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## SUMMARY OF THE CURRENT RESEARCH ACTIVITIES OF RCCCD

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The objectives of the current program in our center are threefold : (1) the efficient realization of major potential contributions to knowledge of the long term longitudinal study launched in 1966 ; (2) the development of new facets of research on child development, including studies of father-mother-child relationships from an eco-psychological standpoint and of socialization of the infant ; (3) the provision of facilities and assistance to faculty members and graduate students interested in conducting research on child development.

The followings is a summary of the current research activities of RCCCD.

### A LONGITUDINAL STUDY OF MOTHER-CHILD RELATIONSHIPS AND CHILD BEHAVIORAL DEVELOPMENT

We have already published several reports (2 in English, cf. Miyake et al. 1978, Miyake, Tajima and Usui 1980) containing descriptions of the goals, sample, methods and tentative findings of this longitudinal study launched in 1966 with 51 mother-infant pairs as the subjects at the initial stage of the data collection. At the 22nd International Congress of Psychology (Leipzig, GDR July 6-12, 1980) the present author delivered a paper on this study. What follows is a summary.

The aim of this study is to replace the past socialization research demonstrating correlations between mother and child variables at a single point in time and regarding maternal characteristics as antecedents and child variables as consequents. For this purpose we stress the need for continuous assessment of the reciprocal relations between mother and child to determine how the interactions between the two accelerate or prevent the child's socialization.

*Methods* : The total number of subjects was 51 at the initial stage of the study ; 22 mother and child pairs were followed for twelve years from the beginning. The mother was interviewed repeatedly from the period of pregnancy until the child was 11 ½ years old. Observations of mother-child interactions were made repeatedly in the naturalistic situation. The laboratory situation was loosely structured in that mother and child were free to do what they liked. The mother-child interaction was videotaped and ratings were made on the mother's variables such as directing, helping, restricting and giving affection as well as on the child's variables such as curiosity, aggression, dependency, anxiety and sensitivity. Moreover, verbatim transcripts of the interaction were prepared from the videotape in order to be unitized into communication units and be coded according to the following categories : statement, question, proposal, explanation, acceptance and negation. An overall summary of the tentative findings and interpretations follows.

*Results* : The child's behavior is modified by the mother's behavior and undergoes considerable changes over time. It equally seems to be true that the mother's behavior is

modified by the child's behavior. By utilizing a statistical analog of the back and forth influences (cross-lagged panel correlational technique) we could tentatively show a complex reciprocity between the mother and child and examine the cause-effect consequences in the child's socialization process. For example, if the mother is aware of her 3-year-old child's needs and responds adequately to behavioral expressions of these needs, he grows up to be a socially active 5-year-old. This in turn brings about maternal responsiveness during subsequent years. Another example of the reciprocal relations between the two is that the low level of motor activity, negative quality of mood, high threshold of responsiveness and mild intensity of reaction of the child in his early years seems to bring about maternal responsiveness during the preschool period. This is positively related to the child's cognitive and social competence at 8 years of age.

*Discussion* : If the child's socialization is to be understood properly, not only the mother's effects on the child, but also the child's effects on the mother should be carefully investigated through continuous assessment of the relation between the two.

#### REFERENCES

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#### MOTHER-CHILD INTERACTION IN AN UNSTRUCTURED PLAY SITUATION AND THE CHILD'S COGNITIVE DEVELOPMENT

The data for this study were taken from American and Japanese sample of the project, "The Influence of Socialization Agents upon Cognitive Functioning, Communication Styles, and Educability of Preschool Children in United States and Japan", co-directed by Prof. R. D. Hess, Stanford University in the United States and Prof. H. Azuma, University of Tokyo in Japan.

