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ATTACHMENT AND EXPLORATION - A SYSTEMATIC APPROACH TO THE STUDY OF SEPARATION-ADAPTATION PHENOMENA IN RESPONSE TO NURSERY SCHOOL ENTRY

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Presented at the 57th Annual Meetings of the American Psychoanalytic Association in San Francisco, California, May, 1970. These investigations were sponsored by the Southern California Psychoanalytic Institute and supported by Grant MH-16715-01 from the National Institute of Mental Health, United States Public Health Service. Dr. van Leeuwen, Principal Investigator is ~~an instructor of~~ a training analyst at the Southern California Psychoanalytic Institute and Associate Clinical Professor of Psychiatry at the U.C.L.A. Medical School. Dr. Tuma contributed admirably to the research design and testing. She is now Assistant Professor of Psychology at the University of Texas Medical Branch, Galveston, Texas. Leila Beckwith, Ph.D., U.C.L.A. Medical School, was responsible for the statistical analysis of the data and Jean Roshal, Ph.D., for the testing and clinical observations. The authors are also grateful to the teachers (Sonja Freedman, Pat Zeitlin, Martha Friedman, Dottie Bowman, Beverly Baker, Lois Dubkin, and Carol Baker) of Little Village Nursery School, Los Angeles and participating families for their patient cooperation.

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ATTACHMENT AND EXPLORATION - A SYSTEMATIC APPROACH TO THE STUDY OF SEPARATION-INDIVIDUATION PHENOMENA IN RESPONSE TO NURSERY SCHOOL ENTRY *

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In every society our social expectations a significant number of children experience considerable difficulty in coping with nursery school entry as documented in

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a pilot study by van Leeuwen (van Leeuwen and Pomer, 1969) combining cross-sectional and longitudinal findings. These adverse reactions are not only important because of their immediate consequences, but for their long-term effects as well. Sensitization to separation and related stress experiences make later adaptations to new situations more anxiety ridden. School phobia and learning difficulties may ensue. Undesirable coping patterns and defenses are reenforced or precipipated.

The current trend for children to enter school at earlier ages necessitates careful consideration of its consequences. Larger numbers of women work outside the home and there is increasing involvement of mothers away from their children. In the same vein there are trends in education to introduce academies earlier. Is this early push towards independence and separateness actually beneficial to children?

This research set out to investigate separation-adaptation systematically. Psychoanalytic concepts are combined with research methodology to evaluate the behavioral manifestations of separation reactions. As our previous observations indicated, distress about separation is openly expressed in crying or clinging as a refusal of the mother-child detachment. More disguised holding mechanisms are seen in the use of transitional objects, illness or infantile behavior.

Or the anxiety may be displaced, repressed or become evident in restlessness, hyperactivity, ~~peer~~ nocturnis and other sleep disturbances. Or the child is solemn, sad and reluctant to participate. In an effort to categorize these different kinds of behavior we gleened certain concepts from research done on monkeys. According to Kaufman (1967), presence of the mother is comforting to the monkey infant and separation is followed by either a withdrawal to conserve energy and avoid injury or an agitated increase in physical activity calculated to regain comfort or remove distress. Agitated searching, calling, decreased peer-directed behavior, deep depression and penis sucking occur. These separation patterns are what he terms distress reactions organized around a comfort-distress dimension. If the human young display similar reactions to separation, then we should be able to demonstrate this at nursery school entry. In other words, if a child is not ready to separate we expect this to reflect in what we term exploratory behavior. Conservation-withdrawal would result in a decrease of exploration and activity; the agitated searching would produce hyperactive behavior, restlessness and shallowness of exploration.

Harlow (1966) has shown in monkeys that peer alliances can form successfully only when maternal ties are weakened. Though human object relations

expand early while the child is still considerably attached to the mother (Ainsworth, 1964), there may be crucial points in the development of the child's individuation (Mahler 1965, 1969) at which he is more capable of coping with the enforced separation and required greater social development demanded by nursery school. As Jensen and Bobbitt (1963) imply, emancipation from the monkey mother is dependent upon the augmenting activity level of the developing infant which permits him to wander increasingly further from mother and also on mother's growing encouragement of exploration of the environment. Is the attitude of the mother towards separation important at the time of nursery school entry?

