

# 二言語発達の非対称性 — 言語の初期段階からの現われ —

## Asymmetry in Early Bilingual Development: Manifestations from the Onset of Speech

中村 ジェニス NAKAMURA, Janice

● 国際基督教大学大学院教育学研究科  
Graduate School of Education, International Christian University



初期二言語発達, 初期語彙習得, 二言語発達の差

early bilingual development, early lexical development, bilingual developmental differences

### ABSTRACT

発達の初期から二言語を習得する場合において、一つの言語がもう一つの言語より早く発達する現象はしばしば観察される。本研究は、一人のバイリンガル幼児の英語と日本語の初期言語発達を観察し、言語の初期段階からの非対称性の現われ方を明らかにすることを目的とする。Nakamura (2010) における同じ対象児が前言語期で日本語より英語の理解発達が先に進んだという報告に続き、本研究の結果では、同児の英語の初期語彙種類数は日本語のそれと比べ格段に大きいことが分かった。また、対象児は英語のコンテキストでは発話頻度が高く、使った語彙の範囲も広いことが明らかになった。英語の2語文も最少でも3ヶ月早く発話でき、日本語の発話は英語のコンテキストにおいても比較的になかった。こういった幾つかの言語的側面に見られた発達の非対称性は、地域社会に使われている言語の発達が必ずしも先に進まないことを示している。これらの研究結果は、安定した言語環境の中では、非対称性の初期二言語発達は、累積効果があり、言語理解から言語産出に渡って見られることを示唆している。

In the acquisition of two languages from birth, it is common for one language to develop faster than the other. This paper examines at the development of English and Japanese in a bilingual toddler, Issa, to determine some of the early manifestations of asymmetrical bilingual development. Following a previous study in volume 52 of this journal, which demonstrated that comprehension development of the same child was more advanced in English than in Japanese at the pre-linguistic stage, the results of this study found that the same asymmetrical pattern continued from the onset of speech as his early productive lexicon was considerably larger in English than in Japanese. The child also produced more utterances and used a wider range of words when interacting

in the English context than in the Japanese context. Word combinations in English also emerged at least three months earlier than in Japanese and fewer utterances in the non-contextual language (Japanese) were produced in the English context. The faster development in English than in Japanese, as seen from these linguistic aspects, shows that the societal language does not necessarily develop ahead. Results also indicate that, in a stable linguistic environment, asymmetry in the earliest stages of language development has a cumulative effect, extending from comprehension to production.

## Introduction

Exposure to two languages from birth does not make the bilingual child the sum of 'two monolinguals in one' (Grosjean, 1989). The fact that two languages are developing simultaneously does not necessarily make them develop the way they do in monolingual children or in parallel fashion. The phenomenon where one language develops faster than the other will be described here as *asymmetrical bilingual development*. This condition is commonly, but perhaps unfavorably, known as 'unbalanced bilingualism' or 'uneven bilingualism' (e.g. Bernardini & Schlyter, 2004) and is also linked to terms such as 'language dominance' (Genesee, Nicoladis & Paradis, 1995) or the 'stronger language' and 'weaker language' (e.g. Schlyter, 1993). However, given that such asymmetry is a common occurrence in early bilingual development, it seems inappropriate to use the terms 'unbalanced' or 'uneven' to describe the mass of emerging bilinguals. Terms such as the 'weaker language' also imply a degree of permanence in terms of the relative proficiency of both languages and do not reflect the fluid, fast-changing developmental processes that the bilingual child undergoes.

When bilingual development is asymmetrical, milestones will be reached faster in one language. There will also be a higher frequency and larger range of words understood and produced in one language than in the other. In discussing asymmetrical bilingual development, Cantone, Kupisch, Müller and Schmitz (2008, p. 309)

provide a null hypothesis which presupposes that 'the two languages of a bilingual child will develop at the same rate and in a normal way' with any deviation from the null hypothesis defining the 'language distance' in the bilingual child. Such an asymmetry will, to some degree, occur naturally for bilingual children who are acquiring two languages sequentially. However, this is an interesting phenomenon to study in simultaneous bilingual acquisition particularly when each parent, using the One-Parent-One-Language (OPOL) approach, provides the child with regular and consistent exposure from birth.

