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JAPANESE VS. UNITED STATES COMPARISON OF MOTHER-INFANT INTERACTION AND INFANT DEVELOPMENT: A REVIEW

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I. INTRODUCTION

This chapter deals with major empirical studies concerning infant development in Japan during the last twenty-five to thirty years. We do not presume to provide a comprehensive review of the field but rather will concentrate on some selected few topics that will (1) show some cultural factors that might have important implications for infant development, and (2) point out some methodological preconceptions currently in existence. In the following discussion, we will try to provide a historical sketch of this line of research in Japan and to make some practical suggestions concerning some important factors in the process of infant development and its study. For the last few years, we have been involved in the study of early mother-infant relationship, we choose to discuss comparative studies of mother-infant interaction and infant temperament between Japan and the United States. For a more general review of studies of behavior development in Japan the readers are referred to Azuma (1982).

It is believed that since the Japanese child-rearing culture is very different from that of the United States and Europe in some important ways, comparative studies between Japan and other countries (or societies) can make a special contribution to our understanding of infant development (e. g. Azuma, *op. cit.* ; Caudill & Weinstein, 1969).

Cross-cultural comparison of child-rearing and later personality development has a long history and it was the main area where psychology and anthropology met before cross-cultural cognitive psychology became popular. The American interest in the psychology of the Japanese was mainly motivated during World War II by practical concerns of the time. This was probably the beginning of modern psychological studies of the Japanese. The popularity of cultural anthropology in America after the Second World War has resulted in many western researchers' interest in the Japanese. Under the influence of Freudian theory, infancy and child-rearing practice were considered important topics in most of the cultural anthropological studies of a society. Caudill, an anthropologist by training, began the first empirical study of early interaction of the Japanese mother and infant in the early 60s. The subsequent development of this line of research in Japan seems to reflect the influence of both Caudill's initial study and the contemporaneous research trends in western, especially American, psychology; Azuma, Kashiwagi, and Hess's study of maternal variable and cognitive development of the child

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in the 70s. Miyake's study of infant temperament, interaction and attachment in early 1980s.

While empirical comparative study of infant development between Japan and countries other than the United States is almost non-existent (Note 1); comparison between Japan and the United States seems to be increasing in recent years. However, it has to be admitted that although there are several studies that involve Japan-United States comparison, so little has been learned about early interaction from them. This is partly because in most cases, cross-cultural method has not been employed effectively. Often, comparison was made, not because of necessity, but because it was possible to do.

Among topics under the rubric of infant development studies, mother-infant interaction is attracting increasing attention in Japan in recent years (Chen, 1983; Niwa, 1979; Tajima, 1982; Takahashi, 1977; Yamada, 1982).

Another topic that seems to deserve attention here is the study of infant temperament. Freedman has suggested that among the Oriental newborns and young babies that he had studied, Japanese were observed to be more irritable than either Navajo or Chinese, but not as extreme as the Caucasians (Freedman, 1979). Some other recent preliminary studies have shown behavioral differences of newborns among ethnic groups (Hsu, C. -C., Soong, W., Stigler, J. W., Hong, C., & Smetana, J. G., 1981; Kato, T., Takahashi, E., Amino, T., Kato, N., & Kobayashi, N., 1984; Ohyama, M., Murai, N., Nihei, Y., 1982). The possibility of behavioral differences in the newborn period between different ethnic groups has implications in some other research areas such as the assessment of attachment and its interpretation (Miyake, Chen, and Campos, 1984). However, further research using more rigorous control and analysis will be necessary before a more definite conclusion can be drawn.

In this paper, we will begin with a description of the background of Caudill's studies. Then, his findings and conclusion will be briefly reviewed with some comments from the point of view of cross-cultural methodology. Following this, Azuma, Kashiwagi, and Hess's studies of maternal variables and the cognitive development of the child will be discussed. Miyake's research project on attachment, infant temperament, and mode of interaction will then be introduced before we turn to infant temperament studies now in progress. We end by mentioning some research projects that are still in the stage of research design, but seem to promise a more substantial step forward in the cross-cultural study of early mother-infant interaction.

