the worthwhileness of effort, struggle or an attempt to cope with the environment. (Rado[19] emphasizes struggle, Ives Hendrick,[20] mastery.)

There are some other needs, however, which babies or at least some babies make an attempt to handle even from neonatal days. Some neonatal babies can push away covers encroaching on the face uncomfortably, and it is a common source of amusement to nurses that some babies when they are still in the hospital can wiggle themselves down into a cozy corner of the crib (as did our four-week-old V.H.). That is, the baby will maneuver himself into the corner and stay there, from which we infer that this feels better than the open area of the crib. Vague as this effort is, since we know from experimental work that conditioning can take place during the neonatal days, a baby who repeatedly achieves

this maneuver can be assumed then to be learning something about what he is able to accomplish for himself.

We also see some neonatal babies making an effort to hold up their heads when held and to stare at a bright light or some other conspicuous visual stimulus. Complete focusing, and (we assume) anything like clear visual perception as we know it, cannot exist at this time; yet the repeated efforts which such babies make to look for the sake of looking (and this kind of thing is most apt to happen when other needs have been gratified) point to the importance of autonomous satisfaction in ego functions which are active simply for the sake of being active; that is looking for the sake of looking, and listening for the sake of listening, begin very early as autonomous efforts of the ego. During the very first weeks of life—for some babies the first two weeks of life—there are experiences of primitive if vague mastery associated with basic libidinal gratification and feeding, with more diffuse need satisfaction in achieving bodily comfort, and with autonomous ego functions which begin to operate from their own drives at times when other needs or libidinal cravings are not present as far as we can judge.

I have mentioned these instances because analytic thinking has put such emphasis on the development of autonomy in connection with the achievement of sphincter control during the second year of life that we may have overlooked the fact that the experience of autonomy has its primitive beginnings practically from birth, parallel with the primitive beginnings of self-esteem and well-being rooted in primary narcissism.

The early objectless satiation which we have associated chiefly with oral gratification should probably be extended to concepts of comfort and satisfaction when any needs are met; and also satisfaction in using all functions available at a given level to the extent of their potentialities at that stage. All this together contributes to satisfaction or pleasure experienced probably as internal and from the self but, nevertheless, having its source in any one of several different kinds of contact with, or exchange with, stimulus from the environment, laying a foundation for a multidimensional differentiation of self from objects.

We can accept the idea that the first differentiation is stimulated by such experiences as the loss of the nipple when acutely hungry, from which the infant finds in some dim way that the source of satisfaction is not himself but is something outside. This experience begins very early. The capacity of the baby to integrate some sense of me-ness versus object out of such an experience will doubtless vary in relation to other

aspects of integrative capacity about which we know very little. Certainly in the first week or so of life many babies react by screaming at such interruptions in such a way that it is hard to see what cognitive integrative activity might actually result from the experience. However, as the baby becomes able not only to succeed in retrieving the nipple but to wait, to look at, to keep an eye on the mother during such an interruption or to listen to her voice, we assume that integration is taking place and that the baby has, at some level, command of the idea "mother is there and will come back." By this time, if not before, pleasure from contact with the gratifying object begins to come into the picture as an experience different from the experience of global undifferentiated self-contained bliss of primary narcissism.

In the next stage, usually between three to six months, this becomes well-established in many babies. Pleasure in being a cause, getting action from the mother, getting results, arousing activity by the love-object to gratify one's needs becomes clear-cut and controllable. In the Escalona-Leitch records we see spontaneous expressive babies "crowing," as we say, with eager delight at the age of three and a half to five months to attract the attention of a loved adult. The pleasure associated with gratification from the mothering person is actually used as a stimulus for further attention from her for its own sake, whether or not any basic libidinal needs are directly involved. We say then the baby wraps his mother around his little finger, he rules the roost. What Fenichel[21] calls his passive receptive mastery, actually involves considerable initiative in order to bring the stimuli within the range where he can be receptive. From this stage, where enough differentiation is present to permit waiting and delay, responding to signals, and giving signals—and all of this is very clear-cut by the age of six months—we find very rapid development along three lines simultaneously.