Based on the analysis of the data taken from the Japanese sample of the project stated above, two papers have already been published in English (Hatano, Miyake and Tajima 1980, Tajima and Miyake 1980). Even though the Hokudai (Hokkaido University) team headed by K. Miyake undertook analysis of the data taken not only from Japanese sample but also from American sample and has already finished the analysis of the data from the standpoint of cross-national comparisons, the results have not been published in English yet in accordance with the publication guidelines for the cross-national study : these state that any article reporting cross-cultural data to be published in English should be sent to the other team for comment, usually to Hess or Azuma and persons most concerned with the topic. A plan for publishing a complete report of the project in U. S. under the coeditorship of Hess and Azuma is underway, and K. Miyake is to help prepare a chapter on the interaction of mothers and children in U. S. and Japan in an unstructured play situation.

Mention can be made here of a published paper entitled "A Cross-National Study of Mother-Child Interactions in an Unstructured Situation and the Child's Cognitive Development — U. S. -Japan Comparisons" (Miyake, Tajima and Usui, Bulletin of the Faculty of Education, Hokkaido University, 1980, 37, 1-76).

One of the interesting findings of our cross-national comparisons is that 'the mother's sensitivity to the child' (defined as when a mother tries to facilitate and encourage her child to display positive and spontaneous behavior in an indirect manner) positively affects the cognitive growth of the Japanese children as well as the American children. The other major component concerns maternal behavior 'structuring the situation' (defined as when a mother leads her child to a certain action mainly through direct verbal instructions). Results indicated that negative effects occur in the Japanese child's cognitive performance, whilst in U. S. no negative effects are found.

Our interpretations of the above-stated findings are as follows. The Japanese mothers' direct leading would be regarded by their children as a 'press,' since typical Japanese mothers neither structure the situation nor give direct instructions in order to stimulate their children's positive and spontaneous behavior. Rather, they give direct instructions to their children when they want to prohibit spontaneous behavior. On the other hand, the American mothers typically structure the situation or give direct instructions to facilitate positive behavior. Hence their direct control does not have negative effects upon their children's performance.

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#### A LONGITUDINAL STUDY ON PARENT-CHILD RELATIONSHIPS AND CHILD DEVELOPMENT FROM AN ECO-PSYCHOLOGICAL STANDPOINT

This study was started in 1979 directed by K. Miyake. A grant-in-aid for scientific research from the Ministry of Education was received for the fiscal years of 1979~1981.

The objective of this study is to get into the comprehensive understanding of the development in the period of preschool years. For this purpose a multiphasic approach to the reality of the child's life from a standpoint as wide as possible is made. Through that endeavor we hope to find some truly significant variables for studying young children and by integrating the data obtained, we might be able to explore the educational conditions including parent-child relationships for promoting desirable development in ways of ecological validity.

*Subjects* : Sixty 3-year-old children (30 boys and 30 girls) and their fathers and mothers were chosen as subjects at the start of this project. Half of them were from urban families living around the campus of Hokkaido University and the remaining half were from farm households living in a typical agricultural area in central Hokkaido. Our research group has been following them for nearly two years and the data collection is to

be completed by the end of 1981.

*Data collection procedure* : a (Parents interview — Fathers and mothers are interviewed separately about their expectations for the child's development, their perceptions on the child's behavior, their teaching styles as well as their daily style of living. Besides this, additional mother interviews are conducted twice later on to gather informations regarding the mother's life history, the mother's cognition of the child's personality and its daily routine.

b) Observations of father-child and of mother-child interactions — Father-child and mother-child interactions in a laboratory like situation are unobtrusively videotaped for 10 min. The situation is only minimally structured so that a variety of interactions can take place. The toy materials used in the father-child session are the Lego blocks. German made toy materials consisted of a 7×7 punchboard and 63 pegs of 4 different colors with which various patterns can be made were used to observe the mother-child interactions.

