

託児所における言語習得

Language Acquisition in the Daycare

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言語発達, マルティリンガリズム (多言語使用), 託児所,
ケア・ギバー・インプット (周囲の人間が子供に与える言葉のインプット)
Language Development, Multilingualism, Daycare, Caregiver Input

ABSTRACT

ドイツ語話者である父親と英語話者である母親との間に生まれたある幼児は、そのどちらの言語でもなく、生後11ヶ月から1歳10ヶ月まで預けられていた託児所で接した日本語をもっとも得意とするようになった。これは託児所でのコミュニケーションが、子供の言語発達に重要な役割をになっていることを示唆している。この幼児は生後1歳10ヶ月の時にドイツに移住し、結果として2つの国での託児所生活を経験することとなった。この論文は、この幼児の言語学習に影響を与えた託児所生活の特徴を、1歳10ヶ月(日本)と3歳頃(ドイツ)の両段階で検討したものである。先行研究にもある通り、託児所という環境では(特にこの幼児が年長組に入ったドイツの託児所では)、会話のやり取りをする機会は比較的限られている。言語発達にとって、言葉のやり取りはその量よりも質が大切であることが言われてきているが、この「質」の基準を満たすような託児所の環境こそ、多言語の育成を促す効果的な方法なのである。

INTRODUCTION

In an earlier study of trilingual development up to age 1;10 (reported in Quay 2001), it was found that an infant exposed to German and English from birth nevertheless became dominant in Japanese, the language of his daycare environment from age 0;11 until 1;10. Although that study focused on the infant's interactions in the home with his German-speaking father and his English-speaking mother, the fact that the infant produced predominantly Japanese utterances in the home context caused the investigator to speculate, among other possible explanations, on the importance of linguistic interactions in the daycare setting.

In contrast, Tizard and Hughes (1984) and Wells (1986) have found the daycare environment to play a less important role than the home environment for language development. They both report that children receive less linguistic stimulation in daycare facilities than in their homes. When Tizard and Hughes (1984) compared the conversations of 30 four-year-old girls at nursery school with their teachers and at home with their mothers, they found that more frequent conversations of a longer duration and with a much wider range of topics occurred in the home than in similar exchanges in the nursery school. Wells (1986: 87) also concludes that:

As with other researchers who have compared the language experiences of younger children at home and in the nursery or preschool play group, what we found is that, compared with homes, schools are not providing an environment that fosters language development.

In a review of the literature on the potential impact of daycare environments on

language development, Haynes (1998) points out that there have been two types of studies in this area. The two studies already mentioned are examples of studies dealing with the importance of *quantity* of communication in early language development. There have also been studies of the *quality* of daycare facilities where it is believed that quality of communication is more important than quantity.

Although daycare environments provide increased social participation and peer interactions, this has not been found to be valuable for language development. McCartney (1984), for example, studied 166 children, aged 3;0 to 5;8, in nine different daycare centers. She used the amount of verbal interactions children had with caregivers as a measure of the quality of a daycare center. She found that the children from daycare centers that had high levels of caregiver interactions performed better on language tests than the children from centers with a high occurrence of peer speech. Phillips, McCartney and Scarr (1987) also include overall quality and director experience along with caregiver-child verbal interactions as highly predictive of children's social development in childcare.

In more recent work, Burchinal, Roberts, Riggins, Zeisel, Neebe and Bryant (2000) examined longitudinally whether children's outcomes differ statistically among children who do and those who do not experience care that meet professional recommendations for two quality factors, adult-child ratios and childcare training. They found, just as in previous research, that quality of care in community-based child-care centers is a consistent predictor of cognitive and communication development during the first three years for the 89 African-American children they studied. Classrooms that met profes-

sional recommendations for child-adult ratios tended to have children with better language skills and those that met recommendations with regard to teacher education tended to have girls with better cognitive and receptive language skills. Burchinal et al. (2000: 354) speculated that the reason the child outcomes were higher for girls but not for boys in classes where the main teacher met recommendations regarding education was because preschool girls were more likely than preschool boys to seek out the attention of adults, thereby eliciting more conversations with them. Other studies, like Corsaro (1985, 1986), who do not deal directly with language development, emphasize, nevertheless, the importance of peer relations and culture in nursery school or preschool environments for childhood socialization.

