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〈研究ノート〉

幼児の第二言語能力の考察

——言語学の見地から——

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Individual Bilingualism in Young Children: A Linguistic Perspective

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要　旨　今世紀に入る頃まで，二言語，またはそれ以上の言語の知識を得ることは，言語を習得する上で様々な障害を持つことになるという一般的な主張があった。1913年に Ronjat は，幼い子供が自由自在に２つの言語を使えることを立証するケーススタディを発表した。Ronjat は，このケーススタディによって二言語以上で養育されることが幼児の総体的な言語能力の発達に，妨げにならないことを明らかにした。Leopold は1939年から1949年にかけて Ronjat の主張を更に細かく研究し，Ronjat の理論を支持した。この問題について言語習得の理論的な基準や科学的な概念に基づいて研究が実施されたのは1960年代に入ってからであった。この研究によって人々は，言語能力の発達を妨げることなしに幼児が二言語を同時に機能させることが可能であると信じ初めた。本稿は言語学の見地から幼児に関する二言語使用能力を考察している。この点から本稿は個人的なレベルでの二言語使用能力のみ言及しており，二言語使用能力を社会学，社会言語学あるいは言語社会学といった社会的ないし総括的論理レベルで検証しようとするものではない。私は，この論文のテーマにおいて歴史的な見方から現時点の考えに至るまでの二言語使用能力を言語学の側面からの考えを示すよう試みた。初期の知覚力，音声の発達，（言語，記号の）意味と語彙の発達，（言語，記号の）意味能力，形態構造（ある言語または自然言語一般に見られる語形成の型，語形変化，関連語の派生，複数語の合成などにおける規則性）の発達，統語法的な発達，という項目を子供の二言語の習得ということとの関連性について考察している。

Introduction

There was a fairly common belief about a hundred years ago that knowledge of two or more languages necessarily implied imperfect linguistic knowledge. However, during the past twenty years or so, a great deal of research has reversed that view and it is now widely believed that early simultaneous bilinguality (a state of bilinguality reached during early childhood in which the child develops two mother tongues from the onset of language) and consecutive or primary bilinguality (in which the second language is acquired after the acquisition of basic skills in the mother tongue) are possible without linguistic imperfections prevailing. It would seem that any imperfections at the linguistic level are due to differentiation or interference, which begin to occur when the child recognizes that two linguistic systems are operating. In most cases, however, the child is eventually able

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to separate the two systems perfectly, resulting in native-like production in both languages. Evidence also indicates that a child's perception and reception skills start to develop almost immediately from birth. It may, therefore, be wise for parents wishing to raise their children bilingually to begin the bilingual upbringing from birth. Much controversy lies in the question of whether languages develop independently of each other or in an initial unitary language system, although the pendulum seems to be shifting slightly in favor of the independent development hypothesis.

A. Early Simultaneous Bilinguality

The first documented case study of the linguistic development of an early simultaneous bilingual child was done by the French psychologist, Ronjat in 1913. Ronjat kept detailed records of his son Louis' language developments from birth to the age of 4 : 10 (four years and 10 months). Strictly following *Grammont's Principle* (Grammont, 1902) in which the home environment should introduce a strict "one language=one person" correspondence, Ronjat spoke to Louis in his native French, while Louis' mother and nanny spoke to him in their native German. Through Ronjat's observation of Louis' linguistic behaviour, he concluded that a bilingual upbringing has no negative effects on the child's overall development, both languages develop in parallel in terms of phonology, lexis, and grammar, the child becomes aware very early on that two distinct linguistic codes exist, he rarely mixes the two languages and if he does it disappears as the child grows older, and bilingualism does not in any way prevent or retard the cognitive development of the child, but rather fosters a more abstract conception of language. In short, Ronjat concludes that a child raised in a mixed-lingual family develops normally and in a non-conflicting way.

Leopold (1939–49) described an even more detailed account of the language acquisition of his daughters in a German–English mixed-lingual family in which the one-parent one-language rule was followed. Leopold's conclusions agreed with those of Ronjat. He also noted several advantages of early bilinguality such as sustained attention for content rather than form and a greater ability to dissociate the word from its referent.

Although both of the aforementioned cases are well-documented descriptive diaries, they contain no information on the developmental psychological processes relevant to bilinguality. It was not until the sixties before studies based on scientific constructs and theoretical models of language acquisition were begun. In fact, prior to that, it was a commonly held belief by many lay persons that a child's bilingualism had a harmful effect on his or her linguistic development. Little thought was given to the idea that bilingual language competence was different from that of the monolingual's or that knowledge of two or more languages could be anything but imperfect linguistic knowledge. Considerable progress has been made in the past twenty years in assessing bilinguals and measuring their linguistic skills by separating those features which are evident in monolinguals with those which are present in bilinguals only.

