IS THE STRANGE SITUATION TOO STRANGE FOR JAPANESE INFANTS ?

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A recent Sapporo study revealed that some cultural context peculiar to Japanese mothers and infants would constrain and reduce the validity of the Strange Situation procedure and the ABC typology for Japanese infants. Although this conclusion seemed to be supported by studies in West Germany and Israel, Sroufe criticized the validity and generality of the Sapporo study. He Claimed that there were theoretical and methodological problems in the Sapporo study. However, by comparing the data from the two other Japanesse studies, his criticism was refuted. In respect of the proportion of attachment types, the data from these two studies did not agree with that of the Sapporo study, (they were comparable to U. S. results), however, the observed or inferred behavior patterns in the strange situation were quite congruous with that of the Sapporo study.

Key words : Strange situation, Japanese infants, Attachment

Strange Situation procedure and the ABC typology developed by Ainsworth and Wittig (1969) are considered reliable and a valid measurement of the quality of mother-infant attachment in the United States. However, its applicability to non-American samples is not without problems (Lamb et al, 1984). In this article, the applicability of the Strange Situation procedure and the ABC typology for the Japanese infants will be discussed by examining data of studies in which the Strange Situation procedure with Japanese infants was performed.

FINDINGS OF THE SAPPORO STUDY AND ITS IMPLICATIONS

Recently, Miyake and his collaborators conducted the Strange Situation procedure with Japanese infants living in Sapporo. Miyake et al (1985) and Takahashi (in press) reported that there were more than 30% C's and no A's in their sample.. This results differ strikingly from those of the American samples, that is, there were 10%−20% C's and 20%−30% A's.

What does this difference mean ? Are there many resistant infants in Japan as compared to the U. S. ? Miyake et al (1985) answered this question by throwing doubt on the assumption of the ABC typology and applicability of the procedure to Japanese infants. Owing to the facts that Japanese mother and infant relationship is typically characterized by constantly close physical contact and by the infrequency of separation from the mother, and that the Japanese infants tend to have a temperamental disposition towards fearfulness and irritability, it can be expected that the Strange Situation will be too strange and too stressful for Japanese infants. Thus they did not consider the C type of response of the Japanese infants as a direct reflection of a greater tendency to be insecurely attached.

Their interpretation was supported by Ujiie & Miyake (1985) and Ujiie & Chen

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(1985). Ujiie & Miyake (1985) described Japanese infants' behavior patterns in the Strange Situation and made a comparison with Ainsworth's description on American infants. They found that Japanese infants tended to be extremely distressed throughout the strange situation. Even in Episode 2, they tended to activate attachment behaviors such as seeking proximity and contact with their mothers, and inhibit exploratory behaviors. These tendencies indicated that they seemed to experience disstrong stress even in the beginning of the procedure, because, according to the attachment theory of Bowlby (1969) and Ainsworth (Ainsworth et al, 1978), the attachment system was in general activated when infants experienced distress, while the explorative system was inhibited under stress. In the case of U. S. samples, most infants actively explored the unfamiliar situation, and did not activate an attachment system in Episode 2. This fact seems to suggest that the psychological meaning of Strange Situation differs even at Episode 1.

Moreover, Ujiie & Chen (1985) reported that the level of distress in the preseparation periods could predict the Subsequent pattern of attachment behaviors. They divided their sample into two subgroups depending on the level of distress in the preseparation period : 19 negative infants (NI) and 37 less negative infants (LNI). They reported that NI's tended to be entirely distressed in the infant-alone-session and display some resistance toward their mothers in Episode 8, thus they tended to be classified as C or B4. However, for these infants, the stress experienced in the separation episodes, particularly in the infant -alone-session, was perhaps too intense to be soothed easily by a reunion with their mothers, because they have already experienced stress even at the beginning of the procedure and a relatively great amount of distress during the first separation from their mothers as shown in figure. 1. At least for these infants, the procedures created a distress so intense that its effects were qualitatively different from that which was originally designed by Ainsworth (Ainsworth et al, 1978) in the Baltimore sample. Thus it can be speculated that the resistant behaviors displayed by these infants would reflect not insecurity of attachment or maladaptive parent-infant relationships but rather an unusual and