## Studies of asymmetry in early bilingual development

Just as studies by Quay (2001) and Nakamura (2010) have indicated that the early receptive lexicon for one language may be larger for one language than the other, asymmetrical bilingual development occurs even in the pre-lingual stage. Such a phenomenon in early lexical development is also manifested in a larger productive lexicon in one language as noted in Leopold (1939) and David and Li (2008). Despite its existence at the earliest stages of language development, it is not well-studied in young children because both languages are only emerging and developmental patterns may only be transient. Manifestations of this phenomenon such as grammatical errors and language mixing have also yet to be evident. Studies related to asymmetrical bilingual development have mainly concentrated on



investigating children from around age two, at the syntactic stage. Even so, as Cantone et al. (2008) point out, such studies did not examine asymmetry as a research topic on its own but as part of an inquiry into other linguistic phenomena. A large part of such research has been undertaken with relation to language mixing (e.g. Gawlitzek-Maiwald & Tracy, 1996; Genesee et al., 1995; Jisa, 2000; Nicoladis & Secco, 2000; Petersen, 1988). These studies have shown that mixing occurred more often in the language that is slower in development.

Research has also focused on cross-linguistic influence arising from asymmetrical bilingual development. Findings of such studies have indicated that structural aspects of the language which is developing ahead exert influence on the other language. Bernardini and Schlyter (2004) provided evidence that, when gaps representing higher syntactic structures arise in code mixed utterances of the 'weaker language', they will be substituted with the equivalent in the 'stronger language'. Such cross-linguistic influences have also been found in the acquisition of determiners by German-Italian children in a study by Kupisch (2007). Similarly, Yip and Matthews (2007) also demonstrated how advanced development of Cantonese in Cantonese-English bilingual subjects is manifested in the use of null objects with transitive verbs, *wh*-in-situ questions and relative clauses in English. Asymmetrical bilingual development has also been examined from a discourse perspective by Döpke (1992) who, in comparing the discourse practices of parents with active bilingual children with passive ones, found that a more child-centered discourse style supported the growth of the language which was slower in development.

Schlyter (1993) represents a study which looked at asymmetrical bilingual development as a linguistic behavior by itself. She showed that while features of central grammatical phenomena in L1 such as finiteness, word order and placement

of negation were evident in the stronger language, they were non-existent or have lower occurrence in the weaker language. This led her to postulate that the development of the weaker language may show characteristics of L2 acquisition. However, Schlyter's hypothesis has been criticized by Meisel (2007) on the ground that it did not specify the minimum conditions for L1 'acquisition failure' to occur. The results from an analysis of clitics, null subjects and negation in two French-German bilingual subjects by Bonnesen (2009) also failed to find evidence of L2-like acquisition. The weakness in Schlyter's hypothesis has also led Montrul (2008) to propose an alternative – the Weaker Language as L1 Hypothesis. Montrul suggests that even when incomplete acquisition or attrition occurs for one of the languages in early bilingual development, it will retain the features of an L1 because it occurs during the critical period.

Cantone et al. (2008) is another study which independently examined the phenomenon of asymmetrical bilingual development. They examined the relation of the two languages to each other and the relation of each language to a bilingual norm and used their results to create bilingual learner profiles based on the degree of bilingualism. Children with patterns closest to the bilingual norm were categorized as the 'beach types' whereas 'alp types' were subjects with development that deviated considerably from the norm. Subjects with intermediate deviations in their development were known as 'hill types'. Although bilingual development in some of their subjects came close to the norm, they showed that it was the rule rather than the exception that the two languages develop at a different pace with one language developing faster and then subsequently slower than the other for some subjects throughout the period of study. They also found that, while their subjects lived in Germany, they experienced faster development in French, suggesting that the societal language is not

necessarily the language which will experience faster development.

## **The scope of the current research**

The early development of English and Japanese in a bilingual child, Issa, will be assessed using some common measures of linguistic development. Nakamura (2010) has already described how the child has experienced faster development of English from the pre-linguistic stage with a receptive lexicon that largely consisted of English words. This paper will focus on his language development from his first words at age 1;3 (year; month) to early word combinations at age 2;3 with the objective of revealing some of the early manifestations of asymmetrical bilingual development. As this phenomenon has not been closely examined from the onset of speech, this study will provide an insight into how the initial process of language acquisition can vary from one language to another in the same child. It also has practical implications for parents who are concerned about their child's early bilingual development and professionals who need to make an assessment of a bilingual child's early language development.

