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ABSTRACT

Research on factors related to the sociocultural effects of balanced biliteracy involving a European language and an Asian language is reviewed. Becoming biliterate and fluently bilingual in a European and an Asian language involves several complications not involved in acquiring two European languages. The biliterate in such a situation must learn two different orthographies and learn to apply sociolinguistic rules to interaction in two widely different cultures. The review focuses on children who are learning to read in a second language following a change in country of residence. The topics discussed include the linguistic relationship between the first and second languages, orthography, exposure to written material, the effects of age on second language learning, and the sociocultural effects of biliteracy. Balanced biliteracy is difficult to achieve when the second language is that of the dominant culture. However, the benefits of balanced biliteracy include pride in ethnicity and flexibility in the cognitive and cultural domains. References are appended. (RW)

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BILITERACY ACQUISITION AND ITS SOCIO-CULTURAL EFFECTS

Agnes M. Niyekawa

Most of the recent studies on bilingualism deal with the process of becoming bilingual rather than the state of being bilingual. They tend to focus on the learning of the second language (L_2), which is usually the primary or dominant language of the sociopolitical society in which the learner is to function. Studies that do pay attention to the second language learners' first language (L_1) and test their competence in L_1 as well as L_2 are relatively small in number, and tend to deal with bilingualism and biliteracy in two related languages within the European language family. The paucity of studies on biliteracy acquisition where one of the two languages is Asian or Pacific is distressing but understandable. The generalization of findings, however, from children's biliteracy acquisition in two related languages to all biliteracy acquistion situations is disturbing. Such generalizations tend to ignore a number of important factors that affect the degree of difficulty in learning to be literate in two completely unrelated languages.

The reasons that bilingualism and biliteracy involving a European language and an Asian or Pacific language require separate considerations are many. Foremost is the fact that European languages, when contrasted with any of the non-European languages, are structurally so similar to one another as to be categorically referred to as Standard Average European or SAE by Whorf (Carroll, 1956). When one considers the additional differences in an SAE culture and an Asian or Pacific culture, to become a functionally fluent bilingual who can properly apply the sociolinguistic rules in personal interactions in the two languages and cultures seems to require much more "learning" than would be expected in becoming bilingual in two European languages. The second major reason is that to become biliterate, two completely different orthographies must be learned in most cases when one of the languages is Asian. On the other hand, when one of the languages is of a Pacific Island that had been traditionally a non-literate society, there are a different set of factors to consider in becoming just literate, to say nothing of <u>bi</u>literate.

In this paper, I will review these factors relevant to biliteracy acquisition when one of the two languages is English or a European language and the other an Asian or Pacific language and discuss the socio-cultural effects of being biliterate in such languages. The term biliteracy in this paper will refer to an advanced state of bilingualism where the person can not only speak two languages fluently but also read and write these two languages. It will exclude from consideration those who are biliterate but not bilingual. We know many such cases, particularly among learned scholars in Asia, who can read one or more European languages but can neither aurally comprehend nor orally communicate in the languages they can read. Since foreign language education before the audiolingual vogue in this country was also geared to produce biliteracy rather than oral bilinguality, being biliterate without being bilingual may be expected among educated people above a certain age.

The paper will focus on children who are learning to read in L_2 as a result of a change in the country of residence, although studies and observations in other settings will be cited when relevant. The factors involved include linguistic relationship between the two languages, orthography, exposure to written material, and age. In the discussion of socio-cultural effects of biliteracy, adults are taken into consideration, for the status of balanced biliteracy is often not achieved until adulthood.

Linguistic Relationship between L_1 and L_2. The bulk of controlled experiments on bilingual education carried out so far involves French and English in Canada, and Spanish and English in the U.S. It may therefore not be surprising that the linguistic relationship between L_1 and L_2 has not played a significant role in making generalizations about language acquisition. When one considers bilingual education from a global perspective, however, it is an issue that cannot be ignored. Engle (1975) in her comprehensive review of studies in the L_1-L_2 issue with minority

language group children does include the linguistic relationship between the two languages as one of the issues that must be taken into account in future research.

With Asians and Pacific Islanders, when L_2 is English or some other European language, there is no linguistic relationship between L_1 and L_2 except with the Hindi languages that are distantly related. L_1 for this large group can be roughly divided into two categories: Languages with unique orthographies and history of literacy among at least some segment of the population, and languages with only oral traditions until fairly recently when the Roman alphabet was adopted for universal education. In general, most of the major languages of the Asian continent belong to the former, and those spoken in the Pacific Islands to the latter. One can expect learning a European L_2 for speakers of these languages to be quite different from learning an L_2 that is linguistically related to L_1, particularly in the case of the Asian group where there is the additional problem of learning a new system of orthography.