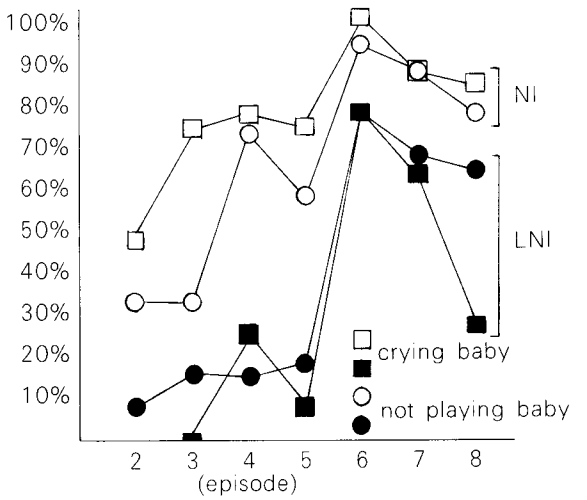

FIGURE 1 Pattern of Affective States

temporary responses to the additional stress caused by the strangeness of this procedure itself.

Therefore the results of the Sapporo study imply that Japanese child rearing practice and infants' temperamental dispositions should reduce the appropriateness of the Strange Situation procedure in Japan, and as a result, these factors constrain the validity and appilicability of ABC typology in Japan.

OTHER CROSS-NATIONAL DATA SUGGESTED TO SUPPORT RESULTS AND INTERPRETATIONS OF SAPPORO STUDY

Some recent studies on the patterns of attachment with non-American samples, similar to the Sapporo study found a different proportion of attachment types from U. S. samples. Grossmann et al (1981) found a very high proportion of A's in the West German (Bielefeld) sample, and Sagi et al (1985) found a high proportion of C's in the Israelite kibbutz sample. In West Germany, there were 49% A's and 12% C's. B's were only 33% of their sample. On the other hand, there were 34% C's and only 8% A's in the kibbutz sample. Fifty-six percent of their sample were classified as B's.

Grossmann and his coresearchers interpreted avoidant behaviors displayed by infants to reflect not insecurity of attachment or maladaptive parent-infant relationships but the desired outcome of cultural values and conscious parental strateiges (Grossmann & Grossmann, 1982 ; Grossmann et al, 1985). In the area of Northern Germany, the ideal is an independent, nonclinging infant who does not make demands on parents. Most North German mothers feel that they should be weaned from close bodily contact as soon as the infants become mobile.

On the other hand, Sagi et al (1985) pointed out the importance of infant characteristics in the kibbutz sample as was the case in the Japanese sample. According to Sagi et al (1985), one third of the Strange Situation procedure had to be modified or terminated because the infants were intensely and inconsolably distressed. Once they were distressed, neither the stranger's departure nor the attachment figure's ministrations were successful in calming the infants. Most of the infants whose assessment were terminated or modified were later rated as resistantly attached. Thus the procedures created a psychological state of distress so intense for these infants that its effects were qualitatively different from those typically observed in U. S. samples.

In summary, the results of the Sapporo sample, the Bielfeld sample and the kibbutz sample clearly indicate that the psychological meaning of behaviors observed in the strange situation depends on the cultural context such as child rearing customs or social value system as well as the appropriateness of the procedure. Sagi et al (1985) and Ujiie & Chen (1985) suggested that the Strange Situation procedure and the ABC typology would not be a fair test of security of attachment in either the Kibbutz or Japanese sample.

SROUFE'S CRITICISM ON THE DATA AND INTERPRETATION OF CROSS-NATIONAL STUDIES

However, Sroufe (1985) questioned the validity and generalizability of these results and interpretations, especially those of the Sapporo study, because they were interpreted by Campos et al (1983) as evidence to support Kagan's (1982) position that strange situation

classifications reflect temperament.