II. CAUDILL'S STUDIES

Psychological studies on Japanese personality only started during the war and these investigations were done outside of Japan through interviews with Japanese Americans (Benedict, 1946; Caudill, 1952). William Caudill inaugurated the first empirical study of Japanese infant-mother interaction in 1961. We begin our description of

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Note 1 Some Japanese cultural or social anthropological works might have included a child-rearing section, but systematic comparisons of child rearing in Japan and other cultures are unknown to the present authors except Hara's study of the North American Indians (Hara, 1979).

infant development studies in Japan with Caudill, not only because of his historical priority, but also because of the profound influence his studies have had on subsequent development in the study of mother-infant relationship in Japan.

Trained as an anthropologist at the University of Chicago, Caudill first became interested in the Japanese personality development through his attempt to understand the remarkable adiustment to life in Chicago of many of the 20,000 Japanese Americans who had spent a few years in the relocation camps during the war years (Caudill, 1952). Before he started the now classic study of maternal care and infant behavior in Japan, he had been working and doing research as a psychological anthropologist in psychiatry wards (Caudill, 1952; 1954; 1959; 1961). This background of Caudill's was to influence his studies of the Japanese personality.

When Caudill died in 1972, he had published more than 20 research papers concerning Japanese. Among them, he is most remembered for the ones comparing maternal care and infant behavior in Japan and the United States. These papers were all based on one research project he and his co-workers carried out from 1961 to 1964. It involved 30 Japanese and 30 American first-born, middle-class infants and their mothers. Data were obtained through naturalistic observations made on two consecutive days covering one morning and one afternoon, and totaling 290 minutes (4.8 hours), including a five minute break after every ten minutes. In one of his papers (1972) he summarized the findings as follows:

> In summary...the general findings by culture in the earlier analysis show a basic similarity in the biologically rooted behavior of the infants in the two countries regarding the total time spent in intake of food (sucking on breast or bottle and eating of semisolid food) and in sleep, and also show a basic similarity in the behavior of the mothers in the two countries in the time spent in the feeding, diapering, and dressing of infants. Beyond these similarities, however, the American infants have greater amounts of gross bodily activity, play (with toys, hands, and other objects), and happy vocalization; in contrast, the Japanese infants seem passive, and only have a grater amount of unhappy vocalization. The American mothers do more looking at, positioning the body of, and chatting to their infants; the Japanese mothers do more carrying, rocking, and lulling of their infants.

To Caudill, the differences and their explanation were the topics of later papers. He sought the answer in the differences in the structural variables of mother-infant interaction.

With these empirical findings concerning infants of 3 to 4 months old in both Japan and the United States, he proceeded to confirm his hypothesis about the difference in mother-infant interaction. In another study carrid out by Caudill and Frost (Caudill & Frost, 1973), the strategy of comparing maternal care and infant behavior among Japanese-American and Japanese families was adopted in an attempt to solve the problem of whether the differences in infant behavior and maternal care between Japan and the United States was due to genetic differences or cultural ones. Once again, it was argued that the greater activity and happy vocalization of the American baby in

contrast to the Japanese baby do not seem to be genetic in origin "because the Yonsei baby is like the American baby in these regards even though he is genetically Japanese". (Caudill & Frost, 1973, pages 15–16.) The authors emphasized both the cultural change and cultural persistence as reflected in the influence on the behavior of the mothers and their infants. The former point was supported by the finding that the Yonsei babies responded appropriately and learned to behave in ways that reflected the cultural style of their parents.

By the time Caudill died, the coding of the data from the observations at age 2 1/2 had been finished and some very tentative analyses begun, the coding of the data gathered at age 6 and their analyses were left almost undone (Caudill & Schooler, 1973).

