Ten normal 3-year-old children and their parents served as subjects for this longitudinal study of the interaction between parent-child relationships and the child's approach to task situations while attending nursery school. To illustrate the nature of the data gathered and observations made in this study, three of the 10 children were considered in some detail. The emphasis was on comparing the child's task behavior during nursery school to his relationship with his mother. These comparisons were made at the end of the first year of nursery school and again at the end of the second year of nursery school. The results indicated that it was important to look beyond the affection displayed by the mother towards her child to the whole context of the home environment in which the mother-child relationship took place. That is, mothers who rate about the same in terms of providing adequate affection for their child may, because of other factors of the relationship or of the home context, establish different positive or negative behavioral characteristics in their child that would not be understandable without a more comprehensive awareness of the total mother-child relationship. Where mother to child warmth was adequate, where mother availability was well defined, where new relationships for the child were encouraged, where limits on behavior were set, and where achievement was encouraged, the child demonstrated a more stable personality and a superior approach to task behavior.
Approaches to and Applications

of the Study of Parent-Child Interaction

PARENT-CHILD INTERACTION AND THE CHILD'S

APPROACH TO TASK SITUATIONS

by

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Parent-Child Interaction and the Child's Approach to Task Situations

The thoughts to be developed here emerge from a program of research focusing on the inter-relation of:

1. Parent-child relationship variables,
2. Performance on nursery school tasks like book time and art activities,
3. Performance in special assessment situations including intelligence tests, and
4. Performance in reading during the early grades.

At a time when there is much emphasis on educational programs for the pre-school child, it is important to review what role the previous and ongoing parent-child relationship plays in allowing the pre-school child to make maximum use of these experiences. In a recent review entitled "Parental Influence on Cognitive Development in Early Childhood", Freeberg and Payne (1967) cite the contradictory results that have been obtained using such variables as warmth, restriction-permissiveness, and pressure towards achievement. In any effort to clarify these findings they suggest care in using comparable indeces of cognitive achievement, call for the combined use of interview and parent-child interaction data, and ask for more precise definition of the variables as well as a study of their likely interaction.

We wish to illustrate in this paper that to obtain valid indeces of parent-child interaction that can be meaningfully related to the child's cognitive functioning, it may be necessary to:

1. Conceptualize the interrelationship of parents to child in profile terms. Thus, the set of qualities deemed to be important are abstracted, presented and interpreted in context rather than in isolation, and
2. To study the parent-child relationship for a sufficient period of time.
so that qualities which can best and perhaps only be seen in a time and inter-
personal dimension have an opportunity to emerge.

To illustrate these two methodological points we will use longitudinal data
from a pilot study of ten normal three year old children and their families ob-
served before and during the child's two year stay in a nursery school. Before
entrance into school in September, the interviewer assigned to the family, and
the future teacher of the child each visited the home one or more times. Mother
and child were then observed once in the nursery school before the semester began.

For the first three months of nursery school the following data were avail-
able:

1. Daily and continuous observation of the child in the school by three
different observers.

2. Observation of parent-child interaction especially during the first two
weeks when parents were encouraged to stay.

3. Continuing interviews with the parents on at least a bi-weekly basis.

4. Daily observations by the teacher of both child and parents.

5. Periodic evaluations of the child by the teacher including parent con-
ferences.

The various types of observations were maintained after the first three
months until the end of nursery school, but on a less intense basis.

At the end of the first year when the child was four the curriculum was care-
fully planned for a week to allow observation of the child's adaptation to two
basic types of task situations: Listening to and being questioned on a book, and
engaging in a goal directed motoric activity like gluing with pieces of wood. A
category system of observation was used to observe the child's and teacher's be-
behavior. The dimensions of engagement in the task, productivity, pleasure experi-
enced, creativity shown, and signs of regression seen were developed empirically
to organize these categorizations. Each of the ten children were rated and ranked
on each of these dimensions.

These intensive observations were repeated at the end of the second year of nursery school and the child now five was also observed in such special assessment situations as a play interview and the WPPSI.

To return to the methodological considerations involved in conceptualizing the mother-child relationship, we felt it important to respect the individual differences and the specific patterns of each family, and yet we wanted of course also to be able to compare one family with another. Our initial approach was consistent with the work of Schaeffer and Bayley (1963) and our own previous experience (Heinicke and Westheimer, 1966) and focussed on such dimensions as maternal affection, effective limit setting, etc. As has been observed by many other investigators, the degree of affection shown is likely to account for much of the variation in child behavior. Equivalent ratings on this variable are likely, however, to be misleading unless the judgments are seen in the context of other dimensions.