Sroufe (1985) raised three problems. Firstly he pointed out that the problem of temperamental features of Japanese infants are still controversial. Miyake and his collaborators expected that Japanese infants have a temperamental disposition towards fearfulness, or tendency towards inhibition and crying in accordance to findings of Kagan et al (1978) about Oriental infants. However, Freedman (1974) reported that Oriental newborns were less changeable, less perturbable, and tended to calm themselves or be consoled more readily when upset. This description clearly contradicts the expectation of Miyake and his collaborators that Japanese infants have a temperamental disposition towards fearfulness, inhibition and crying.

Secondly, Sroufe pointed out a procedural problem of the Sapporo study. In the Sapporo study, investigators allowed the separations to go on for 3-min. regardless of the amount of infants' distress, rather than cutting the separation short, as is done in the U. S.

Thirdly, Sroufe pointed out the problem of sampling. In the case of Germany as well as in Japan, the proportion of attachment types which were obtained from non-traditional modern samples were comparable to U. S. samples. In fact, the study of Durrett et al (1984), which was done with "a modern Japanese sample", reported that the proportion of A's was 13% and C's was 18%. A study with Chinese Americans revealed a link between C status and the degree of acculturation (Li-Repac, 1982 cited in Sroufe, 1985). Thus Sroufe insisted that the result and interpretation of the Sapporo study and also of Grossmann's study should be applicable to only one particular sample, those who are reared by "traditional mothers".

Thus Sroufe (1985) claimed that the validity, findings and conclusion of the Hokkaido study were questionable.

REFUTATION TO SROUFE'S CRITICISM ON THE SAPPORO STUDY

However, some of Sroufe's discussion points are refutable. At first, the procedural problem can be checked by comparing the results of two cohorts in the Sapporo study. Indeed, as pointed out by Sroufe himself, researchers allowed the separations to go on for 3-min in most cases regardless of the amount of distress in Cohort 1. But, in Cohort 2, researchers cut the separations short according to the amount of distress, as is done in U. S. Nevertheless the result of Cohort 2 was comparable to that of Cohort 1 (table 1). Moreover, in Cohort 1 as well as Cohort 2, many of children displayed distress even in the presparation periods (Ujiie & Miyake, 1985) and the degree of distress in preseparation period was found to be related to later classification of attachment. Thus, the distress experienced by the infants was not solely caused by the individual being alone as insisted by Takahashi (in press) but caused by the Strange Situation procedure itself.

Secondly, the criticisms of Sroufe (1985) can be refuted by detailed examination of the data of studies which employed the Strange Situation procedure with Japanese infants. Three studies can be referred to for supportivre evidence, the Sapporo study, the study of Durrett et al (1984) and the study of Hanta et al (1983).

The proportions of ABC types reported in these studies are shown in table 1. As shown in table 1, both findings of Durrett et al (1984) and Hanta et al (1983) were clearly diffement from the finding of the Sapporo study, and they were rather comparable to the

TABLE 1

Proportions of Attachment Types in Different Countries

	Ainsworth et al 1978 (N=106)	Grossmann et al 1981 (N=49)[a]	Sagi et al 1985 (N=83)[b]	Miyake 1986 Cohort 1 (N=29)	Cohort 2 (N=30)	Durret et al 1984 (N=39)[c]	Hanta et al 1983 (N=24)[c]
A	22(21%)	24(49%)	7(8%)	0	0	5(13%)	2(8%)
B_{1-3}	66(62%)	15(31%)	40(48%)	17(59%)	19(63%)	13(33%)	19(79%)
B_4	5(5%)	1(2%)	7(8%)	1(3%)	3(10%)	11(28%)	
C	13(12%)	6(12%)	28(34%)	11(38%)	8(27%)	7(18%)	3(13%)
Unclassified		3(6%)	1(1%)			3(8%)	

a Subjects were West German middle-class.
b Subjects were Israel kibbtznik.
c Subjects were Japanese middle-class.

findings of the American samples : A's were 13% and C's were 18% in Durrett et al (1984), and A's were 8% and C's were 13% in Hanta et al (1983), whereas C's were 30% and A's were not found in the Sapporo study (Ujiie & Chen, 1985).

However, it is insufficient for the purpose of this article to compare solely the proportion of ABC types. Examining the data reported by Durrett et al (1984) and Hanta et al (1983) in detail, a different feature of Japanese infants in the Strange Situation is revealed, contrary to the feature revealed by the proportion of ABC type reported by themselves.