Since the death of Caudill there was no serious attempts either by Japanese or American development psychlogists to further his work. In 1980 a replication of Caudill's observation study was carried out with 40 three-month-old-infants and their mothers (Sengoku, 1981 ; 1983). In 1982, a partial replication was done by a group of American and Japanese researchers (Otaki, M., Durrett, M. E., Richards, P., Nyquist, L., and Pennebaker, J. W., 1982).

Though often quoted and mentioned, Caudill's works have rarely been subject to serious criticism by psychologists or anthropologists. The only possible exception is a monograph by Hara and Wagatsuma (1974), an anthropologist and a social psychologist. However, these authors mainly criticized the methodology of what is known as model personality, and the type of study under the influence of the so-called culture and personality theory current in the 1960s and before. To be sure, Caudill's implicit theory was not without problems. However, he was among the earliest who saw the association between infant behaviors and maternal interactional behaviors, long before mother-infant interaction became the focus of research attention in the 1970s (Note 2).

With regard to methodology, his naturalistic observations seemed too contrived in comparison with traditional anthropological field methods on the one hand ; and too limited and lacking in control when compared with traditional psychological study in the laboratory on the other hand. As an anthropologist, he seemed to have paid much attention to the effect of context on human behavior (Caudill, 1952 ; 1959). However, the possibility that the presence of an observer in the mother-infant interaction context could have created significant difference between the two countries in question seemed to have escaped his attention. He did not mentioned this issue in any of his papers. This is not an issue that can be solved by merely mentioning it, and it is not a minor point in a cross-cultural comparative study of mother-infant interaction. Japanese and American differ in their attitudes toward the presence of a stranger in the home, and toward an observer in the mother-infant context ; differences that might differentially bias the observation of maternal behavior.

Furthermore, differences in the physical setting (including size and layout) of the home between Japan and the United States may also introduce bias. In explaining the

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Note 2 Caudill did not seem to be aware of earlier studies on mother-infant interaction by researchers such as Ainsworth (1963), Moss & Robson (1967) and Sander (1962).

fact that American infants had more vocalization, Caudill argued that in their relationship with their babies, the American mother's pace of interaction was more "livelier" and she tended to be in and out of the room more often and was providing more naturally occurring opportunities to speak to her baby and for her to respond vocally as she came to care for the baby (Caudill, 1969). Apart from the cultural difference in maternal attitude toward the infant, which Caudill seemed to consider as the ultimate explanation for the differences observed, the behavior of the American mothers should also be interpreted as the result of the physical setting of the American house, where more rooms are usually available and the infant tends to have his/her own room. Because, under such condition, it is natural for the mother to leave her baby alone in his/her room, and only to check the infant's condition from time to time, it may create what Caudill described as being more "livelier" in the pace of interaction. In trying to explain the fact that American infants had more happy vocalization, Caudill argued that the pace of the American mothers was more "livelier" in their interaction with their babies. He attributed this pattern of the American mothers to the difference in attitude toward infants. An obvious, but often neglected, factor is the difference in the physical setting of the house.

As a methodological strategy, cross-cultural reseach of early interaction has its merits as well as limitations. For example, it can produce hypotheses to guide further, more quantitative assessment of between-group differences. However, cross-cultural comparison usually does not yield a "cause" for differences between groups in question. It can make suggestions as to where differences are most likely to be. This will have to be followed up by more specific hypothesis-testing studies of developmental processes to verify what is found in the first step of cross-cultural study. Only after such a two-step procedure can cross-cultural study provide us with process-oriented answer to some of the questions raised by researchers in early interaction (Whiting, 1966; Whiting & Whiting, 1975; Zaslow, & Rogoff, 1981).

As a first step in the cross-cultural comparison of early interaction patterns between the United States and Japan, Caudill's research has generated some hypotheses concerning early infant behaviors, maternal care style, and other factors such as the mother's attitude toward child-rearing, and her beliefs about the child's capacities and limitations (*Jidokan*).