How then can we establish separation readiness from the mother, a requirement for successful nursery school experience? What are we looking at when a child separates from mother to attend school? After much time we settled upon the two visible measurable sets of observations; attachment behavior (A), representing the movement towards mother, and exploratory behavior (E), the movement from mother towards the new environment. The significance of attachment and exploratory scores can be highlighted by comparing extremes, such as a hyperactive child and a shy child. Characteristically a shy child clings to the mother, therefore he has a high attachment or A score. He explores a new

environment hesitantly, visually rather than physically from a safe vantage point. Once involved in an activity he is reluctant to change. His exploration or E is low. A hyperactive child on the other hand runs from mother, from one activity to the other, without hesitation. His A is low and E is high. There is lack of involvement which may make for shallowness of object ties.

In assessing the effect of separation-adaptation on behavior we evaluate whether or not nursery school entry produces stress. We hypothesized that this stress is reflected in changes in attachment and exploratory behavior. Once the child becomes adjusted to the new environment, evidence of distress should levels off and A and E scores return to pre-entry levels.

1. <u>If nursery school is a positive experience</u>, there should be evidence of growth. This reflects in the attachment behavior. A decreases (A↓) or remains at the same level (A=). The exploratory score increases (E↑) or remains the same (E=). The child shows

   a. <u>Increased independence</u> - greater self reliance in dressing, getting toys; doing other things for himself. He needs less help and releases mother with greater ease.

   b. <u>Increased exploratory behavior</u> - reaching out to the environment, animate and inanimate, and becoming involved with it.

c. Increased pleasure in activities.

d. Increased interaction with peers.

2. If nursery school entry has a frightening component, attachment increases (A↑) upon entry[1] and exploration decreases (E↓)[2]. This reflects in:

a. Increased dependence on mother or teacher - the child becomes less self-reliant. He seeks more frequent sight of mother or more physical and verbal contact. His ability to separate from mother decreases. His demands upon mother increase and there is excessive directing of mother.

b. Decreased exploratory behavior.

c. Decreased pleasure in activities.

d. Decreased interaction with peers.

e. Perceptual factors - attention span, ability to concentrate decreases.

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[1]If insufficient mothering has been available previously, attachment may be lowered because of increased hostility or denial of needs.

[2]A relationship exists between each child's typical reaction to separation and the direction of change in exploratory score. We hypothesized that the E ratings would decrease due to a withdrawal reaction in children in response to mother's removal or result in hyperactive behavior.

f. Social expressions - increased hostility towards peers, parents, teachers. Excessive bossiness.

g. Somatic expressions - disturbances of appetite, sleep, control of elimination.

Subjects:

We studied 16 children and mothers on a nursery school waiting list. The children's ages ranged from 2-11 to 4-3 years at nursery school entry. Most of them shared a similar socio-economic and intellectual background with parents of business and professional occupations predominating.

Ten mother-child pairs were studied three and six months prior to nursery school entry as well, providing us with a control group and affording the opportunity to compare changes with and without nursery school entry.

Procedure:

Mothers of children on the waiting list to LVNS were asked to meet with an examiner. They were told that the present inquiry had the purpose of studying adjustment to nursery school. Data were collected about developmental history, history of reactions to prior separations (short and long), family constellation (including substitute mothers e.g. housekeepers, etc.),

exposure to play groups or neighborhood play, mother's anticipations of nursery school for child and self.

Mother and child were observed prior to nursery school entry for periods of 10 minutes in the playyard and 10 minutes in the classroom. Ratings by two observers were entered on the A-E rating sheets. Exploratory ratings were established by scoring spontaneity of entry into activities, radius of exploration and ease of change. Amount of activity, time spent in one activity, direction of and pleasure in activities were scored as well (see chart).