## **Methodology**

### **A study of asymmetrical bilingual development in an English-Japanese bilingual toddler**

The subject of this study, Issa, was born and raised in Kawasaki City in Japan and has been exposed to two languages from birth. He was taken care at home full-time by his English-speaking mother, the researcher of this study, and received exposure to Japanese from his father in the evenings and from his grandparents whom he visited several times a week. Although he had considerably more exposure to English, Issa was also exposed to Japanese regularly and consistently from birth. This linguistic

environment remained unchanged from birth until age 2;3 when he entered a public daycare program.

The data for this study come from diary records and video recordings. A diary was used to record Issa's lexical development in English and Japanese from ages 1;2 to 2;0. The mother, who was with the subject most of the time, made handwritten notes when new words were produced. The notes were then typed into the diary at the end of the day. After a new utterance was recorded in the diary, it was subsequently transferred into the bilingual lexicon if the following criteria were satisfied:

- i) the utterance is spontaneous or elicited and not a repetition of an adult's utterance;
- ii) the utterance is followed by at least two more episodes of production with the same phonological form; and
- iii) the utterance meets other criteria laid out in Vihman and McCune (1994).

Video recordings were also made bi-monthly from ages 1;2 to 2;3 in both the English and Japanese contexts for approximately 20 to 25 minutes each. The English context revolved around the interaction between the mother-researcher and child at home, whereas the Japanese context centered on the interaction between the child and his grandmother, a highly familiar person to the child whom he regularly visited several times a week. Due to the lack of time and resources to transcribe every recording made, a sample of 26 video recordings (13 from each language context) is taken from each month under observation. The video recordings from the English context were transcribed using the Codes for the Human Analysis of Transcripts (CHAT) format from Child Language Data Exchange System (CHILDES) (MacWhinney, 2010). The Japanese data was transcribed in romanized form, with utterances segmented according to the guidelines set in the CHILDES manual for Japanese (Oshima-Takane & MacWhinney, 1998) to allow for comparability of results between the two languages.



Quantitative analyses were then conducted using the Computerized Language Analysis (CLAN) program (MacWhinney, 2010).

## Results

### Early lexical development

Data from the diary records are used to examine Issa's early lexical development. At the onset of speech at age 1;3, it was the production of Japanese words that first took off as his first three words were Japanese. The first two words were onomatopoeic baby words, i.e. *wanwan* (doggie) and *manma* (food). These words may have been relatively easier than other words to produce due to the reduplication of syllables. The third word, *hai* (yes), was Issa's reply when his name was called. His first English word, *flower*, only emerged after that. Phonologically simpler forms in Japanese compared to English have probably helped Issa in his first spontaneous vocalizations of meaningful words.

However, despite the early production of Japanese

words, as Figure 1 illustrates, the acquisition of English words soon exceeded that of Japanese words. At age 1;5, no new words in Japanese emerged in comparison to seven new English words. At age 1;6, only one new Japanese word was acquired whereas eight new English words were produced. His 50-word milestone achieved at age 1;8.18 consisted of 39 English words and 11 Japanese words.

Issa also underwent a period of accelerated vocabulary acquisition in English with the number of new words increasing from 24 words at age 1;10 to 62 words at age 1;11. In contrast, acquisition of Japanese words continued to be a slow and gradual process until the end of the period under observation. Issa's pattern of word acquisition in both languages showed that a vocabulary spurt may only occur for one of the languages that a bilingual child is acquiring, a developmental pattern which was also observed in David and Li (2003). Out of a combined lexicon of 269 words at age 2;0.30 (year;month.day), 233 words or 87.7 percent were English words