Kojima (1979, 1981, 1982) has shown that the Japanese view of infant development is indeed different from that of the Americans, because the Japanese consider that sleep and prompt satisfaction of desire are what the young infant most needs, rather than the ability to express him/herself verbally. The difference in the parent's view of infant development, however, does not tell us the whole story. A satisfactory explanation of the differences in early interaction and early infant development will have to explain, for example, why the views about infant development are different.

Based on his study of the traditional Japanese *Jidokan*, or childrearing concept Kojima made an alternative interpretation of Caudill's result (Kojima, 1982). According to Kojima (1982, p. 13), Caudill interpreted the Japanese mother's tendency to touch the infant when it was asleep, or her slow response to unhappy vocalization of the baby, as the result of less sensitivity in Japanese maternal care. Alternatively, Kojima

suggested that it could be interpreted as the result of a different childrearing concept.

At a more general level of analysis, cross-cultural differences in views about infant development are part of differences in the structure of the family system (Bronfenbrenner, 1979; Kojima, 1984). In comparing parental attitude or views about infant development between Japan and the United States, the following fact should not be neglected, namely, in Japan, where mothers are usually responsible for household work as well as child rearing, mothers of young infants are often held responsible for any negative state of the child such as sickness, fussing and crying. In order not to be criticized, by her husband or by her neighbours, Japanese mothers will do whatever possible to keep the infant from falling into a negative condition, and avoid disturbing her husband or the neighbours. This factor exists long before the mother develops her own view about the development of the infant, and this seems to be the result of the traditional position of the female in Japan . In view of this fact, it is understandable why Japanese mothers tend to avoid stimulating their babies, and to prefer their babies to be in a more quiet than active state. To Caudill, and many who are interested in the Japanese society, the ultimate explanation that is appealed to is sociological construct such as culture, or attitude, and not a universal psychological construct.

Ⅲ. MATERNAL VARIABLES AND THE COGNITIVE DEVELOPMENT OF THE CHILD

The next major research project that addresses itself to differences between Japan and the United States is the collaborative project by Azuma, Kashiwagi and Hess (1981). Although this project does not properly fall into the category of 'infant study', it is included here for serveral reasons. First of all, as an empirical study involving actual observation of mother-child interaction, it can be considered a continuation of Caudill's study. In fact, Caudill was one of the participants in the Stanford conference in 1971 that was the origin of the ideas about this project. Second, it is the first collaborative effort between psychologists in Japan and the United States to contribute independently to a common goal, and may serve as an example to subsequent interaction between scholars in the two countries. Thirdly, the concrete findings of this study aroused the interest of some researchers, some of them are collaborators in this project, in continuing the line of thoughts and to pursue the topic further. Finally, some of the conclusions of this research have implications for the future study of infant or child development using a cultural comparison method.

The Azuma, et al. study reflects two trends in the developmental psychology of the time; the rise of cognitive development studies, and the emphasis placed on the influence of the parent's attitude and behavior on children's language or cognitive development (Bernstein, 1966; Hess & Shipman, 1965, 1967).

Several papers, articles and one book (in Japanese) have been published as a result of this research project (Azuma & Hess, 1976; cf. Azuma, Kashiwagi, & Hess, 1981, for detailed references).

According to a 1977 preliminary report, the study involved 76 Japanese and 67 American mother-child pairs. The average age of the children was 3 years and 8 months at the start of the study. Both the mothers and the children were observed in various situations either individually, or in interaction with each other. In addition,

observations involving teacher, teacher-child and interview with teacher were also carried out.

The research has generated a large number of findings that are summed up in four categories: (1) Findings related to motherhood, home enviornment, and mother-child relationship, (2) findings related to child's cognitive development and behavior characteristics, (3) findings related to the relationship between maternal variables and the cognitive development of the child, and (4) general findings.

There are several findings and issues that, in our opinion, may not only have implications in the period of childhood under investigation (i. e. 4 to 6), but also in earlier period. Further, some of the issues collaborated with the point we made in connection with Caudill's study, namely, the difference between the Japanese and the Americans in response to experimental situations. The following discussion will be made with these contrasts in mind.