This paper investigates one child's experience of daycare at two different periods of development (at age 1;10 versus at age 3;0) in two very different countries, Japan and Germany. Three research questions are addressed:

- 1) Since daycares have been found to provide less linguistic stimulation than the home, did the daycare environment in both Japan and Germany provide an adequate amount of language interaction for the child?
- 2) Since caregiver-child interactions in daycares have been found to be more valuable for language development than peer interactions, what proportion of the child's interactions were with adults and what with other children in the two settings?
- 3) What features of daycare experience in the two countries seem to contribute to

language learning?

This study explores language use in the daycare quantitatively and qualitatively from a different perspective from all previous studies of daycare and language development. All other studies of which I am aware have dealt predominantly with monolingual children. This is a study of a multilingual child. How do daycare experiences shift and change the child's language preferences and dominance?

METHODOLOGY

Language exposure and data collection

The subject of this study, Freddy, was born in Tokyo, Japan to a German father and an American mother. The child was exposed to German and English from birth and to Japanese from age 0;11 until 1;10 in a Japanese daycare for six hours every week day. Freddy's early language exposure patterns have been reported in detail in Quay (2001). The family moved from Japan to Germany when the child was 1;10 and he started attending a morning daycare in Germany from ages 2;4 to 3;3 for 5 hours every week day. It was found in Quay (2001) that by 1;10, Freddy was dominant in Japanese and only seemed to have passive competence in German, his weakest language at that point. His mother reported in an e-mail message to the investigator three months after their arrival in Germany that weeks after the family arrived in Germany, new Japanese words that the parents had never heard him say before kept spilling out of him even after he had been removed from the Japanese environment. After about 6 weeks in his new environment, German became his dominant language. According to his mother, Freddy

continued to switch easily to English words with her, but seemed to be taking longer than other children to construct fuller sentences and spoke mostly in phrases (e-mail of June 28, 1999). In another e-mail message six months after their arrival in Germany, the mother writes:

Freddy is very active and very verbal, and switches very well now between English and German. Just since a few weeks, he doesn't seem to say those few lingering Japanese words anymore. But I am beginning to sing more Japanese songs and his favorite book is a Japanese book (e-mail of Sep 28, 1999).

Not surprisingly, his loss of Japanese language production coincided with the time that he entered daycare in Germany.

Characteristics of the two daycares

Both daycares that Freddy attended in Japan and Germany are community-based private facilities. The one in Mitaka, Tokyo is part of a cooperative that owns the facilities, some residential accommodation, and a neighboring restaurant that is used as a gathering place for parents as well as the community at large. In the infant section of the daycare, there were two regular female staff members, but those who lived at the cooperative's residences, male and female, also had to take turns as helpers in the daycare. There were always three adults with the nine children in Freddy's group but sometimes more adults were present when more helpers were available. The daycare in Duisburg, Germany was a parent's initiative (*Elterninitiativ*), a type of pre-kindergarten organized and managed by parents in the local community (for more

information, see Shire 2001). Like the daycare in Japan, they also performed an open community function by allowing parents to use the facility in off-hours and on the weekend.

All of Freddy's peers and adults at the daycares in Japan and in Germany were monolingual Japanese and German speakers respectively. Of the eight other children in the infant section of the Japanese daycare, seven were older than Freddy with the oldest boy being a year and nine months older while the youngest girl was only two months and two weeks younger than Freddy. Of the eight other children in the German daycare, six were older than Freddy with the oldest girl being nine months and one day older while the youngest boy was four months and twenty-three days younger than Freddy.

Both daycares meet the recommended child to adult ratio mentioned in the study by Burchinal et al. (2000). The child to adult ratios recommended by the American Public Health Association and the American Academy of Pediatrics (1992) are 3 to 1 or less for infants under age 2;0, and this was always the case in the Japanese daycare. Sometimes it was less when two or more helpers were also available along with regular staff members. The child to adult ratios recommended are 5 to 1 or less for children aged 2;7 to 2;11, and 7 to 1 or less for children older than age 3;0. In the German daycare, the ratio was always 4.5 to 1, well within recommended guidelines.

For the purposes of this paper, two 30-minute sessions recorded at ages 1;9.26 and 1;10.8 respectively in the Japanese daycare are examined together to make up a one-hour session to compare with the one-hour session recorded at the German daycare when Freddy

was age 2;11.24. At the Japanese daycare, Freddy could be seen playing and reading indoors and riding on a toy car outside the daycare, as well as playing at a public park. At the German daycare, the activities recorded include free play and looking at books alone as well as group sessions with the teacher leading the children in singing and dancing, teaching them how to decorate candles, reading to them, and presiding over meal times.