From the time the baby's autonomy has expanded through being able to handle his body enough to cooperate in dressing, diapering and bath, to make things happen by batting at toys in his cradle gym, reaching, banging, manipulating, demanding, commanding and stimulating—all of which are well underway between three to six months in many babies—through the period where the baby is able to sit up with help, then pull himself up, to crawl, to pull himself to standing, finally to walk, we find the development of exuberant delight, triumph and other expressions of pleasure in mastery which constitute an elaboration and enriching of

own body, to get satisfaction by what one can make it accomplish, parallels the development of motility through these dramatic stages of the rest of the first year of life.

In our culture, the delight and appreciation of the adults and siblings as the baby almost miraculously achieves these brilliant new accomplishments provide a pleasure for the baby reflected back from the object, a feeling of being appreciated and loved. The combination of his own zest in autonomous achievement and the secondary narcissism or feeling of well-being arising from the pleasure reflected back from the object, both contribute to the pride of the newly walking child whom we now consider "autonomous" because he can go from one place to another and is no longer dependent upon being carried.

The sense of autonomy so much emphasized as a result of the development of sphincter control which probably normally comes after the child has already developed a considerable sense of control through his overt motor achievements, seems, then, to be only one aspect of a deeply rooted feeling of accomplishment and independence which has been growing ever since the very first primitive active efforts he made within a few weeks after birth. Also it seems to be only one aspect of an autonomy which is enormously expanded and enriched by the sense of being able to do things to objects, to put things inside other things, to bang things together, to make sounds (and, with some children, even to put records on their own phonographs), to accomplish primitive restructuring and creating. A little girl barely twenty-four months old who played through a fantasy of going to the hospital to be with her mother is an example of the complexity of the creativity available to bright children by the end of the second year of life, a creativity which is a more complex development of autonomy mediated through wish.

I have reviewed these sequences on the parallel development of narcissism and autonomy without describing the concomitant development of the sense of identity. I referred earlier to Erikson's comment on the first dim sense of recognition and being recognized as perhaps the beginning of identity, and along with this (usually before it, perhaps in some cases stimulated by it), the baby's differentiation of self from others.

As soon as the baby begins to get an experience of "I stimulate myself," through patting his hands together, touching and exploring his body (these things can begin around four months) or looking at his own hands (which usually begins before three months), we can assume an experience of pleasure from the self as a stimulus or an object which is assimi-

lated into the enriching process of narcissism and which provides affective and perceptual aspects of what we later will call a sense of identity.

Very young bright babies may show discomfort when in strange places. The mother will say the child likes his own crib best. He does not like to be taken into a strange room. One three-months-old baby was restless and uncomfortable for two weeks when visiting relatives; he relaxed when he got back in his own crib and his own room. Molly, in our records, was uneasy in strange places at the age of eight weeks. In other words, we can think of the contact with visual and auditory stimuli connected with the configuration of a place as contributing to a primitive sense of "I belong here, this is my place" or a foundation of place identity which goes along with the feeling of "I belong with my mommy," the sorting out of the world into "that which is part of me" or close to me, belongs to me, takes care of me, helps me and so forth, versus the rest of the world in which there is very little investment. As Whitman and other writers have pointed out, the sense of identity includes the feeling of "all that I am part of is part of me."

The picture we get from the baby's experience at home in the family is different in some ways from the picture obtained by experimental observation at a given time and place when we make a formal attempt to elicit certain kinds of behavior. In Martha Guernsey's experimental work on imitation,[22] she was able to stimulate the baby at the age of seven to eight months to imitate such expressions as sticking out a tongue. However, when we observe a much younger baby with its mother at home, it is possible to see a mutual echoing and imitating of sounds in the vocalizing and mother-baby conversations that go on between sociable mothers and babies from the early weeks on. From this it is not hard to respect Melanie Klein's thinking about the projective and introjective operations which begin in a primitive way at very early ages.[23–24]

The experiences of losing the gratifying object which stimulates the need for fantasy, and for intrapsychic incorporation to sustain the image of the object and the potentiality of gratification—together with experiences of union, being in tune with, in mutual "lulling," in cooperative efforts in dressing, and in imitative games—all provide a foundation in the child for future feelings of identification following the model "I include and I am included in." These culminate dramatically in the latency period in the child's ecstatic exclamation "I am a Brownie" or "This is my church," or "This is my school." We can thus see the feeling of well-being connected with pride and self-esteem as growing out of the rich

and subtle interplay of healthy narcissism, autonomy and identity as they contribute to the positive self-feeling of the child, his healthy investment in the environment and his capacity to love.