(a) The verbal communication between mother and her child in Japan is not necessarily lower in frequency, nor more simple in content, as suggested by some reseachers such as Caudill and Weinstein (1972). The authors pointed out that the difference lies in the "content" of communication. Thus, the Japanese mothers are characterized by a tendency to emphasize the experience and affect of the speaker and the listener as related to the topic or issue, and to explain the situations surrounding the problem, rather than by a tendency to communicate about the problem itself as American mother tended to do.

(b) There are differences in the pattern of interaction in a free play situation. In general, Japanese mothers tend to intervene and direct the child more, while American mothers tend to control less, to pay more attention to child's ability and behavior, and to praise more often. The authors pointed out that this was related to the fact that in an experimental situation, Japanese mothers tended to be nervous and less spontaneous in their behavior. This difference also pertains to the observed difference in teaching style between the two countries. This also supports our earlier contention that mother-infant interaction differences found by Caudill could be the result of differential reactivity to the observers.

(c) In relation to sex differences, this research found that the Japanese sample showed more significant differences between male and female children in the relationship between maternal variables and child cognitive development than the American sample. Thus, relationship between maternal variables and the cognitive development of the boys is stronger than in girls in Japan, and there were fewer common patterns between male and female seen in American sample. This seems to suggest that there is stronger difference in what can be called "cognitive socialization process" between sexes in Japan.

(d) Although there is a social class difference in discipline within both Japan and the United States, the research found that the patterns in the two countries show interesting contrasts: in the United States States, lower SES mothers tended to adopt direct commands that appealed to status, while this style of discipline tended to be adopted by the higher SES mothers in Japan. This is not in agreement with either the findings of the Chicago studies (Hess & Shipman, 1967), nor with that of Bernstein

(1971). The authors suggested that the strategy of the lower Japanese SES parents was more characteristic of traditional Japanese style of discipline while that of the higher SES parents indicated a tendency to move away from the traditional and to move towards that of the West.

(e) The aspects of development that are expected early in childhood differed between the two countries. In Japan, emotional maturity, compliance to adults and etiquetts were expected from early on; while in the United States, verbal self-assertion, and social skills in making friends were expected. This seems to support the view Caudill had about the cultural difference in what consituted a "good child" (Caudill, 1972) in Japan and in the United States.

In the original plan of this comparative study, data from subjects living in rural area were collected. The idea was to look into variety of contexts within each national group and to compare these varieties. As far as the Japanese sample is concerned, these data were available, although no analysis has yet been carried out. We mentioned earlier about differential response to experimental situations. It is to be noted that if several versions of an assessment battery can be tested out, or a variety of subjects within the same society (or nation) can be observed, the danger of "context stripping" (Mishler, 1979) can be minimized.

Ⅳ. ATTACHMENT AND INFANT TEMPERAMENT

As a natural extension of the Azuma, Kashiwagi, & Hess studies, interest in the antecedents of the differences between both children and mothers in the two countries soon consolidated into research proposal for longitudinal comparative study from newborn period to three or four years of age. The actual research project began in 1980 with Kazuo Miyake as the principal investigator. As of December 1983, the data collection of two cohorts are underway, and a preliminary report for the first year of the first cohort has been finished and will be published in S. R. C. D. Monographs in 1984 (Miyake et al., 1984). Besides, part of the results was reported in S. R. C. D. convention in 1983. Miyake will give another report in I. C. I. S. in 1984.

In these two longitudinal studies, the main objectives are (1) the antecedents of attachment at 12 months, (2) the consequences of attachment, (3) the interaction between infant temperamental disposituion and mode of interaction with special reference to cultural factors involved in emotional communication between mother and infant.

Sixty mother-infant pairs from middle-class nuclear families in the city of Sapporo on the island of Hokkaido are involved in the two studies. Interviews were conducted during the last two months of pregnancy and observation assessments were made of both the newborn infants and their mothers during the lying-in period.