Verbatim transcripts are to be made from the videotapes, and the whole session of verbal exchange between the pair is to be divided into Communication Units (CU), a CU being the smallest unit for the exchange of an idea to be completed or interrupted by another idea. All the CUs are classified into several categories by considering the meaning and the function of each utterance (cf. Tajima and Miyake 1980). Besides this, global ratings of paternal, maternal and child behavior are made by a seven-point scale (cf. Tajima and Miyake 1980).

c) Naturalistic observations of the child's behavior — The child's activity in his/her home and neighborhood is observed and recorded narratively by 2 observers once in the morning and once in the afternoon. The aim of this observation is to gather information concerning the type and duration of play, the type and number of settings which the child enters and the persons with whom the child interacts.

The patterns of peer interactions are recorded narratively in a free play situation and in an structured group activity situation (each session is for 30 min.). The observations of peer interactions are conducted at the day nursery where the child attends.

d) Child performance measures — The following is the measures of child performance.

i) WIPPSI (Japanese version) ii) MFF (KRISP) iii) Motor Ability Test iv) Role-Taking Task v) Memory Test. In addition to the measures stated above, global behavior ratings of the child's behavior at the day nursery are conducted by his/her teacher.

Data analysis has already started and several papers are expected to be delivered at JPA annual convention in 1981.

#### A COLLABORATIVE STUDY ON THE GROWTH OF ATTACHMENT AND SOCIALIZATION IN EARLY YEARS

Under the sponsorship of the Japan Society for the Promotion of Science and the Social Science Research Council of the U. S. two small meetings between Japanese and American developmental researchers were held in November, 1970 and in July, 1980. Led

by Professor Kagan, Harvard University and Professor Kazuo Miyake, Hokkaido University, eight American and six Japanese researchers discussed their research on early socialization and attempted to identify topics for new comparative research efforts in the first meeting. Then in the second meeting four American and three Japanese psychologists discussed the feasibility of a collaborative effort in which identical procedures will be implemented in both cultures and data analyses and interpretation will be coordinated with a similar mood of unity. It was also decided to proceed with the cooperative research on infancy. K. Miyake will be the principal investigator for the Japanese sample ; Professor Kagan will be responsible for the American sample. The cost of the Japanese effort will be met with funds from the Japan Society for the Promotion of Science, the Toyota Foundation and the Ministry of Education.

The primary purposes of this infant research are to study relations among maternal behavior, some aspects of infant temperament, and indexes of attachment in the first and second year of life. According to Professor Kagan one of the most popular assumptions in contemporary developmental theory is that specific classes of interactive experiences with the mother during the first year create in the child special emotional and behavioral attachment relation. A related assumption is that variation in the quality of attachment among young children has a significant influence on the future course of the child's socialization. Both hypotheses are not yet confirmed and assessment of their truth value has both theoretical and practical implications.

Because of the purpose of this study we have decided to restrict the Japanese sample in the following manner. (1)The mother will be at least a high school graduate and not be employed full time, (2) The father will have at least 14 years' education and be engaged in a white collar or professional vocation, (3) the mother will be between 22 and 30 years of age and the father will be above 22 years of age, and (4) no other child will be living in the home. Because the resources at Hokkaido University are unable to deal with large and diverse samples and still retain the desired quality control on the data to be gathered, we have to restrict the Japanese sample to the criteria listed above. Professor Kagan is planning to include both middle and lower-class mothers and children among his American sample. Nevertheless, both the American and Japanese principal investigators believe that even with the restrictions noted there will be significant differences in maternal and child behavior between the American and Japanese middle class samples.

The Japanese team has already started a preliminary research with 30 mother-infant pairs. We intend to follow them from the 32nd week of pregnancy to the child's first birthday by using various methods including interviews, observations of mother-infant interactions at home as well as in a laboratory setting, laboratory assessments of the infant's habituation to visual and auditory stimuli and response to a stranger. At 10 and 12 months of age we intend to evaluate the primary outcome variable; namely, the child's attachment to the mother. We would like to use positive signs of attachment as most of the indexes used are negative behaviors such as separation protest, crying and withdrawal. Besides this, we plan to administer some procedures to assess selected aspects of cognitive development three or four times in the course of the first year of life.

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