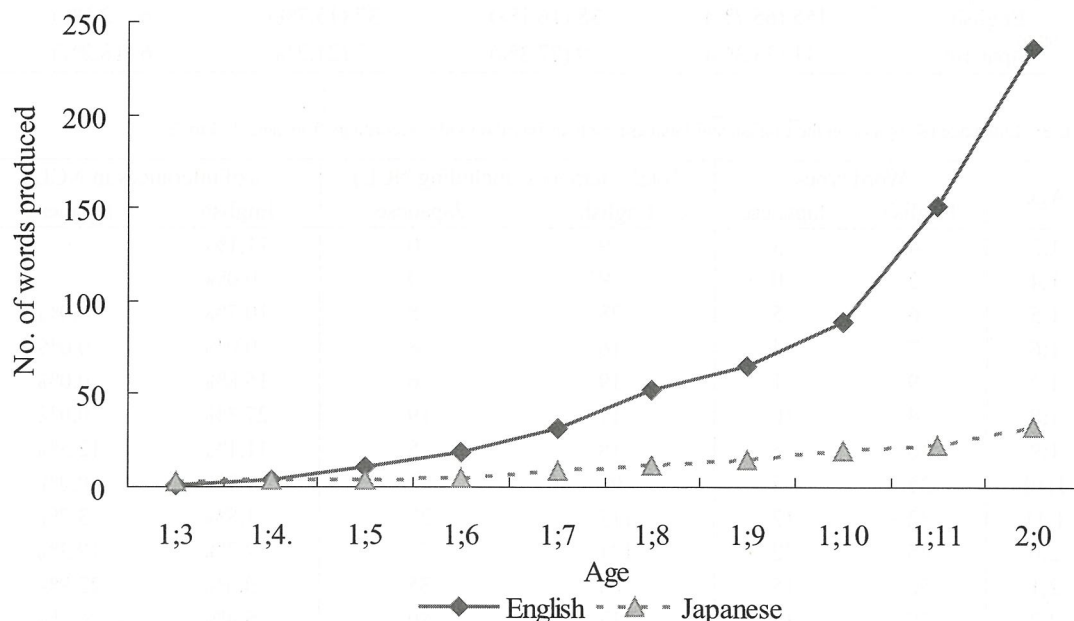


Figure 1. Issa's production of new words based on diary records from ages 1;3.1 to 2;0.29

whereas only 33 or 13.3 percent were words in Japanese.

An analysis of the distribution of words across word categories was also undertaken to uncover differences between the two languages. Words were categorized into noun, verb, modifier (adjectives) and personal-social (e.g. *hello*, *thank you*) classes (Benedict, 1979). As shown in Table 1, both languages have more nouns than any other word category. However, the bias towards nouns is less pronounced in Japanese with proportionately more words from the other classes. In particular, the proportion of verbs was relatively high, making up 27.3 percent of the total Japanese lexicon compared to only 16.1 percent of the English lexicon at age 2;0. However, as the results obtained here are based on a relatively small Japanese lexicon of 33 words, it is uncertain whether such a pattern of distribution would also occur when more Japanese words are acquired.

## Language use in the English and Japanese contexts

The video recordings revealed that asymmetry existed in Issa's language use in the English and Japanese contexts. Table 2 indicates that Issa used a larger range of words and produced more utterances when interacting in the English context than in the Japanese context particularly from age 1;10 where vocabulary acquisition in English accelerated. At age 2;3, he produced 87 word types and 135 utterances in English compared to 20 word types and 76 utterances in Japanese, indicating that a larger English lexicon has led to a wider range of vocabulary in use and greater production. While the child actively participated in verbal interactions in the English context, he was comparatively quiet in the Japanese context.

Table 2 also shows the percentage of utterances in the non-contextual language (NCL) in each language context, i.e. the use of Japanese in the

Table 1. Distribution of word production across word categories in English and Japanese based on diary records from ages 1;3 to 2;3

	Nouns	Verbs	Modifiers	Personal-Social
English	155 (65.7%)	38 (16.1%)	37 (15.7%)	6 ( 2.5%)
Japanese	11 (33.3%)	9 (27.3%)	7 (21.2%)	6 (18.2%)

Table 2. Language use by Issa in the English and Japanese contexts based on video recordings from ages 1;3 to 2;3