The two cohorts differ slightly in the number of items assessed and in timing; mainly because the first cohort served as a pilot study. However, major assessments and their time of administration were the same. Table 1 shows the actual schedule for both cohorts.

The major findings from data collected in the first twelve months are:

1. There is a strong correlation between the tendency for a baby to be either

TABLE 1

Data collection schudule for both cohorts for the first year

Time	Cohort I	Cohort II
Day 1–Day 7	1. Response to interruption of sucking (RIS) 2. Observation of feeding situation 3. Interview with mother	1. 〃 2. 〃 3. 〃 4. Brazelton's Neonatal Behavioral Assessment Scale (BNBAS) 5. Brain stem response
1 Month	1. Observation of infant behavior during interview with mother	
2 Months		1. Mother-infant interaction 2. Interview with mother
3 Months	1. Observation of infant behavior during interview with mother 2. Interview with mother	
4.5 Months		1. Meeting a female stranger 2. Mother-infant interaction 3. Interview with mother 4. Questionnaire for father 5. Infant Temperamental Questionnaire (ITQ)
7 Months	1. Mother-infant interaction in free play situation 2. Strange Situation 3. Home observation of mother-infant interaction	1. 〃 2. 〃 3. 〃
12 Months	1. Ainsworth Strange Situation 2. Free play	

rated or observed as "irritable" in the first three months and the tendency for that baby to be classified as a "C" baby ("insecurely attached") in the Ainsworth Strange Situation at 12 months.

2. In addition to "irritability" in the first three months, "C" baby classification seemed to relate to mother's mode of interaction; that is, if an "irritable" baby was accompanied by a mother whose mode of interaction was characterized as more "intrusive", the possibility was higher that the baby would be classified as "C".
3. Substantially higher proportion of "C" babies was observed among the Japanese sample. This tentative finding was hypothesized to be the result of either (1) Japanese mode of early infant-mother interaction characterized by

close physical contact and symbiotic emotional relationship between mother and infant, or (2) the Japanese infant's proneness to irritability and distress.

These two longitudinal studies are carried out at a time when a general trend in the study of mother-infant or mother-child relationship to emphasize the role of the infant or child is receiving greater attention in the United States (Bell, 1968). This tendency was reflected in some of the reports coming out of these studies. We are involved in a controversy concerning the antecedents of attachment and its consequence. However. the fact that we pointed out the existence of one temperamental disposition–i. e. early irritability–in the formation of attachment, does not mean that we are arguing for "temperament" to the exclusion of other factors. In fact, in our monograph paper, we tried to emphasize the importance of maternal mode of interaction in interaction with infant characteristics. This view will be further supported by more substantial data, especially data on early mother-infant interaction at home which was added in our cohort II longitudinal study.

Another issue that attracted our attention while we are analyzing data from the first cohort sample and collecting data on a second cohort is infant/child compliance to maternal commands. Now under the name of "prohibition tasks", a series of comparative studies on this topic are being planned and carried out between the Hokkaido University group and researchers in the United States. Our preliminary observations indicated that differences existed in the ways prohibitions were made both in public and in private. Japanese infants around the age of 11 months tended to show longer delays to mothers' vocal signals expressed in the anger mood. It is not our intention to jump to our conclusion. Much more further studies will have to be done and we are designing some of them. However, it is to be emphasized that what we have mentioned above, namely, differential responses of the subjects to the experimental situation, will apply here too. This is particularly true in regard to prohibition behaviors. Thus, for example, in Japan, the presence of the others creates drastic difference in the behaviors of the observed.