Attachment was assessed by the number and type of contacts (physical, visual or verbal), manner of approach to mother (casual or demanding), number of requests for help, approval and sharing, the use of a transitional object, thumb sucking, reaction to separation and changes in behavior when mother left. Reactions to obervers were noted. Also rated was mood. The mother's reaction to the child was evaluated as well.

A modified Marschak Interaction Schedule (M.I.S.) (Marschak, 1960) was administered to rate maternal attitudes and the child's response in a structured situation.[3]

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[3]Mother was asked to execute certain tasks with child (swing, build blocks, puzzle, playdough, child on lap, leave for three minutes).

Following this the child was engaged in doll play to assess his level of psychosexual development, language, areas of conflict, and feelings about starting nursery school.

Simultaneously the Vineland Social Maturity Scale (V.S.M.S.) (Doll 905) was administered to the mother and additional information was elicited about sleep patterns, toileting, bedtime procedure, independant or clinging behavior, to establish a baseline for anticipated changes as the child advanced through the initial phases of nursery school.

These examinations (except for the Marschak) were repeated on the 15th and 90th day following nursery school entry. Aside from these afternoon examinations of mother and child, observations were recorded on the morning of the first day of nursery school and an A-E chart made out. Careful attention was given to the attachment behavior toward mother, teacher, peers and observer during the first day of school at which time it is customary for the mother to accompany the child to class. These observations were repeated on the third, eighth, fifteenth and nineteenth day of school. Reactions were noted to mother's leaving and reuniting with the child and changes in behavior after the mother's departure.

Clinical Case Material

#31 A↓E↑

Amongst the children who successfully and fairly rapidly adjusted to nursery school is David (#31), oldest of two children, 3 years and 3 months of age at nursery school entry. The family has a housekeeper and he does not object to being left as long as the mother explains where she is going, though he prefers to come along. He is used to playing with his older cousins. He has resisted toilettraining to date. He is outgoing, active, charming and highly exploratory (E=5.5). He approaches his mother, an attractive young woman, repeatedly (A=5.5) during the pre-entry examination to relate his experiences or to ask for help and he treats her with affection. He skillfully manipulates her when he wants something and she readily responds to any requests on his part, obviously deriving pleasure out of his activities. He briefly objects to her leaving (R4, C6). Upon school entry, he readily participates in activities offered and plays with his peers in an easy carefree manner. Exploration diminishes only slightly during the first few days of school. His behavior in school remains much the same throughout the initial period of adjustment. He is invariably happy, outgoing and active. On the day 15 examination A (6) and E (6) show a slight increase and control

over elimination improves.

On the 90th day exploration returns to pre-entry level and the attachment score decreases to 3½, to below pre-entry level. He reacts less to mother's leaving yet retains his affectionate relationship with her.

#14 A↑E↓

Clara is 3 years 1 month at nursery school entry. Though she is as spontaneous and carefree as David (E=5½, A=5½), she does not fare as well. She frequently had visited school with her older sister. Her mother works part time and she is cared for by a housekeeper. She never objects to being left. The family changed housekeepers a month before nursery school entry. Clara does not seem to mind when mother leaves during the pre-school examination. The first week of school, Clara joins all activities eagerly and readily makes friends with another new girl. ~~As~~ mother can't remain after the first week, Clara cries inconsolably when she is left. After the crying subsides she appears withdrawn, wanting to sit close to an adult, then joins the group. At the day 15 examination she is less exploratory, less outgoing and reacts more to mother's leaving than at the pre-entry examination. There is no physical clinging. Exploration further decreases and attachment is increased ~~at~~ the 3 month examination. In school Clara's behavior deterioriates as she

gradually turns from an extroverted happy girl into a sad dejected child, who is desperately attempting to attract the attention of available adults, such as the observers when the teacher is too busy. She submits passively to other children's attempts to play. At home too she clings a great deal and is unhappy. This behavior continues until the Christmas vacation, five months after school entry, when mother is able to spend more time at home. Upon Clara's return to school, she seems less depressed and once more turns to school activities with pleasure.