Erikson[3] has focused attention on the deposits for healthy ego development provided by the satisfactory experience of each stage of development seen primarily in terms of the traditional libidinal phases. Here we can extend the contribution of Mittelmann,[25] whose presentations of the motility urge, and stages in the development and vicissitudes of motility have provided an important anchor for the understanding of the relationship between autonomous functions of the ego, as seen by Hartmann,[26] and libidinal development as seen at earlier periods of psychoanalysis.

Summary

All ego functions arise from genetic dispositions which carry their own energy; but at the same time the development of these takes place in an interpersonal context which has much to do both with the patterning of narcissism, and with the investment in the environment which augments and nourishes or deprives the so-called autonomous ego functions. The latter are also constantly interacting in the service of libidinal gratification, and are reinforced by basic pleasures when autonomous efforts implemented by motility and sensory apparatus produce gratification of primitive needs. Consequently we have to think not only of residues for the affective orientation of the ego which are carried over from experiences at successive libidinal phases; we also have to include residues from a complex interaction between the modes of experience connected with different libidinal zones and the modes of experience emerging autonomously in connection with sensory and motor ego functions. The latter are supported, as we observed, by narcissistic and environmental gratifications, independent of their contribution to libidinal gratification. Thus pride, self-esteem and the feeling of well-being are the resultants both of autonomous efforts, the healthy narcissism accompanying these and the sense of identity which they produce, and also the interaction between these and libidinal phase experiences as they have been described elsewhere.

In later publications, we shall discuss our empirical data in which much evidence is provided for this formulation of interrelationships between ego and libido gratification in the development of the sense of well-being which underlies pride and healthy narcissism.

COPING DEVICES AND DEFENSE MECHANISMS IN RELATION TO AUTONOMOUS EGO FUNCTIONS

LOIS B. MURPHY, PH.D.

Doctor Heider's discussion of vulnerability included some consideration of the efforts made by an infant to manage its needs and its relation to the environment in such a way as to keep comfortable. In the present paper, I would like to suggest some relationships between coping devices, defense mechanisms, and autonomous functions of the ego in the early development of the child's capacity to handle its relation to the environment. In a short paper, it is not possible to present a full discussion of the development of any of these three groups of functions; but I shall try to indicate some of the lines such a discussion would have to follow.

The term "coping devices" can be used to refer to specific acts, however minimal or complex, which deal with stress, difficulties, challenges, new opportunities, and other situations, stimuli, or demands which cannot be handled by reflex, or other automatic reactions. By contrast, defense mechanisms are intrapsychic operations utilized by the child to reduce anxiety aroused by inner conflict or conflict between pressures from the outside and the inside.

I shall also want to keep in mind the distinction between "defensive behavior" (fighting, turning away), "defensive function" (struggling for cognitive mastery in order to reduce anxiety) and "defense mechanisms" which usually involve some distortion of reality, temporary, limited, superficial—or deep, permanent, or pervasive. Examples of the latter, common in even normal young children, are temporary denial or minimization of a threat. "Autonomous ego functions" include those activities made available by the developing potentialities of the child's equipment as an organism, activities such as seeing, hearing, remembering, exploring, which do not have to be motivated by conflict or obstacles, however much they may be shaped or colored by the affective experiences concomitant with their emergence or practice.

We saw in Doctor Heider's study of vulnerability that records of infants observed at the age of one month, two months and three months provide evidence for activities which might be regarded as precursors of later coping devices and defense mechanisms. In common with very simple organisms such as worms and ants, a baby soon after birth will turn its face or body away from a threatening stimulus, shut its eyes to avoid such a threat, or curl into itself. Some neonates will also push away or in

some other way crudely attack a stimulus which is a source of discomfort, such as an uncomfortable blanket pressing on its face. A baby's cry, at first a primitive discharge mechanism of the organism, soon becomes a technique or device for obtaining help. It is used as communication and demand, as well as an expression of anger, fear, discomfort, or pain and anxiety.

As soon as the development of motor skills and locomotion makes it possible for the baby to turn over, creep, or pull or push himself away from the stimulus, his primitive turning away or shutting his eyes is extended to removing his body. As fine motor control develops, his initial amorphous hitting out yields to more coordinated methods of hitting or throwing away. These are all active ways of defending one's self against discomfort or external stress—that is, defensive behavior.