Transcription and coding

The video recorded sessions from the Japanese and the German daycare environments were transcribed in the CHAT format of CHILDES (see MacWhinney 1995 for details). In addition to standard dependent tiers, each main tier was also coded for addressee (%add). This made it possible to identify the amount of adult to adult speech, adult to child speech, child to adult speech, and child to child speech. When the addressee was unclear, it was coded as UNC. This happened

often for the target child, Freddy, as it was not always possible to determine whether he was speaking to a specific daycare staff or peer, addressing the camera operator, or just talking to himself.

RESULTS AND DISCUSSION

Did the two daycare environments give Freddy an opportunity to display his language skills? Figure 1 shows the number of utterances and turns made by all the adults, all the children and Freddy alone in the Japanese daycare. In terms of utterances, Freddy produced 47% of the total utterances (254 out of 537) recorded and had 35% of the total turns (135/384) taken by all participants in the Japanese daycare setting. Figure 2 shows the same information as Figure 1 but for the German daycare. Here, Freddy produced only 10% (180/1766) of the total utterances recorded and made only 14% of the total turns (138/995) taken by all participants at

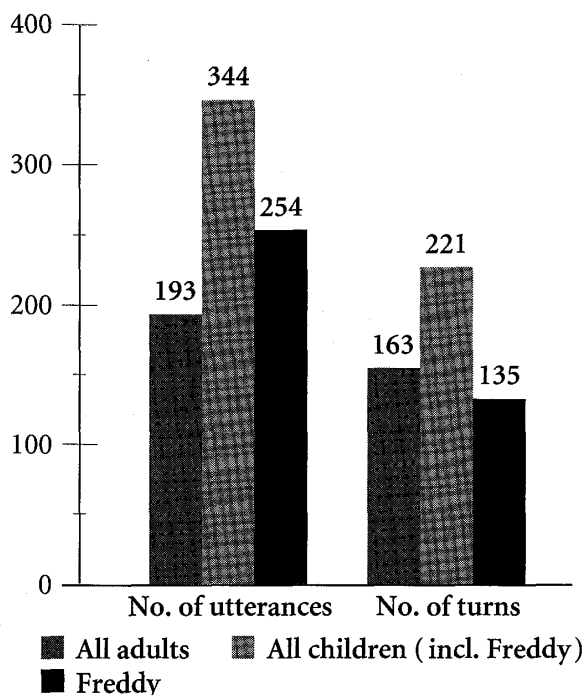


Figure 1. Overall discourse structure of JAPANESE daycare sessions

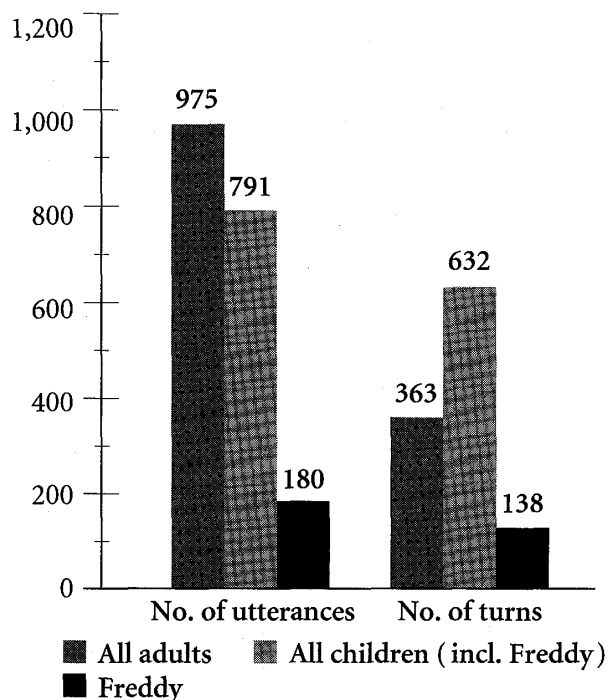


Figure 2. Overall discourse structure of GERMAN daycare sessions

the German daycare.