Our first methodological point therefore stresses the importance of maintaining a concept of the Profile of parent-child interrelationships in collecting, and particularly in analyzing one's observations. For example, on the basis of interview and mother-child interaction data gathered shortly before and during the first week of nursery school, both Bob's and Paula's mother rated fairly high on the affection shown their children. They obviously enjoyed the company of their children and met their affectionate demands. Other ratings to be discussed here are the mother's ability to set limits, the extent to which her availability to the child is clearly defined, the extent to which she encourages her child to form new relationships, and the extent to which she expects her child to achieve in age appropriate task situations.

When these ratings were repeated six weeks after the beginning of Nursery School, Paula's mother received a slightly lower rating on giving affection than
did Bob's mother, but it now also became very clear that the impact of this affection was likely to be very different. Although Paula's mother was not often very demonstrative and though she was one of the first mothers to leave her child on her own, her affection and presence could be counted on by her daughter. When Paula wanted to sit in her lap and in this way return to "home base", she was received warmly. This quality of her affection could also now be seen in the context of her clear setting of limits and her active encouragement of Paula's independent achievement. She did not allow Paula's wish to mess to go too far. Similarly, she made it clear that she expected her to manage the separation into nursery school. She was clearly available but also explicitly encouraged Paula to solve her own problems or turn to the teacher in the school.

Bob's mother was if anything more affectionate and very close to her child. But this had again to be interpreted in context. Thus, at certain moments her availability could not be counted on. Brief periods of depression arising out of instances of marital conflict made her affection and Bob's "home base" insecure. The otherwise close affection was further qualified by her inability to effectively limit Bob's defiance. He would refuse to remain at the lunch table or refuse to stay in bed, claiming he had to go to the toilet. While clearly wishing him to be independent, she had difficulty letting the teacher and Bob deal with the slight wetting that occurred towards the end of the morning.

It can be argued that the later data analysis can include the above suggested necessary combination of various mother-child variables and that each dimension should initially be judged independently. Thus, in their Patterns of Child Rearing Sears, Maccoby and Levin (1957) noted that they found higher correlations with child behavior when three or more mother-child variables were used in combination rather than attempting to correlate single maternal with single child variables. Too often though the dimensions are ultimately used only in their discrete form and analyzed statistically in such a way that the
individual profiles or types of profile are lost.

An example of the value of retaining the focus on the individual parent-child profile or types of profile can be seen by noting the parallels between the above parent-child profiles and the manner in which Paula and Bob typically approached a task situation when observed at the end of their first year of nursery school. They were now four years of age.

During the first months of nursery school Paula had reacted to her mother's limited presence and active encouragement to form new relationships by whining and excessive thumb sucking. Although clear about her mother's availability, she initially needed the affectionate lap of one of the student teachers as a substitute "home base". For some time she sought out this comfort but could from there gradually form new and persisting relationships with certain peers and the other teachers. These new relationships in turn provided the basis for increasing involvement and mastery of such tasks as singing and tricycle riding. (The details of this are given in Heinicke, Busch, Click, and Kramer 1968). The retreat to some kind of self comfort never quite disappeared, but her generally adequate adaptation by the end of the first year was reflected in her response to the task situations. She was rated high on engagement, productivity, pleasure in the task, compliance and signs of creativity. Her frequent sucking of her thumb, particularly during the book time, was also noted.

An example serves to illustrate these ratings. Paula had begun the morning of June 5th by "cooking" for almost an hour in the Doll Corner with her best friend, Joan. When she heard the main teacher calling the children to book time she quickly settled down. She was soon correctly answering questions about which of the children in the group were missing, and so forth. In association to a discussion of the animals in the story, Paula volunteered that her dog's name is Sarah. A link to the name of her favorite student teacher and her mother's name was thus established, but this personal interest did not disrupt the group. As Harry the Dog
developed into a Sea Monster frightening various people, Paula attended in spell-bound fashion with her finger in her mouth.

Paula also listened carefully as the next activity, gluing pieces of wood, was explained to the children. Though again settling down quickly, she slowly put little dabs of glue in certain places on the board. She was concentrating as she carefully and with obvious enjoyment made her first "arrangement". All observers agreed that the result was creative as well as practical. She produced one design after another until ultimately she had made six. Both shapes and color were actively employed to create a total effect. She not only enjoyed her work but was proud of it and was making sure that each piece was labeled and saved. Moreover, she taught Jennifer how to glue certain pieces together.