It is now widely agreed that early simultaneous or primary bilinguals have the ability to function

in two languages simultaneously, without taking twice as long or any significantly longer time than a monolingual needs to acquire one. Initially, the main task is that of differentiation. The child must first recognize the presence of two separate linguistic codes and then identify and sort the elements into their respective systems. Most bilingual children seem to be unaware of the existence of two distinct systems until they reach the age of about two, well after phonological development has begun. Once the discovery is made, differentiation begins. An ordinary monolingual child goes through several stages in which he or she simplifies the linguistic system he or she is learning. Bilinguals simplify as well, but do so in each language and cross-lingually. It also seems possible that a balanced bilingual might use a different method of differentiation, starting with an averaged system having contrastive patterns and perceptual category boundaries lying between the two target language systems and slowly and more or less simultaneously moving away from this in either direction towards two differentiated phonologies. It is likely that both balanced and non-balanced children use both strategies to varying degrees (Watson, 1983).

B. Consecutive Bilingualism

Unfortunately, there are few documented cases of consecutive bilingualism among children less than four years of age. However, one oft-cited study is that by Fantini of his son, Mario (Fantini, 1985). Mario underwent a different pattern of exposure to his languages (Spanish–English), resulting in a different pattern of phonological development. His Spanish consonant system was virtually complete at 2 : 6 and he used practically no English sounds, other than those which had close equivalents in Spanish. Between 2 : 6 and 3 : 0, Mario began producing English sounds, but the two systems were not properly differentiated in production. It was not until the age of 5 : 0 that he was clearly able to distinguish correctly all the English phonemes. In terms of pronunciation, Mario showed signs of interference from English in his Spanish pronunciation, by incorrectly aspirating certain Spanish consonants. It is clear that one phonological system was developed by building out from the other to some degree.

Two conclusions may be drawn from Fantini's study. One is that the developing bilingual has to learn processing skills which the monolingual does not. He or she has to recognize that it is possible to use more than one sound system to communicate, and, therefore, he or she must learn when to use one system instead of the other. The other conclusion is that, due to instrumental data, it is not exactly known how far claims of native-like abilities in both languages are valid.

C. Early Perception

Eilers, Gavin, and Oller (1982) analyzed the perception of phonemes by four to eight-month-old infants raised in both bilingual (English–Spanish) and monolingual (English) environments and found that the bilingual subjects appeared to discriminate better between not only the phonemes of English and Spanish, but also between those of English and Czech, a language of which they had no knowledge. They used the VRISD (Visual Reinforced Infant Speech Discrimination) technique in

which the infant is first conditioned to turn his head in response to a change in a continuous auditory signal after which the infant's other discriminatory capabilities can then be assessed. Eiler and associates interpreted the results as possible evidence that a richer linguistic input from the environment may lead to superior phonemic discrimination skills. Goodz (1984, 1985) from his longitudinal observations of children from mixed lingual families in Montreal found that infants at the prelinguistic stage are capable of discriminating between the intonation patterns of French and English. These two cases suggest than an infant raised in a bilingual environment may develop perceptual skills which allow him or her to distinguish between two languages. The implication of this observation is that the development of perceptual skills may later aid the infant in separating the two languages at the production stage.

D. Phonological Development

Recent first language acquisition research indicates that an individual's receptive language skills begin to develop very early in infancy. Newborn babies react differently to human sounds than they do to non-human sounds and begin to differentiate pitch and stress features very soon. Fantini (1985) noted that his son Mario was able to recognize his parents' voices at the age of 0 : 4 and was producing (meaningless) sounds following familiar intonational patterns by age one. At 1 : 10 he seemingly responded positively to strangers at a party who addressed him in Spanish, while showing no reaction to those who spoke to him in English, to which he had virtually no previous exposure.

The process involved in the production of the child's first speech sounds is the same for bilinguals as it is for monolinguals. The task is made more complex for the bilingual speaker, however, since two systems are involved. Because a greater number of features have to be recognized and produced, speech production in bilinguals may occur later compared to their monolingual counterparts and there may even be some confusion in the initial stages. However, the absence of sound confusion in bilinguals has been documented more than its presence. Ronjat (1913) noted that his son Louis was able to produce the phonomes of German and English correctly at 3 : 5 and would appropriately shape loan words to match the language. More recently, Oksaar (1970) observed no confusion of sounds as his son Sven acquired Swedish and Estonian, including her son's mastery of the prosodic features of vowel and consonant length which characterize Estonian but not Swedish.