The difference between the proportion of Freddy's production in the Japanese and the German daycare recordings is a result of his age in each context. He was only around age 1;10 in the Japanese sessions and had been the second youngest child in his group for the past year. So the daycare staff tended to stay with Freddy and the youngest child while the older children played. The youngest children were usually not included in group games. This gave Freddy the opportunity to have more adult than peer interactions, which the studies discussed earlier claim promote higher language development. Inadvertently, Freddy also interacted with the camera operator in both daycare settings although the camera operator tried to stay in the background. In the German daycare, Freddy was almost age 3;0 and participated in all group activities which limited the number of turns he could take. In many activities, the teacher took the most turns and made sure that each child had a chance to contribute, which of course, lowers the number of speaking opportunities for any one particular child. Most of Freddy's utterances were made during the free play session rather than during group activities.

In terms of the average length of utterances and turns, Figure 3 for the Japanese daycare shows that the average length of utterances for the adults is slightly higher than for all the children combined or for Freddy alone. But the average length of adult turns in terms of words and utterances is shorter than Freddy's turns. Typically, the daycare staff allowed their young charges to initiate conversations and responded accordingly but did not elaborate any of their responses, thus encouraging the children to take more turns. The pattern is different in the German daycare where the

children are older and more verbal. Although adult utterances are only slightly longer than child utterances in Figure 4, the adults, mainly the teacher, took longer turns in terms of words and utterances as a result of her "teaching" role. In the recording, she sang songs for the children, read to them and taught them how to use wax pieces to decorate candles.

Caregiver-child interactions have been found to be more valuable for language development than peer interactions in daycare settings. Therefore, it is important to determine what proportion of the sessions in the Japanese and German daycare respectively involved children's interactions with adults and with peers.

Table 1 shows the proportion of adult and child utterances to an adult, to one or more children and to Freddy in the two daycares. It also shows the proportion of utterances that Freddy addressed to an adult and to one or more children. Utterances were classified as UNC when it was unclear whom the addressee was. Freddy is included in the category "child (ren)" (one or more children) when the children were all addressed as a group by an adult or by a child other than Freddy himself. In the recordings at the Japanese daycare, the adults addressed Freddy directly 56% of the time while the other children addressed him only 5% of the time. As mentioned earlier, the older children did not include Freddy much in their games and the one girl younger than him hardly spoke. In the German daycare recording shown in the last column of Table 1, the adults spoke to Freddy directly only 13% of the time but Freddy is included in part of the 79% of adult speech addressed to more than one child. 44% of this adult speech (384/866 utterances) were directed to all the children as a group.

When we combine the group and individual percentages together, Freddy was the recipient of 57% of all adult utterances. Although the proportion of adult to Freddy speech is low in the German daycare, the proportion of adult to all children is relatively high and must be of some benefit not only for Freddy's language development but also for the other children. This issue of caregiver's speech to a group of children has not been addressed in the daycare literature which has claimed that more speech from an adult to an individual child results in better language skills for that child. Freddy's peers addressed him directly 19% of the time, which is much higher than in the Japanese daycare and makes sense considering that they are all older in the German daycare than the children in the Japanese daycare. Overall, in both daycares, Freddy heard more speech from adults than from other children.