As memory, imagery and fantasy develop during the early months, the baby's resources are greatly extended so that it is no longer necessary for him to depend solely on physically active dealings with the external environment. We can see a series of steps between the earliest methods of coping and later methods of defending himself, some of which become patterned into defense mechanisms. For example: The baby turns away from a threatening stimulus. This makes it possible for him to forget; or parallel with forgetting, to deny the existence of the threat. When forgetting is maintained consistently, we might call it repression. It is hardly reasonable to assume that all forgetting is repression under emotional conflict since when the infant is very young such a multitude of stimuli are pressing upon him in succession that memory must be regarded as a positive development and an achievement in itself, and forgetting as a normal consequence of the shifting of attention from a previous stimulus to a new and more absorbing one.

Enduring memory, itself an achievement, very likely may depend upon the development of constellations of organized traces which can capture new impressions and integrate them into an already established configuration; but without conscious memory it is possible for massive, deeply disturbing experiences to leave an enduring impresson, or for crucially significant events occurring at a time when thresholds are low, to be imprinted in an enduring way, later expressed in the form of expectations or attitudes. In the first two or three weeks, thousands of relatively irrelevant impressions from the point of view of the baby's early economy are only momentarily registered; it requires scores of exposures to make conditioning occur during the first two weeks of life. Probably only those

impressions which are received repeatedly, or in a context of deeply significant or pervasive affect can be expected to endure. Thus we can speak of repression only when we are talking about traces which would otherwise be retained or remembered. Repression takes more energy than simple forgetting. It is easy to forget things of no consequence. It is hard to repress those which cause us deep conflict or anxiety.

When the baby reaches an age where the threat comes from the reaction of the environment to something he has done, whether it is a matter of biting the nipple of his mother while nursing or throwing something frustrating or annoying to him out of his play pen or high chair, we find the beginning of anger at the external person who punishes or reproves for the painful or socially destructive action.

It is not uncommon to see forceful spirited babies look angrily and defiantly at the grownup who has slapped the baby's hand or protested some action. It is as if the baby said, "It is you who are bad, not I." This quick exchange seems to serve the purpose of forestalling recognition or acceptance of guilty feelings by the baby, specially in those cases where the baby maintains a proud autonomy after such accusing looks at the grownup. In some instances a baby may follow such an angry accusation with a shy, withdrawing, retreating appeal as if for forgiveness or for reinstatement of love, a look expressive of reparation. This is a distinct next step, however. In a setting of exchanges of anger before a baby has clearly differentiated concepts of self and of mother, such responses may involve precursors of later projection.

By the age of two or three years such processes have gone far enough so that children (for example, Martin in our group) have developed a pattern of anticipating blame, protest, accusation, or punishment from the adult and forestalling it by (1) projecting threats to the adults, and (2) acting in a way which takes into account the possibility of their threatening behavior. Even when there is no objective evidence at all that a specific new adult is hostile, the child retreats to a safe area where dangerous activity will be avoided, in this way taking no risk. In other words, early experiences of exchange of hostilities leads to a pattern of anticipation of threat from the grownup. This can become an intrapsychic device which operates automatically and autonomously, finally emerging as a "defense mechanism."

In the early stages of turning away, denial, repression and projection, we can see the steps in the baby's actual behavior. After an end product such as projection has been repeated to the point where it becomes

crystallized into a mechanism, the child does not go through these steps and the pattern can no longer be broken. In exactly the same way, other higher units are established which then become autonomous and capable of incorporation into still more complicated configurations of response; the defense mechanism has become an autonomous response pattern.

By the age of two to four years, all of the children in our study group had already developed a repertoire of such autonomous patterns—defense mechanisms which played their part in the total resources of coping used by each child. This was true regardless of the over-all level of happiness or adjustment or prognosis of future comfortable development as seen by the psychiatrist.

Furthermore, the most normal and happy of our group of children drew upon defense mechanisms, as part of their total strategy for coping, with considerable flexibility and with changing emphases over the period during which we observed them.

An example of sequences* in coping with fear of thunder shows Molly's way of progressing by a series of steps in which defenses and overt efforts were combined:

As a two-year-old, Molly cried and was terrified during thunderstorms or when a jet plane passed overhead. At three years three months, she got into bed with her older sister during a thunderstorm and accepted comfort from her. At about the same time Molly began to reassure herself (and her baby brother) saying, "It's just a noise and it really won't hurt you a bit."