With regard to the phonological development of bilingual children, research suggests that the two systems are largely acquired separately. Although the child may develop patterns of substitution or avoidance of certain problematic features during the process, monolinguals are equally as prone to do so. The extent to which bilingual children keep the two systems apart possibly depends on linguistic factors and certainly on environmental ones. Ruķe-Draviņa (1965, 1967) and Hoffman (1985) maintain that the closer the languages are phonologically and morphologically, the more likely that interference is to occur, starting with intonation features.

In raising bilingual children one must recognize the need for varied and continued language

input. If one language to which the child is exposed dominates the other, then the subordinate language is likely to be affected by it at the phonological level, as well as all others. And if exposure to one language ceases altogether, then it will not be long before that language disappears from the child, in some cases in as little as four months. Since a child's receptive skills start to develop virtually from birth, it stands to reason that a bilingual upbringing should also begin from birth.

This discussion of phonological development would not be complete without mentioning the "*critical period*" during which children are particularly adept at acquiring language, lasting from about the second year to about puberty (Penfield and Roberts, 1959; Lenneberg, 1957). Considerable evidence shows that younger learners are better at acquiring a native-like accent than older children or adults. Many experts believe, however, that under the right conditions, older learners are able to achieve native-like pronunciation in the second language.

E. Semantic and Lexical Development

As a child's vocabulary increases, he or she learns to differentiate meanings and acquires the necessary linguistic forms to make finer and finer distinctions. Certain items used during the holophrastic stage are abandoned in favor of adult forms. Similarly, overextension of meaning (where the child concentrates on one characteristic, while disregarding other features, and refers to all things having that characteristic the same way) also disappears as the child's semantic and lexical development matures. In short, all children use some degree of overextension and differentiation of meaning and all abandon some earlier forms as their vocabulary increases.

In bilingual children, mixed elements in early language production suggest that an undifferentiated language system exists. Volterra and Taeschner (1978) interpret mixing in a three-stage model: in stage (1) the child operates under only one lexical and syntactic system comprising items from both languages; in stage (2) the lexicon becomes differentiated but the syntax remains in a single system; in stage (3) differentiation of the syntactic system occurs. This model has garnered considerable support, but the question still remains as to whether children being raised bilingually during infancy initially operate one system or two.

F. Semantic Capacity

Different contexts determine which code the bilingual child will choose and enable him or her to develop strategies for language choice, a process involving considerable cognitive effort. The bilingual child is faced with the two-fold task of knowing two labels for each semantic unit in assigning words to meaning. The child must also recognize that the semantic relationship of objects, events, actions, etc. may vary from one language to another. The capacity for acquiring new words and equivalents in bilinguals is subject to individual variation, depending on such variables as cognitive maturity and memory, and also on interactional factors related to the child's sociocultural environment. Although the bilingual individual's linguistic capacity must encompass the two languages, this does not necessarily mean that his or her lexicon is twice as big as that of the monolin-

gual individual. The bilingual person is able to denote the same number of lexical items as the monolingual person. This is done by dividing his or her repertoire between items from both codes, with varying degrees of overlap. Monolinguals tend to have a larger vocabulary than bilinguals in the dominant language. However, bilinguals show superior verbal fluency in storytelling and also in the number of concepts expressed per story (Doyle, Champagne, Segalowitz, 1978). It can be said that successful communication depends not so much on the number of lexicon the individual possesses as it does on the way the available ones are used. Therefore, there is some evidence suggesting that bilingual people are able to handle language more flexibly and creatively than monolingual people.

G. Morphological Development

It is a commonly held belief that, as a general rule, morphology develops after syntax, unless a very close relationship exists between the two languages being learned. In fact, with respect to bilingual language acquisition, much less research has been done in morphology than on syntax. This may be explained by the fact that many of the case studies conducted involved languages (such as English) where the absence of morphological markers is not likely to lead to frequent communication breakdowns. Leopold (1949) observed that his daughter's morphology in English and German was still largely undeveloped at the age of two. She used some plural forms in English, but hardly any in German. No noun or verb endings were evident when she spoke German, and only a few adjectival endings were noted in her English speech. On the other hand, Burling (1959) found that his son's morphological and syntactic development was already fairly extensive by the time he reached the age of two. Garo, a highly inflected language, was his dominant language at the time and this would explain his faster acquisition of Garo morphology than English morphology. He could use Garo suffixes indicating future, past, imperative, present and habitual aspects on all the verbs he used, and he was starting to use possessives, negatives and some noun suffixes.

The development of morphology involves a number of quite complex cognitive processes. Not only are there structural relationships with other morphemes (for example, one morpheme may mark several grammatical functions such as number, gender, and case), but also perceptual aspects. This, coupled with the fact that successful communication can often take place without noun, verb, and adjective markers (since language contains a variety of clues about grammatical categories and functions), is perhaps why it takes a bilingual child longer to achieve complete morphological control.