Table 1 also shows the proportion of

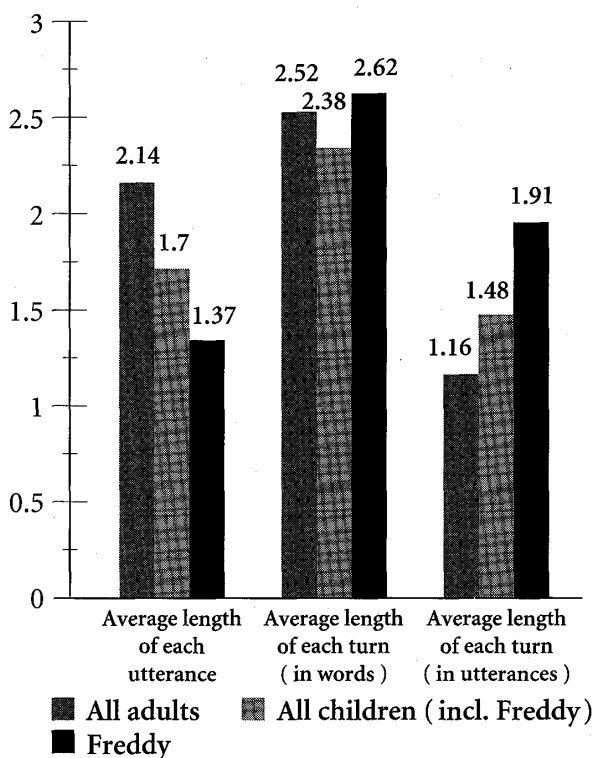


Figure 3. Average length of utterances and turns in JAPANESE daycare sessions

Freddy's own speech that was directed at adults and to other children. The results are unclear in the Japanese daycare because 49% of Freddy's utterances were coded as UNC. This leaves 28% of his utterances directed at one or more children and 23% directed at adults. In the German daycare, 61% of his utterances were directed at one or more children, 14% at adults and 25% were unclear (UNC). While he heard more utterances from adults than from children, Freddy clearly directed more utterances to other children than to adults.

The above results from two different age periods seem to suggest that as children get older, they become more inclined to interact with each other and less with the adults around them. It was also suggested in Burchinal et al. (2000) that preschool boys, like Freddy, are less inclined than their female counterparts to seek out the attention of adults.

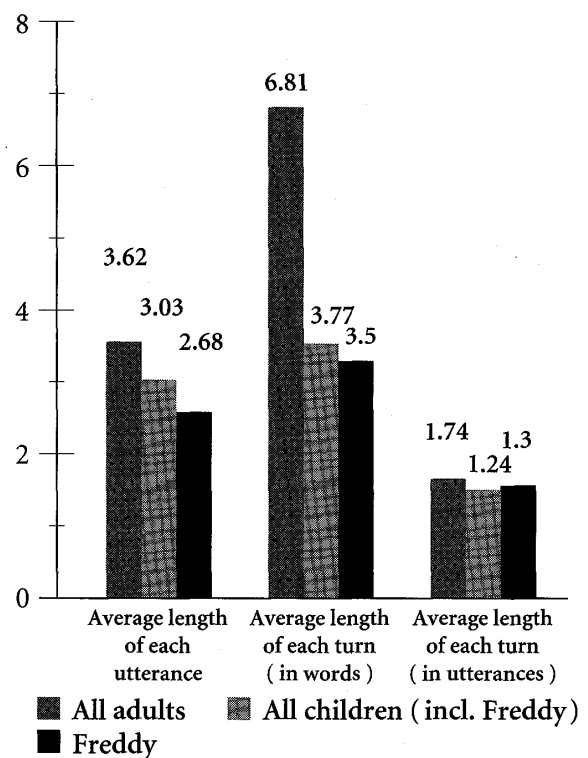


Figure 4. Average length of utterances and turns in GERMAN daycare sessions

Characteristics of daycare experience

Similar features could be found in the two daycare experiences that may have contributed to Freddy's initial dominance in Japanese and his later dominance in German. In both daycare situations, routines formed a part of the children's time at daycare. These routines involved the repetition of limited topics like getting dressed to go outside, having something to eat, being told to do something, playing the same games and reading the same books. All the children were exposed to the same types of language structures repeatedly, which may have been conducive in providing manageable incremental steps in language learning. If a child did not get something right one day, he or she could count on doing it again the next day. The children were roughly at the same stages in language development with the older children slightly more advanced than Freddy. Being among the youngest in the group of nine children at both daycares was probably beneficial to Freddy as he was exposed to language that was always slightly more advanced but not too much so than his own. The children seemed to understand each other better than adults could understand them. At the

Japanese daycare, Freddy and his best friend, Daisuke, would speak gibberish (at least what sounded like gibberish to adults) to each other but managed to play together for hours on end in this way when both were younger than age 1;10.

While Freddy is receiving less direct linguistic stimulation at the daycare, he is receiving *indirect* linguistic stimulation when he is exposed to the conversations and behavior of the other children and adults around him. In the Japanese daycare, he used many Japanese exclamations such as 'uwa' or 'aya' to show surprise or 'oi' or 'ne' to get someone's attention, utterances that he would never hear from his own parents and which he did not use later in the German daycare. When the children at the Japanese daycare played outside, they would warn each other by shouting "abunai" (it's dangerous) each time a car came by. Each child would repeat this word as they scurried to the side of the road. In the German daycare, all the children would also produce a chorus of the same responses when the teacher addressed the whole group. In effect, they provided each other with model answers. And when a child hesitated, one or more children would tell him or her what to

Table 1. Direction of discourse interactions in the two daycares

Speaker	Addressee	JAPANESE Daycare	GERMAN Daycare
Adult to:	Adult	8%	7%
	Child(ren)	35%	79%
	Freddy	56%	13%
	UNC	1%	1%
Child to:	Adult	29%	19%
	Child(ren)	24%	55%
	Freddy	5%	19%
	UNC	42%	7%
Freddy to:	Adult	23%	14%
	Child(ren)	28%	61%
	UNC	49%	25%

say.