Orthography. It is not surprising that relatively little attention has been given in the West to bilingual education involving two different orthographies. Except for the two major non-Latin scripts (Greek and Cyrillic (Russian), the entire Western world uses the Roman alphabet (Latin script). In contrast, of the 29 scripts in common use in daily newspapers in the world, five are found in the area around the Near East, and 21 scripts, in addition to the Latin, Arabic and Cyrillic scripts, are in use in Asian (Nakanishi, 1980). These scripts vary in the direction they run: Horizontally from left to right or right to left, or vertically starting from the top right or left. Some are alphabetic, some syllabic, and a few are logographic or use a mixture of these. Some of the alphabetic scripts use different forms of the same letter depending on whether it appears word initially, medially or finally. Many do not use spaces between words. The number of letters or elements (such as vowel signs) to be learned to become literate varies widely, from anywhere in the thirties to the thousands, as with Chinese script. However, even for

scripts with relatively small numbers of letters or elements, when a letter or element combines with another, the resulting standardized letter can add to the number of letters to be mastered in that language.

Orthographic issues have been discussed in relation to the teaching of reading and writing in L_1 in various countries (Feitelson, 1973; Kim, 1977; Leong, 1973; Mehrota, 1977; Oomen, 1973; Sakamoto & Makita, 1973). There are, however, few data-based studies available on biliteracy involving one such language except Cowan and Sarmad (1976). They compared the performance in reading Persian and English between children in bilingual program schools and monolingual control schools. They point out the dissimilarities between the two languages in syntactic structures as well as orthographies. Persian uses the Arabic script with four additional letters. It is written from right to left; each of the 32 letters of the alphabet has three shapes depending on whether it occurs at the beginning, middle or end of a word; and 22 of the letters are distinguished from one another only by the presence or absence of a dot or stroke; not all vowels are represented in script.

The main findings of the study were that the bilingual children did not perform as well as their monolingual counterparts in reading tests of either of the two languages. This was particularly so in Persian. Even though the bilingual children came from upper middle and upper class backgrounds, the superiority they showed in Persian reading over lower class monolingual children in the first grade is found to be insignificant in the sixth grade. The authors hypothesize that bilingual children had to develop two distinct attack strategies for reading the respective languages, resulting in not being able to read either language quite as well as their monolingual counterparts. They state that the outcome would be expected to be different "for languages with near identical orthographies, greater structural similarities, and a high number of cognates, as is the case with French and English." They hypothesize a parallel processing theory of reading for bilinguals and suggest that when there is maximum similarity between linguistic systems, greater competence

in reading both languages will develop, while great dissimilarity between systems will lead to two separate attack strategies for reading. It would have been extremely interesting if a control group of children from a similar socioeconomic background were available who received instruction in Persian only for the first three grades, and then were introduced to English in a bilingual program for grade four. One cannot help but wonder whether such a group of children might have fared better in both Persian and English by grade six.

Compared with the alphabetic system, including Arabic, the logographic writing system is considered to be the hardest to learn by most Westerners (e.g., Goody, 1968; Hall, 1969). Native speakers of Chinese and Japanese, however, point out systematic aspects of Chinese orthography which make learning by native speakers much easier than an outsider might imagine (Leong, 1973; Sakamoto & Makita, 1973; Suzuki, 1975; Wang, 1973). Martin in two different articles points out how much easier initial reading in L_1 is for the Japanese child than the American (1974a) on the one hand, and how time-consuming it is for the American to learn Japanese as L_2 (1974b) on the other. He points out that the kana syllabaries in Japanese serve as easy phonetic units since "what the human ear extracts from the speech signal is not, in the first instance, the phonemes or their components, but rather syllables" and that this is also one of the reasons why Johnny, who has to break up the syllable into smaller entities, finds initial reading in English difficult (1974a).

The Japanese child, however, has to learn kanji, the Chinese characters, in addition to the syllabaries. During his/her first six years, s/he learns about 900 of them, and in the following three years in junior high school s/he learns the remainder of the 1,850, which account for roughly 96 percent of the running text of newspapers. Since each kanji has usually two or more alternative readings, the task of learning to read is made that much more complex. Yet incidences of reading disability in Japan is rare (Makita, 1968; Sakamoto and Makita, 1973).