Findings of Durrett et al (1984)

At first, the data of Durrett et al (1984) was examined. Durrett et al (1984) reported that 62% of their sample were classified as B's, but about a half of the B's were B4. They treated B4's as securely attached infants in accordance with Ainsworth et al (1978). However, in their studies with Israel samples, Sagi et al (1985) did not treat the B4 as showing a secure attachment. They distinguished the B4 from other B's and called it "dependent" attachment type. They combined it with group A and C because of their anxious behavior patterns in the strange situation. Moreover, even in Ainsworth et al (1978), the distinction between B4 and C's is ambiguous. They described the B4 infant as follows :

> He seems wholely preoccupied with his mother throughout the strange situation. He gives the impression of feeling anxious throughout, with much crying. In the second separation, particularly, he seems entirely distressed.··· He may show some resistance to his mother, and indeed he may avoid her by drawing back from her or averting his face when held by her. Because he also shows strong contact-seeking behavior, the impression is of some ambivalence, although not as is shown by Group-C infants (p. 62).

Thus, it is possible to infer that 28% of their sample, who were classified as B4, behaved anxiously throughout the strange situation and displayed some ambivalence in the reunion with their mother, even though they were classified as B's. Moreover, according to the manner of analysis employed by Sagi et al (1985), since 18% of their sample were classified as C's, their data imply that 46% of their sample displayed strong distress and some ambivalence in the strange situation. This finding does not support at all the discussion of Sroufe (1985), which expressed doubt about the generality of findings and the

conclusion of the Sapporo study. Durret's study indicates more definitely than the Sapporo study that the strange situation is too stressful for many Japanese infants, even though they are from non-traditional "modern" families.

Findings of Hanta et al (1983)

Secondly, the data of Hanta et al (1983) was examined. Hanta et al (1983) reported that only 13% of their sample were classified as C, and about 80% of their sample were classified as B. The proportion of B's is very high compared with American samples and other Japanese samples. However, their data about the proportion of attachment types are inconsistent with their descriptions regarding attachment behaviors. They reported that 33% of their sample showed moderate (4-5) to strong (6-7) resistance to their mother in Episode 8. Resistance to the mother in Episode 8 is conspicuous characteristics of the C baby in general. This result indicates that more than 30% of their sample were very anxious and ambivalent in the strange situation. Therefore the result of this study seems to support Miyake et al (1985) and Ujiie & Chen (1985), although the proportion of attachment types is different.

They also reported the descriptive data about descrete behaviors in the strange situation. According to their description, many of their samples activated an attachment system rather than an explorative system in Episode 2. Only 50% began to approach toys within 1 minute, and even after beginning to play with toys, many infants sometimes approached their mothers to gain assurance of security in the strange situation. Moreover, the mean frequency of crying in the infant-alone-session was higher than that reportedin Ainsworth et al (1978), and even after reunion with their mothers, the mean frequency of crying did not decline to the level of that in Episode 5. More than 50% of their subjects were not easily soothed by bodily contact of their mothers in Episode 8. These results are very similar to those of Ujiie and Miyake (1985), and also indicate that the strange situation should create extreme distress in Japanese infants.

CONCLUSION

The data from these two studies revealed that there was a high proportion of anxious and resistant infants, in spite of their strange situation classifications. That is, more than 30% of their subjects were anxious and completely distressed, and even displayed some ambivalence in the strange situation. Thus, these results clearly indicate that Sroufe's (1985) criticsms about procedural and sampling problems of Sapporo study have no validity.

Moreover, Hanta et al (1983) reported that many of their samples displayed some signs of distress even in Episode 2, and also a degree of distress raised by the infant alone session did not easily decrease in the reunion with their mother. These results seemed to indicate that the Strange Situation created a distress so intense in some infants that they could not easily recover from the distress even by reunion with their mothers. Thus, these findings imply a contribution from intants' temperamental characteristics is involved and therefore can not be neglected.

From the above, it can be concluded that the results and discussion of the Sapporo study has validity and generalizability for Japanese infants.

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