A month later Molly was again terrified as a jet plane flew unusually low overhead; she cried, and clung to her sister for comfort. A few hours later she repeated several times to herself, "Thunder really doesn't hurt you; it just sounds noisy. I'm not scared of planes, just thunder." The next month she opened the door into her parents' room during a thunderstorm saying that her younger brother was afraid (although he was really fast asleep).

Nine months later, at four years two months, she was awakened from a nap during a thunderstorm, but remained quietly in bed. Afterward she said to her sister, "There was lots of thunder, but I just snuggled in my bed and didn't cry a bit."

Four months later, at four and one-half years, Molly showed no fear herself during a storm and comforted her frightened little brother, saying,

* This is a fuller discussion of a sequence noted in "Learning How Children Cope with Their Problems." *Children* 4:132–136, 1957.

"I remember when I was a little baby, I was scared of thunder and I used to cry every time it thundered."

Here we see the two-steps-forward-one-step-backward process:

1. Overt expression of fearful affect and helplessness;
2. to actively seeking comfort from a supporting person;
3. to internalizing the comfort and the image of the comforting person, acting as a comforter to herself;
4. to differentiating sources of the fear while still reverting to the need for physical comfort from her sister;
5. to projecting her fear to her baby brother (as a way of rationalizing getting the support she needed) and seeking a symbol of support (opening the door without demand for physical or other active comforting);
6. to combining actively comforting herself with formulation of a self-image in terms of pride in control and mastery of her fears;
7. to reaction formation, achievement of bravery and referral of the fear to her past.

It seems clear that in her total process of coping Molly is able to use denial (of her lingering fear) partly because of her increasing cognitive mastery (grasp of the difference between thunder, noise of planes and other noises from objects closer at hand which might actually be realistically threatening) and, one might say that the denial is an active important step in the relinquishment of the fearful affect initially associated with the stimulus of thunder. In other words, denial is used in the service of mastery, and is supported by the cognitive processes which might in turn be regarded as contributing to the maintenance of the defense; or perhaps we can simply say the two go hand in hand. Certainly the cognitive mastery and the denial are both important in the total process of coping with fear of thunder. As we go through the sequences, one defense mechanism yields to another and her projection of fear onto her little brother is essentially another form of denial; or is used in the service of denial as part of the total process of outgrowing her fear.

As we follow the development of such efforts to master fears and other stresses on the part of our children, we are struck by the flexibility with which they use defense mechanisms along with overt defensive maneuvers as part of the total coping strategy. This flexibility includes the capacity to use one mechanism at one time and another later as well as the capacity to use different ones together, when they are needed. An important point

in relation to Molly is that she is not an inhibited, withdrawn child who is unable to deal directly with the environment. She is very direct in her ability to seek comfort from her sister, to go to her parents' room, or to actively snuggle into bed herself. The intrapsychic defense mechanisms appear not as substitutes for these active efforts or as a result of failure to make active efforts but rather go hand in hand with her active efforts as part of her total progress in coping.

Up to this point we have dealt with the development of defense mechanisms in relation to defensive operations. We see a continuity between the baby's first efforts to turn away even through such a limited act as shutting his eyes or turning his head, and his later efforts to turn away bodily, efforts to deny and repress, and then his subsequent patterns of denial and projection. We can speak of the emergence of defense mechanisms as autonomous response patterns which have developed by a series of steps from primitive overt defense operations, but which, once reaching a state of effective operation at an intrapsychic level, function automatically without going through the preliminary steps.

We cannot see the whole process adequately, however, unless we also look at the defensive use of ego functions which are a natural part of the child's total cognitive, motor and affective development. Normal babies who are not hungry, sleepy or in pain respond with varying degrees of vivid interest in visual, auditory, tactual stimuli as fast as their neurological development provides the equipment for responsiveness to the stimuli of the outside world. Babies differ widely in their use of such stimuli. The analysis of records of our children as infants shows wide differences between the tendencies of certain babies to pay more attention to faces and to people than to things, or to pay more attention to colorful, shiny and in other ways interesting objects in contrast to faces. Our knowledge is not at a point where it is possible to stand on firm ground in any theory regarding the basis for such differences in eager excitement about and response to things as compared with faces. (Controlled studies of differences between babies whose first oral gratifications come through being nursed, or being fed while held cuddled and smiled at by the mother, as compared with babies who are played with very little, or are fed by bottles held on mechanical bottle holders, might contribute something to this distinction.)