Age	Word types		Total utterances (including NCL)		% of utterances in NCL	
	English	Japanese	English	Japanese	English	Japanese
1;3	4	3	9	0	11.1%	-
1;4	3	0	9	0	0.0%	-
1;5	6	5	28	8	10.7%	0.0%
1;6	7	4	16	8	0.0%	0.0%
1;7	9	1	19	6	15.8%	0.0%
1;8	4	10	11	19	27.3%	0.0%
1;9	10	5	18	8	11.1%	12.5%
1;10	36	7	97	62	11.3%	0.0%
1;11	42	12	112	27	1.8%	3.7%
2;0	45	22	131	57	2.3%	19.3%
2;1	50	15	83	35	0.0%	22.9%
2;2	59	14	112	80	5.4%	26.3%
2;3	87	20	135	76	2.2%	11.8%

English context and vice versa. While the use of non-contextual language was observed in both language contexts, the use of Japanese in the English context decreased over time whereas the use of English at his grandparent's home increased with age. Japanese words used with his English-speaking mother at home were mainly simple onomatopoeic words. In the video session recorded at age 1;10, which had the highest occurrences of non-contextual language use, seven instances were utterances relating to train sounds in Japanese - '*gatangoton*' and '*kankan*'.

In the Japanese context, higher percentages of utterances in the non-contextual language in the later parts of the study are seen to be caused by several factors, of which one is the lexical gap between English and Japanese. For instance, at age 2;0, Issa uttered '*open*' to ask his grandmother to open a box of rice crackers as he did not possess the Japanese equivalent, '*akete*', in his lexicon at that time. His greater use of English words in the Japanese context was also due to his preference for certain words such as '*no*' which was used despite the existence of the equivalent '*iya*' in his Japanese lexicon. Use of non-contextual language is also attributed to the caregiver's linguistic behavior such as the elicitation of English words as seen in the conversation below between the grandmother (BAB) and Issa (ISS) from age 2;0:

- \*BAB: nani kore?  
 %eng: what is this  
 \*BAB: kore.  
 %eng: this  
 %sit: BAB taps at ISS's toy car  
 \*BAB: kore.  
 %eng: this  
 \*ISS: kore?  
 %eng: this  
 BAB: <car> [/] car.  
 \*ISS: car?  
 %act: goes over to his toy  
 \*BAB: <car> [/] car.

- \*ISS: car.  
 \*BAB: uh car.  
 %eng: yes car  
 \*BAB: hai car.  
 %eng: yes car  
 \*BAB: bububububu.  
 %eng: vroom

Issa's greater understanding of English has prompted the grandmother, a monolingual Japanese speaker, to use some simple English words in order to interact better with her grandson. This suggests that, while a caregiver may not necessarily have knowledge of the language, use of very limited terms and elicitation of words from the non-contextual language are sufficient to affect the child's choice of language. These results support the evidence from previous studies (e.g. Nicoladis & Secco, 2000; Quay, 2001) that code-mixing practices by caregivers strongly affect the use of the non-contextual language by the child.

Asymmetrical bilingual development was also observed in Issa's early production of two-word utterances. As shown in Table 3, he was faster by at least three months in using word combinations in English than in Japanese. The video recording of the English context at age 1;10 showed how he first produced word combinations by saying '*up down*' when trying repeatedly to prop up a toy that kept falling over and '*one two three*' when counting the frequency of kicks of his toy frog.

In contrast, two-word combinations were first identified in the Japanese context at age 2;1 when Issa uttered '*doko kana*' (wonder where) as a repetition of his grandmother's preceding utterance - '*kore doko kana*' (wonder where this goes?), when they were trying to fit blocks of different shapes into a box together. His ability to combine words earlier in English is seen to be a result of having a considerably larger English lexicon. Even after the child was able to construct two-word combinations in both of his languages from age 2;1 onwards,



Table 3. Issa's Mean Length of Utterance (MLU) and Standard Deviation (SD) values based on video recordings from ages 1;3 to 2;3

Age	English		Japanese	
	MLU	SD	MLU	SD
1;3	1.000	-	1.000	-
1;4	1.000	-	-	-
1;5	1.000	-	1.000	-
1;6	1.000	-	1.000	-
1;7	1.000	-	1.000	-
1;8	1.000	-	1.000	-
1;9	1.000	-	1.000	-
1;10	1.081	0.410	1.000	-
1;11	1.000	-	1.000	-
2;0	1.047	0.246	1.000	-
2;1	1.313	0.536	1.083	0.276
2;2	1.302	0.498	1.278	0.487
2;3	1.492	0.634	1.118	0.322

there is a disparity between the MLU values of both languages with higher values in English. SD values also revealed a larger dispersion in the length of utterances produced in the English language than in the Japanese language, indicating a greater ability to produce utterances of varying lengths.