Paula's response is highlighted by contrast with Bob's. He was given a median rating on engagement, a high rating on signs of regression and received low ratings on productivity, creativity, compliance, and pleasure in the task. Examples will again be taken from June 5th. Bob had started his morning playing along with the boys but was not fully accepted and had not become too involved in any one activity. Like Paula, he quickly complied with the teacher's request to come to the book time and settled down nicely. When she asked however, what "kind of juice they were having, Bob momentarily disrupted the group with his answer of "Pooh-pooh juice". Thus, the initial commitment, settling down, is followed by regressive disruption. He could then pay attention, but contributed very little. When one child talked appropriately about sun glasses, Bob went on with it to the point that other children were encouraged to engage in further disruption. When asked directly about one picture involving the identification of sea weed, Bob again tried hard, began to stutter, and could only come out with "giant". After this Bob neither answered a question nor disrupted the group, and did attend with his thumb in his mouth.

For the wood gluing task he again settled down quickly, but just as his pooh-
pooh juice remark burst forth before, so he now splattered great amounts of glue on his base board. He stayed with the task long enough to make some interesting towers, but could not finish them and ran away from the table. The teacher persuaded him to return and tried to help him develop a more practical design. Soon he left again though, and in his absence things literally became unglued - the towers toppled. When he once more returned he first smeared with the paste, and then produced one design in the middle of this lake. Soon he was again off with the other boys who were tearing around on their tricycles.

What we see then are some interesting parallels between certain basic experiences in the parent-child interaction and Bob's approach to the task. The mother's intense commitment to Bob is followed by her suddenly becoming disorganized or fighting with her husband. Bob commits himself to the task but then disorganizes the group or literally runs away and asks for the control that he has not received at home. In this regard he is particularly provocative in an area, namely messing, where the mother and father have been least effective in controlling him. As he turns to the teacher for help or protection, one senses the need to continue the protective and somewhat intrusive relationship that the mother does provide at times. This would not make for the self-reliant functioning seen in Paula. We have then illustrated so far certain interesting parallels between the basic approach to task situations and characteristics of the parent-child relationships. In so doing we have also suggested that the impact of affection has to be seen in the context of the other qualities of the profile of the relationship.

Without wishing to push the above noted parallels too far, for still another child in our study, Jean, certain basic parent-child sequences were also reflected in her approach to task situations. These parallels were, however, not adequately understood until we had observed and to some extent been working with the mother for a considerable period of time.

This brings us then to our second methodological point. Jean's family will
be used to illustrate that certain essential qualities of the mother-child relationship only emerge in a time and interpersonal dimension. By contrast to the relationships observed for Bob and Paula, it became immediately apparent that Jean experienced little closeness with either her mother or father. Although apparently at ease in moving into certain activities of the nursery school, Jean never looked at her mother and towards the end of the day showed no response when her mother said: "I'm going out for a minute, O.K.?" In general, when talked to she squinted her eyes or looked off into space. This incident illustrates not only Jean's withdrawal but the mother's general inability to approach her daughter except in prescribed ways. Thus, she could remain in the school for the suggested period but spent most of her time talking to the other mothers. While distance also characterized Jean's relations with the teachers and children, she could occasionally encourage or invite contact only to flee from it as the other person sought involvement. By contrast, there were certain activities, like mixing paint, that she could engage in with great concentration. Her good intelligence and observation powers became apparent as she quietly repeated songs that had been heard in the group.

Moreover, her intense longing for her mother could be inferred from her regressive reactions to her mother's absence after having remained in the nursery for the first six days. She clung excessively to her favorite blanket and also now insisted on wearing a frilly silken slip. She exhibited herself and often masturbated. Both the staff and her mother became increasingly concerned, and after some discussion the mother herself suggested that she remain in the nursery for a longer period of time. Jean responded very favorably to this change, and by the end of the first month of nursery school had become openly affectionate with members of her family and the main teacher in the nursery school. She could frequently approach the children and often successfully so.

Given Jean's positive development, the mother's decision to once more leave
the nursery seemed appropriate but her subsequent two week departure from the home came as a shock and now made only too clear a pattern which Jean had experienced many times. Only the continued contact with this family allowed us to understand Jean's expectation that any involvement was likely to be followed by the experience of abandonment. She had responded either by avoiding commitment or by touching and quickly running before being disappointed. From her behavior in school and the mother's report, it became clear that through messiness and general provocations she could make a real impact on a mother who constantly wanted her to appear as if company was coming. And while having very high standards both for feminine cleanliness and independent academic achievement, Jean's mother was unable to effectively control her daughter's periodic unruly escapades.