One of the babies with a strong interest in impersonal objects was Abby who was born at a time when her family actually fostered such an interest. With her father busy completing an advanced professional

degree, and her mother helping to support the home, neither parent had with the baby the time for play which subsequent children in the family received. Abby had a cradle gym and was very much interested in it, playing with the toys which dangled above her chest with great enthusiasm. This interest persisted until by the time she was in nursery school she was a child who enjoyed puzzles and other types of play with the objects and toys of nursery school very much. She did not make contact with other children readily. Her nursery school teacher felt this as a lack and may have expressed some of her dissatisfaction with Abby's limited use of the social opportunities of the nursery school. But by the time Abby was seven to eight years old in elementary school where her teacher expressed great appreciation of the intellectual skills she had by now developed, Abby began to expand into very much more active spontaneous social relationships with children, and was, at the age of eight, one of the most popular, if not the most popular child in her group. This social ease utilized in fact the intellectual ease which had developed from early infancy and which was now accepted as important and praiseworthy in the school situation. This is a brief summary of many hundreds of pages of data; what we are interested in here is the fact that what began as an autonomous ego function—mainly observing, analyzing, making relationships between her perceptions and concepts of objects—was utilized by her in infancy more than it might otherwise have been in her early months, partly in lieu of the attention from parents which she would have been getting if they had not been so busy. Since she was in a family with intellectual interests, it contributed to her subsequent identification with her parents and thus received constant reinforcement at home, and became a source of gratification and contact with people.

In nursery school it appears that this interest in puzzles was used defensively and with more conflict partly because of the lack of enthusiasm of the nursery school teacher; but whatever conflicts and unhappiness arose in nursery school around her intellectual interests were not deep enough to outweigh the positive gratifications which were intrinsic in the first place and reinforced by the family interests in the second place. By the time she got to school where intellectual performance was expected, she was able to retrieve and build on her foundations of autonomous ego functioning and her enthusiasm for intellectual activities.

It is particularly dramatic in this connection that her I.Q. increased twenty-four points between her test at nursery school age and the test when she was eight years old. At the latter stage, she was generally more

spontaneous and outgoing, free from social inhibitions as well as functioning more enthusiastically in cognitive terms. During the preschool period of conflict and defensiveness in the use of cognitive functioning, she was constricted. Later, despite the fact that cognitive functions had been utilized defensively for a period, she was able to recapture the enthusiastic immediacy of satisfaction of spontaneous cognitive activity, and to blossom into richer intellectual cognitive functioning; and because of this, and parallel with its acceptance and appreciation in a social group, she blossomed likewise into more creative social activity.

It is interesting to note that along with her popularity and leadership in the group, traces of the unhappiness and insecurity she had had earlier in nursery school were expressed in her concern about insecure children in the school group, children who were different, as she might have felt different in nursery school, or left out as a baby. This sensitivity to difference included unusual social awareness and creativity in relation to Negro children or other minority groups in the school group, even at this age when many children handle sensitivity to difference by activities aimed toward protecting their own status.

At the period of her flowering, Abby's I.Q. was 146, indicating that all along this was a sensitive little girl whose perceptiveness might have contributed to a more than average vulnerability to her nursery school teacher's disapproval of intellectuality.

With many another child, knowledge and the desire to know, to have questions answered, to solve problems, are utilized defensively in certain situations parallel with their use as a spontaneous expression of childish response to the world about them when they are free from threat. At the same time in some children the defensive use of the drive for knowledge interferes with spontaneous autonomous delight in intellectual functioning. With Martin, the intellectual interest appeared to be pushed beyond his capacity because of a need to outstrip an older brother. In his case, the intellectual functioning rarely seemed to go on in the atmosphere of enthusiasm, mastery and ease characteristic of others. Typically Martin produced his answers and his thoughts in an atmosphere of anxiety and tension and a need to prove something.