V. INFANT TEMPERAMENT STUDIES

As a reflection of research trend in United States and Europe, the beginning of 1980 saw the rise of infant temperament studies in Japan. In what is now known as the Tokyo study, Kosawa and his group, compared 45 Japanese newborn babies with Boston newborn babies studied by Tronick (Kosawa, 1980).They found that the greatest difference between the two groups was in orientation to voice and rattle. The Japanese newborn babies and their mothers were also observed up to three months. Sex difference was observed in the relationship between maternal affectionate contacts and the score of physical maturity and self-control of the infants. These were two of the four factors of the BNBAS resulted from their analysis, the other two being irritability and orientation responsiveness (Kosawa et al., 1980). Another research project which employed lab-like or structured observation (or assessment) of newborn and/or young infants was carried out at Hokkaido University and the research is under the directorship of Miyake (Chen & Miyake, 1981). In this study, the emphasis is placed on infant's negative emotional expression.. Although the sample was small,

consistency was observed between neonatal irritability, as difined by consistent full-blown crying response to interruption of sucking (Bell, Weller, and Waldrop, 1971), and higher frequency of crying and/or fussing episodes at one and three months (Miyake, Takahashi, Chen, Sato, Ujiie, and Tajima, 1983). Furthermore, infants who were more irritable up to three months tended to be classified as "C" babies at 12 months, especially when the mothers were characterized as being more "intrusive" in their interaction with their babies.

Currently there are several research groups that study infant temperament by using Carey's questionnaire. The standardization of the Carey's questionnaire is undertaken by Shoji (Shoji and Maekawa, 1981). Brazelton's Scale (BNBAS) is another item much used in infant development studies in Japan in recent years. The introduction of BNBAS and the standardization of Carey's questionnaire have led to popularity of these instruments in Japan among pediatricians and researchers dealing with newborns or young infants. One study aims at comparing results of Carey's questionnaire with samples in Taiwan and in the United States (Ohyama, Murai, Nihei, 1982). As a result of Dr. Brazelton's recent visit to Japan, at least one United States-Japan comparative study of neonatal behavior using BNBAS by a group of pediatricians and medical personnel has come to our attention (Kato, Takahashi, Amino, Kato, and Kobayashi, 1984). It was reported that, as compared with the American sample, the Japanese newborn babies showed significantly less response decrement to rattle and bell, but greater orientation to inanimate auditory stimuli, a result comparable to that of Kosawa as mentioned above.

Ⅵ. CONCLUDING REMARKS

Studies in infant development in Japan have increased in recent years. The new trend seems to owe much to the participation of pediatricians and other medical personnel. It is quite common in Japan for a research in the newborn babies or the young infants to be conducted by researchers from the medical profession only. Only in recent years have psychologists been more actively involved in these studies. Beginning from 1979, a large interdisciplinary research project on early infancy has encouraged the cooperation between medical personnel and psychologists. This project is under the sponsorship of the Japanese Ministry of Welfare and Health and a well-known professor of pediatrics, Dr. Kobayashi, is the principal investigator. Conferences are being held twice every year in Tokyo and some of the research results are beginning to appear in published form (Ministry of Welfare and Health, 1980, 1981, 1982). This operation appears to be effective in Japan in promoting interdisciplinary research; because academic isolation (or segregation) is deeply rooted and it is beyond the ability of researchers in the universities or academic institutions to change the situation. Efforts such as this will have another effect of encouraging developmental psychologists in Japan to engage in more studies of socially significant issues (Kagan, 1982). This will, in the long run, benefit both the community of the psychologists in Japan as well as the community at large.

Research topics that are popular among researchers in the West usually have their Japanese versions sooner or later. Infant development is no exception. However,

Japanese studies in this field tend to make little impact on either theory or methodology in infant development studies. This situation was appalled by some more critical Japanese psychologists (Miyake, 1980; Nagano, 1981). It is hoped that as Japanese psychologists become more aware of their own strength in research, they will make their share of contribution in due course.

We have traced the histrorical development of infant studies in Japan from Caudill's works to current researches. While methodological issues hardly appear in Caudill's papers, recent studies have shown the importance of paying enough attention to context. Azuma et al. (1981) have mentioned this issue in their conclusion, although the study itself did not show that lesson learned from previous cross-national studies was properly integrated into the design of their study. Zaslow, and Rogoff (1981) have shown that not only in cross-cultural studies of cognitive development, but also in early interaction, the context issue is both a variable that requires control, and an important factor deserving study in it its own right.

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