The most striking example of Freddy's adaptation to two different cultures is his change in the use of onomatopoeic or imitative words ('giongo' in Japanese). While in Japan, he would make sounds typical of Japanese children like "bi bi bi bi" when reversing a toy car. He switched to sounds more typical of German children like "brumm brumm" when parking a toy truck at the German daycare.

CONCLUSION

In conclusion, just as other studies have found, the daycare environment, particularly in Germany with an older group of children, did not provide as much opportunity for Freddy to take conversational turns as in the home with his parents or babysitters. While the studies of monolingual children in daycares have deemed the smaller quantity of language addressed to a child in the daycare than at home as detrimental to language development, this was obviously not the case for Freddy. He became trilingual as a result of attending the Japanese daycare and then became stronger in German, previously his weakest language, as a result of attending the German daycare. Just as other studies have suggested, quantity may not be as important as quality of linguistic interactions for language development. In terms of quality, both daycares met recommended adult-child ratios. In the Japanese daycare, Freddy also had more direct interactions with adults, another measurement of quality of daycares used in other studies. This is not true of his situation in the German daycare where he had slightly more speech addressed to him from the other children (19%) than from adults

(13%). However, if we included the amount of adult speech directed at all the children including Freddy as a group, then we could say that he did hear a lot of adult speech. The effect of language directed at a group on individual learning is an area requiring further research as it has educational implications beyond the daycare context.

Some of Freddy's linguistic and cultural behaviors were obviously picked up from contact with other children as it is doubtful that adults would have taught him the conventions and onomatopoeic expressions for playing with toys. This study suggests that peer interactions in groups may be as important as interactions in pairs (whether adult to child or child to child) for linguistic and cultural development. In Freddy's case, the daycare environment has influenced shifts and changes in his language preferences and dominance. Daycare environments that meet 'quality' standards may thus be an effective way of fostering multilingual development.

References

- American Public Health Association and American Academy of Pediatrics. (1992). *Caring for our children. National center-based child care to early cognitive and language development longitudinally. Child Development* 71 (2): 339-357.
- Corsaro, W. A. (1985). *Friendship and Peer Culture in the Early Years*. Norwood, NJ: Ablex Publishing Corporation.
- Corsaro, W. A. (1986). Routines in peer culture. In J. Cook-Gumperz, W.A. Corsaro and J. Streeck (eds.), *Children's Worlds and Children's Language* (pp. 231-251). Berlin: Mouton de Gruyter.
- Haynes, William O. (1998). Caretaker-Child Interaction. In William O. Haynes and Brian B. Shulman (eds.), *Communication development: foundations, processes, and clinical applications*, 2nd ed. (pp. 73-100). Baltimore: Williams &

Wilkins.

- MacWhinney, B. (1995). *The CHILDES Project: Tools for analyzing talk* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
- McCartney, K. (1984). Effect of quality of daycare environment on children's language development. *Developmental Psychology* 20 (2): 244-260.
- Phillips, D., McCartney, K., and Scarr, S. (1987). Child-care quality and children's social development. *Developmental Psychology* 23 (4): 537-543.
- Quay, S. (2001). Managing linguistic boundaries in early trilingual development. In Jasone Cenoz and Fred Genesee (eds.), *Trends in Bilingual Acquisition* (pp. 149-199). Amsterdam: John Benjamins.
- Shire, K. A. (2001). The issue of preschool education from an international perspective. *Educational Studies* 44: 295-303.
- Tizard, B. and Hughes, M. (1984). *Young Children Learning*. Cambridge, Mass.: Harvard University Press.
- Wells, G. (1986). *The Meaning Makers: Children learning language and using language to learn*. Portsmouth, NH: Heinemann Educational Books, Inc.

Acknowledgements

This study would not have been possible without the generous support and enthusiasm of Freddy's parents, Freddy, and the daycare staff and children in Japan and Germany. I am very grateful for their time, patience and cooperation. Thanks are also due to the Matsushita International Foundation for financial support and to Michiko Kaneko, Junko Ogawa and Anke Stehr for research assistance.