We can see then, that in these normal children defense mechanisms develop out of and also parallel with autonomous ego functions. Moreover, children use defense mechanisms, defensive operations, and autonomous ego functions in a mutually supportive way. Further, we can see that the level of spontaneity attending cognitive functioning shifts from

one period to another. While cognitive activities may serve a temporarily defensive function, they can be retrieved for more spontaneous and autonomous experiencing when the situation changes and a defensive role is no longer needed. Finally, in the case of one or two children under a chronic, persistent, competitive pressure, cognitive functions were used for defensive purposes so consistently as to become embedded in a defensive character structure, and thus became less accessible to a flexible and happy use than they were in most of the children in the study.

It is not possible to take space for a fuller discussion here; we shall have to be content with the final observation that when we compare the happier and the less happy children in our study group the difference does not lie in the kinds of defense mechanisms used in each group. Rather, the difference appears to be, first, in the flexibility with which defense mechanisms are used to eke out the child's coping resources when necessary and then relinquished when they are no longer needed. Second, the difference lies in the success of the over-all coping pattern (including defense mechanisms) in protecting and facilitating the child's capacity for gratification, relationships, and growth.

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BOOK REVIEW

Prediction and Outcome: A Study in Child Development. The Menninger Clinic Monograph Series, No. 14. By SIBYLLE ESCALONA and GRACE MOORE HEIDER. $6.75. Pp. 318 plus XVI. New York, Basic Books, 1959.

The making of a prediction provides the occasion for assessing a scientific theory's merit. Either success or failure of a prediction may contribute to the refinement of the theory. Doctors Sibylle Escalona and Grace Heider have put at stake the predictive yield of observations of infants and the nature of behavioral continuity.

The Predictive Study was not planned as such, but makes creative use of data gathered for other studies of infancy and childhood. Doctor Escalona, after carefully examining the infancy records of each child, and with no access to subsequent follow-up data, wrote predictions about each. These predictions were, several years later, evaluated by the authors of the present book and by an independent rater. Predictions were made in seven areas: activity level, motor development, interests and perceptual style, affect organization, social behavior, language, and possible maladjustment patterns.

The authors point out that over-all style or pattern of behavior is more stable and, hence, more predictable than single functions, and that those behaviors are best predicted which can be observed in the same context in infancy and childhood. For example, the child's way of showing masculinity or femininity, his interest in social activity, his tendency to be verbal, and patterns of motor coordination were best predicted. The poorest predictions were in such areas as the thematic content of free play, basic attitudes towards the self and the world, and the quality and quantity of competitiveness. Of great interest to the psychoanalytic reader is the predictors' inability to forecast the mechanisms of defense with which the child will respond to threat. On the other hand, the authors offer support to the psychoanalytic assumption of an inverse relationship between preference for motor discharge of excitement and later interest in words and abstract thinking. There are many interesting speculations on mediating processes; for example, the authors addressed themselves to the question of how, or through what routes, experiences with the mother affect the child.

The authors took elaborate precautions to maintain objectivity which were all the more important inasmuch as they are studying the accuracy of one person's intuitive judgments. For a predictive study to have a generating effect on theory and research, not only the predictions, but the chain of inferences by which the predictions were arrived at must be made explicit. And here lies the chief shortcoming of the study: Since the authors did not detail *how* many of the predictions were arrived at, a good part of the present study cannot be repeated by another investigator. Perhaps the authors will follow up their predictions with a series of papers that focus on the process of inference so that the links in the chain of behavior assessment and prediction can be better understood. It is from such explorations of the mediating conditions in inference that one can convert the skill and art of clinical intuition into prediction on a scientific basis.

The book is full of rich data, sensitive observations, interesting case descriptions, and suggestive relationships, all of which will be of inestimable value to any investigator of child behavior.

PHILIP S. HOLZMAN, PH.D.

BOOK NOTICES

The Medical World of the 18th Century. By LESTER L. KING. $5.75. Pp. 346. Chicago, University of Chicago, 1958.

This is a collection of essays about 18th century medicine: relationships of physicians and apothecaries, nosology, pathology and so on. The reviewer does not agree with the author's severe judgment of Hahnemann; even if his principles were unscientific, homeopathy helped many patients out of dangerous contemporary medications and worked as a systematized placebo therapy. The most interesting chapter is on the rise of medical ethics. (Henri Ellenberger, M.D.)

A Primer of Statistics for Non-Statisticians. By ABRAHAM N. FRANZBLAU. $1.75. Pp. 150. New York, Harcourt, Brace, 1958.