#21 A↑E=

Isaac is 3.4 years at nursery school entry, youngest of the family and a late comer. This is his second school experience. He is an outgoing, friendly cheerful child and strikes up an immediate conversation with the observers. He occasionally approaches his mother to gain her approval or share an experience. She responds in a casual way. There is more interaction during the test situation and he enjoys swinging and doing puzzles with his mother. He quickly slips off her lap when she attempts to put him on according to the directions. He reacts only slightly when she leaves the room and there are no changes in his behavior. Doll play examination reveals some of his feelings about changing schools -

the old school is "puhpuh", he now has to be a big boy, not a baby any longer. The first few days of school he plays readily with a boy he knew, with mother sitting behind him. When on the third day his mother leaves [illegible], he does not protest. There is little change in his exploratory and attachment scores on the day 15 examination. He is not demanding but he reacts more to his mother's leaving than at the pre-entry examination.

As time progresses he begins to display behavior disturbances in school. He becomes hostile to his peers and visitors. He hits children when their backs are turned without apparent provocation. He restlessly moves about the classroom, occasionally engaging for a period in waterplay, spilling frequently.

After four or five months he begins to settle down and becomes less hostile. However when his father leaves on a business trip, there is a repetition of the same behavior and a sharp increase in attachment behavior. He protests his mother's leaving. At the teacher's request, the mother stays with him in school for a few days. As time progresses he continues to be reactive to his father's business trips and sister's illness necessitating his staying with relatives overnight. Isaac varies a great deal in his reactions to the observers. His initial friendly

attitude changes into a verbally or physically hostile one. When the observer during one of his angry days offers to play with him, he first reacts with disbelief, then hostility followed by a friendly response. He plays near her with his trucks becoming increasingly engrossed in play, quite different from his usual restless behavior.

Results

1. Attachment and exploratory scores. All children examined reacted to nursery school entry with increased attachment and/or decreased exploratory behavior.

2. There was no consistent increase in attachment scores for the total group of children studied, from before entry to the fifteenth day after entry of nursery school entry as assessed by the non-parametric sign test (Siegel 1956)[4]. There was a decrease of exploration for the group as a whole.

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[4]The attachment scores increased in nine and decreased in five children. Since a fifty-fifty split is normal, nine is not significantly more than seven. If ten or eleven had shown an increase and four decreased it would have been significant statistically.

3. Age differences. Marked differences when the group was divided into older and younger children became apparent. Contrary to what one would expect, the older children (ranging from 3.2 to 4.2 years of age) were found to have higher attachment scores before nursery school entry than the younger children (ranging from 2.11 to 3.2 years of age) (Spearman Rank Correlation Coefficient, 46 $p < .05$)[5] and higher exploratory scores. (see chart 2)

4. Upon nursery school entry the situation became reversed. The younger children had higher attachment scores on the fifteenth day than the older children (Spearman Rank Correlation Coefficient -.54 $p. < .05$) and lower exploratory scores. Since there is no consistent increase or decrease in attachment scores for the older children either on the fifteenth day[6] or on the ninetieth day[7], this reversal was due to

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[5]If the children are rank ordered according to age, and the attachment scores are similarly rank ordered, there occurs a congruence between age and group, more than can be explained by chance.

[6]Three decreased, two increased, and one remained the same.

[7]Two decreased, four increased in attachment.

the pronounced changes taking place in the behavior of the younger children. The younger children showed a consistent and significant increase[8] in attachment on the fifteenth day of school from pre-entry examination (Sign test $p < .03$). By the ninetieth day the changes level off some.[9] These differences become even more dramatic when the children were rank ordered according to social age (S.A.) using Vineland scores. Cut off age was 3.4-3.7 years of social age.

5. All children examined react with an initial decrease of exploration compared to pre-entry levels for periods of a few days to ninety days. (Sign test probability is less 0.09 at day 15 and less 0.05 at day 90.)[10]

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[8]Five out of six increased and one remaining the same.

[9]The attachment scores of five out of six children of the younger group decrease on day ninety as compared to day 15, but four remain increased as compared to pre-entry levels (not statistically significant). In the older group, not counting previous nursery school attendees, two increased, two decreased and one remained the same.