Generally speaking, a bilingual child follows the same route as a monolingual child. The rapidity in which the correct forms are acquired is a function of the relative importance of morphology within a given code. Most errors can be explained by overextension or simplifications, most often developmentally from within the same language and far less frequently as a result of the child's knowledge of the other language. Although the kind of errors monolinguals make, such as irregular verb forms and plurals, are made by bilinguals as well, they may persist much longer in monolin-

gual children or even become a feature of their speech. There is some evidence suggesting that bilingual children are more aware of morphological aspects of language than are monolinguals and are able to express their awareness in a way monolinguals are not. However, this heightened awareness does not necessarily mean earlier mastery of the morphological systems.

H. Syntactic Development

The question of whether syntax develops in the same way in monolingual children and bilingual children has received a fair amount of attention recently. Meisel (1984) compared the language development of bilingual children with the results of similar studies of monolingual children. He looked at the language development of two bilingual children (French and German) between the ages of 1 : 00 and 4 : 0, concentrating on word order and case marker features. He concluded that bilingual children acquire the same items, and in the same sequence of acquisition, as monolinguals. Taeschner (1983), Mikeš (1967), and Vila (1984) also concluded that bilingual upbringing does not significantly affect the pattern of syntactic acquisition. Meisel also found that bilinguals maintained more consistent patterns of word order from the start than did their monolingual counterparts, that the S–V–O order was preferred to other possible structure, and that consistent use of the verb in second position within the sentence elements (a feature of German syntax) occurred earlier in bilinguals than in monolinguals. With regard to the use of case morphemes and other markers, Meiser found that bilinguals were able to express syntactic functions by morphological means earlier than monolingual German children.

If two languages express a semantic relationship by similar syntactical means, then it is likely that they will be acquired simultaneously. However, it should be noted that the acquistion will be affected by the manner and frequency with which forms are presented to the child. If, on the other hand, a more complex construction is used in one language to express the same semantic relationship in another, then acqusition of the structure may be delayed somewhat. With respect to the onset of early bilingualism, two opposing theories emerged at approximately the same time in the 1970s. Volterra and Taeschner (1978) adhere to the "unitary language system hypothesis" where the bilingual child does not distinguish between the two language systems in the initial period. This model is also supported by Saunders (1982, 1988) and Arnberg (1987). The "independent development hypothesis" was first proposed by Padilla and Liebman (1975) and later supported by Bergman (1976), Meisel (1986, 1987), Genesee (1989) and De Houwer (1990). This hypothesis maintains that languages develop independently of each other.

Taeschner (1983) analyzed the syntax of her two daughters. Her work was based on the linguistic theory of valency grammar, where the verb is considered to be the centre of sentence structure. She used this approach to describe her daughters' progression from the one-word stage to more complex adult-like structures. She proposes that children pass through three stages from (1) simple nuclear sentences to; (2) more complex constructions to; (3) even more advanced structures using connectives to mark relationships of cause, time, condition, etc. During stage one, no distinction

between the two languages was made and the girls used words from both languages. During stages two and three, various types of constructions developed together in Italian and German and in cases where differences were evident, order of acquisition by monolinguals provided an explanation.

De Houwer (1990) differs from Taeschner in that she does not believe in an initial unitary language system for any stage of language development. De Houwer studied a bilingual (Dutch-English) child from age 2 : 7 to 3 : 4 in terms of morphological and syntactic development. She found that bilingual language acquisition runs concurrently with each language forming a separate closed system with very little interference from one on the other. She also observed that the child suddenly developed a heightened linguistic awareness in both languages from her third birthday on. She also raises the possibility that increased linguistic awareness is a function of advancement in cognitive development.

Although both models of language acquisition have considerable support, it does appear that in recent years the independent development hypothesis is gaining more and more support. Until it is known to what extent linguistic knowledge in the very early stages is language specific or until a child's language competence can be accurately assessed from his or her first utterances, the question may never receive a satisfactory answer.

Conclusion

As a child's perception skills start developing almost immediately, it would seem only logical to start the bilingual experience for the child at an equally early stage. Since we know that comprehension always precedes production, there stands a reasonable possibility that early perception "training" may accelerate the comprehension and differentiation processes. Interference has often caused panic among anxious parents, and cases have been documented where mothers trying to raise their children bilingually switched to the dominant language of the community as soon as they noticed that that language was beginning to show some effects of interference from the second language. Research indicates, however, that such a phenomenon is a natural one which, barring unusual circumstances, will eventually disappear completely, usually when the child is still very young. Certainly, early bilingual exposure will lead to native-like pronunciation in both languages, should the child become an early simultaneous bilingual, whereas this is rarely the case with older children and adults. The additional processing skills which the bilingual child may have to handle seem to pose no additional burden.

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