To those who are unfamiliar with the basic uses and techniques of statistics, this handbook should prove helpful. The author presents most of the common statistical techniques as nonmathematically as possible. He begins with elementary concepts of measurement and moves gradually to formulas which he first gives in words instead of symbols. The book includes problems and answers, a few statistical tables, and an appendix on the computation of square root. (Lolafaye Coyne)

Panic and Morale. IAGO GALDSTON, ed. $5. Pp. 340. New York, International Universities, 1958.

These edited proceedings from two conferences on morale wisely bypass unresolvable problems of definition (*e.g.* what is morale?). Rather, the papers and subsequent discussions summarized in this volume serve the much more useful purpose of demonstrating in detail how many levels of phenomena must be considered when one takes a closer look at some shopworn terms in current biological and social science: panic, morale, stress, communication and integration, for example. The list of conference participants is a "Who's Who" in current behavioral science. (Charlton R. Price)

Psychiatry and the Criminal. By JOHN MACDONALD. $5.50. Pp. 227. Springfield, Ill., Charles C Thomas, 1957.

The author's purpose was to write a practical guide to the examination of the accused, and in this he has clearly succeeded. Although theory is de-emphasized, the psychodynamic point of view is well presented and helps to make the book more than a simple manual. Concisely written, it is a good guide for the inexperienced yet offers much to the experienced. The bibliography is excellent. (Joseph Satten, M.D.)

Myokinetic Psychodiagnosis. By EMILIO MIRA Y LOPEZ. Mrs. Jacques Dubois, tr. $6.75. Pp. 186. New York, Logos, 1958.

As Allport indicates in the foreword, modern psychodiagnostic techniques have little place for expressive methods. This book describes Mira's work with a new test in which the subject is asked to make some simple line drawings, at first by copying a visually presented figure, next by repeating the motor act without vision. The graphic results thus obtained are measured in various dimensions. the work of the dominant and nondominant hand are compared,

and the scores obtained are purported to contain diagnostic information about "attitudinal state, *i.e.* temperamental and characterological tendencies." A cautious editor's preface suggests both promises and shortcomings. (Paul W. Pruyser, Ph.D.)

Developmental Potential of Preschool Children. By ELSE HAEUSSERMANN. $8.75. Pp. 285. New York, Grune & Stratton, 1958.

Thirty years experience in evaluating handicapped preschool children as a basis for planning educational programs, has led to the point of view and the assessment procedures described. Emphasized is the need for obtaining a differentiated picture of the individual handicapped child, and the relative strengths and weaknesses in his sensory, perceptual, conceptual, and motor abilities. A set of materials designed to tap these areas of functioning is described, together with methods of presentation. This is not a standardized test; it is labeled a "Structured Interview." Important contributions are made in an area where evaluation becomes so difficult. Both the specific items employed and the methods illustrated for modifying tasks will interest all clinicians engaged in assessing young children who are handicapped. (V. L. Norris, Ph.D.)

Progress in Clinical Psychology, Vol. III. DANIEL BROWER AND LAWRENCE E. ABT, eds. $7.75. Pp. 249. New York, Grune & Stratton, 1958.

The third volume of this series reflects the editors' continuing struggle for a format of their own. Two well-rounded and concise introductory chapters are followed by a section—The Psychodiagnostic Test Battery—devoted to seven authors' personal impressions of the how's and why's of battery testing. Except for Brower's and Hutt's articles, these chapters reveal little progress although they may be valid representations of the current state of diagnostic work. The other major section—Changing Conceptions in Psychotherapy—ranges far afield but is up-to-date and worthy of attention. (Saul M. Siegel, Ph.D.)

The Fear of God. By FRED BERTHOLD, JR. $3. Pp. 158. New York, Harper, 1959.

The subtitle "The Role of Anxiety in Contemporary Thought," plus the author's astute reasoning, warrant a place in a psychiatric library for this book, although it is basically a theological treatise. Anxiety experiences in Saint Teresa and in Luther are placed in Freud's theoretical perspective, which in turn is compared with Kierkegaard's and Heidegger's analysis of anxiety. It is stressed that anxiety has an aspect of "anxious desire" or "anxious longing" which makes it a phenomenon of love. (Paul W. Pruyser, Ph.D.)