It is with this background in mind that we turn to the observations of Jean's adaptation to the task situation on June 5th, at the end of the first year of nursery school. Her general response was categorized as showing low engagement, variable productivity and creativity, little pride and pleasure and a striking tendency toward regression. There were moments when she could attend and demonstrate her excellent intelligence, but as often as not she would then either actively distract the group or more frequently withdraw all involvement, and show signs of regression.

As it happened in the week before June 5th, Jean had experienced a loss of a maid to whom she was quite attached. During the year she had developed a good relationship to the teacher and had made friends with a quiet little girl. On this morning she looked very sad, could initially not respond to her friend, but did accept her invitation to play after some special affection from the teacher.

Like Bob and Paula, she complied quickly when it was time for juice and book time, but her lack of engagement was again apparent as she refused all juice and crackers. Her affect momentarily became positive as she repeated "pooh-pooh juice" after Bob. At other times she might at this moment of disruption have run away
from the table and thus have invited retrieval. But despite this lack of engagement and provocation, she at first gave several correct answers. After this commitment, however, she turned again mainly to her thumb and blanket and was not contributing.

In the wood gluing situation she again complied with the instructions, but showed little imagination or pleasure as she piled a number of pieces together. Most important, she made only one object and was the first to leave the table. A quick engagement is again followed by withdrawal.

We can see then a parallel between Jean having repeatedly experienced the mother's engagement and withdrawal and her own quick engagement and withdrawal in a task situation. Although compliant both with the mother and the teacher in entering the task situation, she could not resist making an impact with a disruptive pooh-pooh burst or by running away from the task. While the interrelation of descriptions of parent-child relationships and descriptions of the child's approach to task situations have thus been illustrated and are we believe meaningful, the process involved in such mutual influence needs further specification and interpretation. In a separate paper (Heinicke, Busch, Click and Kramer, 1958) we have presented the details of this process as well as interpretations of it during the two years of nursery school for both Paula and Jean. Even this presentation still leaves much unaccounted for. Particularly important in this regard is the development of the child in the family during the first three years.

But focusing for the moment on the descriptions available for the two year nursery school span, the inter-relation within the total sample between parent-child profiles, adaptation to task situations and performance on the Wechsler Preschool Scale of Intelligence was also analyzed. The profiles of mother-child relationship rated after the first six weeks of Nursery School were highly individual but could also be divided into two groups: Those where the mother to child warmth was adequate, her availability defined, new relationships encouraged, limits
set and achievement encouraged, as opposed to those where this was not the case.

While it is our observation that the above qualities do interact in ways that have a significant effect on the child, and it is for this reason that we stress the importance of conceptualizing Profiles, it may also be that later data analysis on larger samples will reveal that certain of these qualities are more important in defining a given Profile.

What can be said now is that children from the first of the above two groups consistently scored higher at four years of age on ratings of engagement, productivity, creativity, pleasure in, and compliance with the task. (Statistical significance was tested using Fisher's Exact Test).

These ratings of adaptation to task situations were in turn significantly correlated with scores derived from the WPPSI administered at age five. It was first of all noted by the test examiner, Dr. Liebowitz, that the children did vary greatly in the extent to which poorly resolved conflicts interfered with their test performance. Without knowledge of the previous information on Bob, the examiner described him as an "almost" performer. "He seemed on the verge of answering correctly but suddenly pulled up short. Not that he didn't know the answer, but his persistence was extremely limited. This lack of self confidence appears linked to his self perception and his view of the world about him. He feels that things will easily get out of hand and this tenuous control frightens him."

The specific types of interferences differed for each of the other children showing such disturbance, but it also then became apparent that all of them tended to have lower performance than verbal scores. Further data analysis is needed to clarify why the performance rather than the verbal scores should be depressed as a function of poorly resolved conflicts. Impressive is the fact that both the total Performance Score and the Performance minus Verbal Score at age five correlated significantly with ratings made at four years of the child's engagement, productivity, creativity, pleasure in, and compliance with the task. The Spearman
Rank Coefficients for the association with the discrepancy score ranged from .77 to .95 and were all significant at the .01 level. We also noted that in several instances the depressed Total Performance Score was due to a particularly low score on the Mazes subtest. The child is asked to trace a path through a Maze so that a baby chick can find its way back to her mother. Faced with this test, Jean froze and became disoriented. She scored 5 as opposed to Paula's 16. Performance on this test is in fact correlated with the Performance minus Discrepance Score to the extent .88. It would seem that unresolved problems relating to the psychological separation from the mother may be particularly indicative of other conflictual issues interfering with cognitive performance at this age.

We certainly think that the links between parent-child profiles, adaptation to task situations, and performance on the WPPSI deserve further study.
REFERENCES