## Discussion

### Manifestations of asymmetrical bilingual development

The results show that there are several manifestations of asymmetry at the early stages of bilingual development and that the developmental gap between the two languages may be considerably large. Although Issa's first words in English and Japanese emerged at about the same time at age 1;3, a vocabulary spurt in English led to a productive lexicon that mainly consisted of English words at age 2;0. This asymmetrical pattern was also evident in his use of the two languages as he produced more utterances and used a larger range of vocabulary in the English context than in the Japanese context and was able to combine words in English at least three months earlier than in Japanese. However, it

is noted that, while the development in English was relatively more advanced than in Japanese, this did not lead to a considerably delay in the production of Japanese two-word utterances. Issa probably benefited from some bootstrapping effects from his more advanced linguistic development in English. In addition, the relatively higher proportion of verbs and other non-noun categories in his early Japanese lexicon, as shown in Table 1, probably contributed to his progress to the two-word stage as such word classes allowed him to combine words more easily. This progress also probably reflected improvement in social-cognitive skills such as the greater ability to shift attention according to caregiver's directives and tune into third party speech which usually occurs between ages 1;6 to 2;0 (Tomasello, 1992). Such abilities may have helped Issa to better attune himself to the linguistic data available in his immediate environment, contributing to the rapid increase in English vocabulary from age 1;10 onwards and also assisting him to produce early two-word utterances in Japanese without any considerable delay. While asymmetry existed, both languages were clearly developing within the bilingual child.



The faster development in English than in Japanese appeared to have a cumulative effect; the larger receptive English vocabulary (as observed in Nakamura, 2010) probably encouraged early production of English words as the child attempted to articulate the many English words that he already understood. The larger productive vocabulary, in turn, allowed him to use a larger range of vocabulary and combine words earlier. This contrasts with the observations of Cantone et al. (2008) who report that, for some of their subjects, one language advanced and lagged at different times. However, theirs were a longer longitudinal study dealing with an older group of children with more diverse linguistic conditions. Although different measures of bilingual asymmetry may provide mixed results depending on the degree of asymmetry and the diversity of the child's linguistic environment (Cantone et al., 2008; Genesee et al., 1995; Paradis & Nicoladis, 2007), Issa's experience suggests that in a constant and stable linguistic environment in the first two years of life, asymmetry in early bilingual development is likely to manifest itself consistently from several linguistic aspects.

Although the emergence of early linguistic abilities is a major concern for parents of young bilingual children and practitioners involved in assessing language development, the results of this study demonstrate how the early development of the two languages may vary and that initial assessments based on observations of linguistic behavior in a single language context may be misleading. Just as Pearson Fernández and Oller (1993) have proposed that the combined vocabulary of both languages need to be considered in comparing the lexical development of bilingual toddlers with monolingual norms, the bilingual child's use of language in his two language contexts is also necessary for a complete assessment of language development.

## Conclusion

Although previous research has shown that asymmetrical bilingual development affects language mixing and word structures, the results of this study indicate that this phenomenon may manifest itself from the onset of speech in terms of lexical development, language use and word combinations. Concurring with the findings of Cantone et al. (2008), the faster development in English than in Japanese observed in this study demonstrates that the societal language does not necessarily develop ahead, suggesting that the child's linguistic environment is still relatively too enclosed for the societal language to be a determining factor in bilingual acquisition in the first two years of life. Results also revealed that asymmetrical bilingual development had a cumulative effect, extending from early language comprehension to early language production. While both languages were clearly developing within the bilingual child, each language developed differently from the earliest stages of language acquisition.