[10]By the fifteenth day, eleven out of sixteen children had decreased, two had not changed and three had increased E ratings. Five still had decreased E ratings on day 90.

6. Changes before nursery school entry. Out of the seven children examined three months and/or six months before nursery school entry, five had E ratings which remained the same, the other two decreased. A remained the same (one) or decreased (three) over this same period, except in the children who experienced traumata (one child showed a marked increase in attachment after the birth of a sibling, one after a GU instrumentation and one after a housekeeper left). We need to examine larger numbers of children before school entry to establish norms.

7. Peer involvement. Out of seven children with high initial peer involvement, five show decreased peer relationships when A↑E↓.

8. Adaptation. The amount of clinging displayed at nursery school entry is not necessarily followed by poor adaptation and reversely lack of clinging does not indicate facility of adaptation. Some children who let go of the mother without protest withdraw markedly and have inadequate ways of arousing teacher and peer interest. They were more lethargic than at pre-entry school visits and examination.

When children first begun school, they were fascinated by other children. They did much without really becoming involved in the activities offered.

Children responded favorably to close attention by and contact with the teacher to drift off again and feel lost when she turned away. The more outgoing children actively attempted to appeal verbally or physically while the shy child or the one who had learned not "to bother mother" tended to withdraw. All children reacted with delight when their peers responded to their efforts to play or made friendly overtures.

The children responded positively with increased exploration and activity, more facile peer relations and decrease of hostile behavior to increased adult interest (mother, teacher, observer).

9. Renewed separations at home (housekeeper leaving, father going away, mother away from home more) or in school produced increased attachment and/or decreased exploratory behavior. Increased clinging, increased hostility to peers at home or in school occurred even in children who at first adapted well.

10. Previous nursery school attendance. Three of the four children who previously attended another nursery school demonstrated severe difficulties in adaptation, even though they did not display great attachment needs on pre-entry examination. The one child, who adapted readily was an older girl

(4.4 years)who had previously attended nursery school for 1½ years and entered after summer vacation. The other children (boys) had attended another nursery school for five to seven months. This suggests that previous nursery school experience does not necessarily facilitate separation and adaptation but may serve as a deterrent. Possibly the sense of loss of the previous nursery school played a role and it was difficult to make new friends. This too needs further examination.

11. Doll play tabulations have not been completed. Some children were only able to name objects while others got involved in dynamic play. A number of children used the doll sessions spontaneously to work through anger and distress over separation. Dynamics varied from anger over having to give up mother, the previous school or being a baby to concern over bodily injury. Ambivalence over eliminative functions was frequently evident.

12. ~~Mothers' reactions~~ Maternal attitudes. There was no apparent relationship between warmth, directiveness, involvement of the mother and the amount of difficulties the child experienced upon nursery school entry. All mothers encouraged the separation. There did appear to be a relationship between the mother's aptitude in meeting

the child's increased need for mothering and eventual nursery school adjustment. Those children whose mothers withdrew, when the child's need for mothering increased, experienced more severe and longer disturbances than those who attempted to meet these needs. Mother's presence in nursery school eased distress and facilitated adaptation.

Observations of the mother's spontaneous approach and reactivity to the child before and after the child's nursery school entry revealed a tendency on the part of many mothers to become less concerned and less involved with their child. This mother-child detachment encouraged by the school and teachers made adaptation to school more tenuous for the children who were not ready. In the one instance where the mother was encouraged by the teacher to become more involved with the child and remain in school helping the teacher, the child made a good eventual adaptation even though the separation was difficult.