## References

- Benedict, H. (1979). Early lexical development: comprehension and production. *Journal of Child Language*, 6, 183-200.
- Bernardini, P. and Schlyter, S. (2004). Growing syntactic structure and code-mixing in the weaker language: The Ivy Hypothesis. *Bilingualism: Language and Cognition*, 7(1), 49-69.
- Bonnesen, M. (2009). The status of the 'weaker' language in unbalanced French/German bilingual language acquisition. *Bilingualism: Language and Cognition*, 12(2), 177-192.
- Cantone, K., Kupisch, T., Müller, N. and Schmitz, K. (2008). Rethinking language dominance in bilingual children. *Linguistische Berichte*, 215, 307-343.
- David, A. and Li, W. (2008). Individual differences in the lexical development of French-English bilingual children. *The International Journal of Bilingual Education and Bilingualism*, 11, 518-618.
- Döpke, S. (1992). *One Parent One Language: An Interactional Approach*. Amsterdam: John Benjamins.
- Gawlitzek-Maiwald, I. and Tracy, R. (1996). Bilingual

- bootstrapping. *Linguistics*, 34, 901–926.
- Genesee, F., Nicoladis, E. and Paradis, J. (1995). Language differentiation in early bilingual development. *Journal of Child Language*, 22, 611–631.
- Grosjean, F. (1989). Neurolinguists, beware! The bilingual is not two monolinguals in one person. *Brain and Language*, 36, 3–15.
- Jisa, H. (2000). Language mixing in the weak language: Evidence from two children. *Journal of Pragmatics*, 32, 1363–1386.
- Kupisch, T. (2007). Determiners in German-Italian bilingual children: What they tell us about the relation between language influence and language dominance. *Bilingualism: Language and Cognition*, 10(1) 57–78.
- Leopold, W. F. (1939). *Speech development of a bilingual child: A linguist's record. Vol I: Vocabulary growth in the first two years*. Evanston, IL: Northwestern University Press.
- MacWhinney, B. (2010). The CHILDES project: Tools for Analyzing Talk [Electronic Edition]. Retrieved April 14, 2010 from <http://childes.psy.cmu.edu/manuals/chat.pdf>.
- Meisel, J. (2007). The weaker language in weaker child bilingualism: Acquiring a first language as a second language? *Applied Psycholinguistics*, 28, 495–514.
- Montrul, S.A. (2008). *Incomplete acquisition in bilingualism: re-examining the age factor*. Amsterdam: John Benjamins.
- Nakamura, J. (2010). The bilingual-to-be: Comprehension development in infancy. *Educational Studies*, 52, 199–206.
- Nicoladis, E. and Secco, G. (2000). The role of a child's productive vocabulary in the language choice of a bilingual family. *First Language*, 20, 3–28.
- Oshima-Takane, Y. and MacWhinney, B. (eds.) (1998). CHILDES manual for Japanese. Retrieved February 24, 2010 from <http://www.cyber.sist.chukyo-u.ac.jp/JCHAT/JChatman.pdf>.
- Paradis, J. and Nicoladis, E. (2007). The influence of dominance and sociolinguistic context on bilingual preschoolers' language choice. *The International Journal of Bilingual Education and Bilingualism*, 10(3), 277–297.
- Pearson, B.Z., Fernández, S.C. & Oller, D.K. (1993). Lexical development in bilingual infant and toddlers: Comparison to monolingual norms. *Language Learning*, 43(1), 93–120.
- Petersen, J. (1988). Word-internal code-switching constraints in a bilingual child's grammar. *Linguistics*, 26, 479–493.
- Quay, S. (2001). Managing linguistic boundaries in early trilingual development. In J. Cenoz and F. Genesee (Eds.), *Trends in Bilingual Acquisition* (pp.149–199). Amsterdam: John Benjamins.
- Schlyter, S. (1993). The weaker language in bilingual Swedish-French children. In K. Hyltenstam & A. Viberg (Eds.) *Progression and regression in language: sociocultural, neuropsychological, and linguistic perspectives* (pp.289–308). Cambridge: Cambridge University Press.
- Tomasello, M. (1992). The social bases of language acquisition. *Social Development*, 1(1), 67–87.
- Vihman, M. and McCune, L. (1994). When is a word a word? *Journal of Child Language*, 21, 517–542.
- Yip, V. and Matthews, S. (2007). *The bilingual child: Early development and language contact*. Cambridge: Cambridge University Press.

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