Discussion

Changes in A and E ratings reflect adaptation-separation as outlined in our hypothesis providing us with a useful method to study this process systematically. ~~A positive reaction, growth is reflected by a lowering or sameness in attachment and an~~ shown

increase or sameness of exploration. Stress is revealed in an increase of attachment and decrease of exploration. Limited information obtained from this research suggests that nursery school entry is stressful, particularly between the ages of 2.11 and 3.2 years, is taxing the child's adaptive mechanisms. It is a time when the child is in the process of establishing autonomy. He has just gained some independence of his mother, and in many instances is still struggling to establish control over elimination. His super ego functioning and self-concept are still closely tied to parental attitudes. Being confronted with repeated daily separations, not at his own but someone else's discretion, he reacts with decreased exploration (flight, conservation-withdrawal) and qualitative and quantitative changes in his attachment behavior. Rather than sharing his experiences with the object of his attachment as he did during the pre-entry examination, he becomes demanding, manipulative of the mother and reacts more strongly to her leaving in an attempt to reestablish the relationship (flight). The difficulty in separating we see upon nursery school entry is age-appropriate and more closely related to his stage of development than style of mothering or previous independence. Thus we no longer can state that clinging at nursery school

entrance indicates pathology nor that increased clingingness is evidence of maternal overprotection.

The freedom of exploration and independence of mother observed in the younger children, the very items used by mothers, teachers, and ourselves to predict adaptation gives us the mistaken impression of nursery school readiness. These characteristics do <u>not</u> mean that the child no longer needs access to his mother. The fact that the older children were more clinging and less exploratory suggests that other factors begin to operate at age 3.3 approximately. Possibly greater social awareness and super-ego development are responsible. The fact that exploration clearly decreases points to the effect of nursery school entry, but diminished novelty or decreased exploration expected in familiar situations may also be factors. This points to the need for more information about changes in exploration and attachment <u>without</u> the additional factor of nursery school entry. It is quite possible that the ability of the child to "regress" is adaptational and the ability (physically and emotionally) of the environment, mother and others, to respond to the increased need for mothering is crucial. A child who cannot express this need (because of previous disappointment in mother, anger about a new baby, physical unavailability, super-ego demands) may release mother but show

adaptational difficulties in school. We are sensitive to our children's needs where it is convenient, not necessarily where it counts.

Our findings about the importance of age and social development at nursery school entrance are so dramatic that they should be repeated on larger groups of children in various settings, with various socio-economic and cultural backgrounds. It is quite possible that children who experience maternal deprivation react quite differently to nursery school entry, possibly with a greater percentage of hyperactivity, hostility and restlessness (Rowitch 1966). If the nursery school or child care center provide better mothering there may be a more positive reaction. We do not now know.

Object need and attachment, though intertwined and affected by oral, anal, oedipal factors in the psycho-sexual development of the child, is a fundamental entity. Physical presence, not just internalization of the mother is crucial until adaptation is completed. The concept of object need has far reaching implications for schooling, education, child rearing, therapy and our social institutions.

In keeping with this are our experiences ad adults. A person who undergoes object loss or loss of self esteem has greater difficulty adapting to new situations and may react either by conservation-

withdrawal (depression, decreased exploration), agitated searching (hyperative, manicky, promiscuity, restless behavior) and by an increased need for attachment (increased depending, somatic illness, increased compulsitivity). The need for an object is particularly apparent under those circumstances.

Summary

A method was devised to study adaptation-separation by measuring changes in attachment and exploration. A positive reaction is evidenced for decreased or same attachment and increased or same exploration. Distress is reflected in increased attachment and decreased exploration. All children examined showed some distress at nursery school entry. Younger children were less attached and more exploratory before nursery school entry than the older ones, but reacted more strongly with greater and more prolonged changes in attachment and exploration. This suggests that nursery school entry is a difficult adaptational task. Independence of mother as evident in less reactivity to her leaving gives the mistaken impression of nursery school readiness. Adaptation to nursery school is a difficult task and sensitivity to repeated separation experiences which are not self-initiated appears to be characteristic of this age group.

Concomitant detachment from the child, the mother's reaction to the separation at a time that the child's need for attachment increases tends to compound the problem. Thus in conclusion: The adverse reactions we observe in response to nursery school entry are not necessarily due to either pathology of the child or faulty mothering or the school but can be explained by age-appropriate reactivity to prolonged-repeated separation-adaptation experiences, aggravated by lack of responsiveness and awareness of attachment needs by the environment.

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