The Japanese writing system of the mixed script of kana and kanji is considered highly efficient for reading, since kanji represent the meaning-carrying content words, such as nouns, verbs, adjectives and adverbs, and tend to stand out when surrounded by kana. Studies on relative speed of recognition of the three scripts used in Japanese indicate that younger children find the kana syllabaries easier to recognize than kanji while from age 11 upwards kanji become the easier. (Tanaka, Iwasaki & Miki, 1974; Tanaka, 1977). Mixed script were found to be the easiest with adult native as well as non-native speakers of Japanese in a recent study, although due to the method used, this finding has limited generalizability (Yamamoto, 1980). Learning of kanji for retention by preschool children, which means learning of symbolic representations of concepts, was also found to be easier than comparable learning of kana (Steinberg & Oka, 1978; Oka, Mori & Kakigi, 1979). While we cannot generalize findings from these experiments indiscriminately to all learning situations where many other factors may affect the outcome of learning, we at least have some experimental evidence pointing to the efficiency of kanji.

It is sometimes argued that the Japanese writing system, or more specifically the use of Chinese characters (kanji), is inefficient for writing. Those who engage in a great deal of writing in their professions do not seem to be any slower or less productive or find it more cumbersome than Western writers. Considering the fact that the average adult spends far more time reading than writing, and that there are thousands of times more readers than writers in this era of information explosion, a system with high reading efficiency may be considered the more desirable than one with writing efficiency.

What is mastered in the normal course of education by the Japanese, however, becomes an extremely time-consuming task for the American. Besides the writing system, another reason for the great difference in learning to read Japanese as L_1 and L_2 is that Japanese children already know the Japanese language when they learn to read while the American is

still in the process of learning the lexicon and syntax of Japanese as second language learners. According to linguistic specialists at the Foreign Service Institute cited by Martin (1974b), it takes three to six times as long to learn foreign languages with complicated scripts such as Arabic, Chinese, Japanese, or Korean as for the common European languages or, even Vietnamese, which uses the Latin script with tone marks. Examples of some of the complex aspects of Japanese are given in Martin, 1972 and 1974b. Reading skills, however, are found to be remarkably similar regardless of orthography, and the skilled readers of one system are able to read as efficiently as skilled readers of another (Gibson & Levin, 1975; Goodman, 1971; Gray, 1956; Thorndike, 1973).

Exposure to Written Material. While the Asian continent is characterized by the large variety of scripts, the Pacific region, consisting of a large number of widely scattered islands, has been predominantly non-literate until very recently. For these Pacific Islanders, becoming biliterate in their own language and English presents problems in some ways quite different from those of the Asians who must learn two scripts.

Learning to read does not just entail reading off what is uttered in conversation, for there is a difference in spoken language and written language. Even at the most simple beginning level of reading, the text is in formal language, without any of the contractions found in conversation. The child who is being introduced to reading needs to know that languages can be represented on paper, and that what is written is different in form from the spoken language. In conversational speech, particularly with children, sentences need not be complete. There is a great deal of exchange of short phrases. Because the context in which the conversation takes place provides the clues for the topic, while prosodic and paralinguistic cues such as gestures, quizzical expressions, intonation, stress and restatement clarify possible ambiguities, face-to-face communication need not be complete and exact. A written text, on the other hand, is communication addressed to persons not present, and thus

has to provide, by means of words, all the necessary information that may be supplied by clues in conversation. Olson (1977), after contrasting utterances and texts, points out that when children are taught to read, they are learning both to read and to treat language as text. "Children familiar with the use of textlike language through hearing printed stories obviously confront less of a hurdle than those for whom both reading and that form of language is novel" (p. 276).

We, who live in industrialized societies, take the written text so much for granted that we are not even aware of how much exposure to it our children are getting. Every time we read road signs while driving, or say, "Let's see what the instructions say," and read aloud the instructions in trying to use a new product, we are familiarizing the child with written texts. The child in a non-literate society, however, sees few written signs around except in the commercial section of town, if any, and does not find any written material in his own language that could be read by adults around him. It is likely that a child's first exposure to written text is upon entering school. Many of these societies have only recently adopted universal education, and where no agreed-on orthography has been developed, English is used frequently as the language of the text. In some cases, English is chosen as the language of education because there are no textbooks available in their own language, especially in science and other subjects in upper grades. When these children enter school with minimal preparation for reading even in their L_1, the obstacles in learning to read a language they do not speak are great. They are starting education with dual handicaps.

I have observed such a case in an immersion program where L_2 was the medium of instruction from grade 1 (Niyekawa-Howard, 1972). Even though reading was initiated in L_1 (Samoan language) when it was the subject matter, and reading in L_2 (English) was delayed till close to the end of the first grade, all subject matters were taught through the medium of L_2. The vocabulary of instruction was carefully controlled so that teachers were not permitted to use a word not yet introduced up to that time.

Consequently, teachers had difficulty paraphrasing, and the language spoken by the teacher was very much like the language of texts, definitely not conversational speech. While some may refer to this approach as "the direct method," it is far from learning directly in an interpersonal situation where the need to communicate is strong and where all the extra-linguistic cues are available. Children could not build on what they had learned perceptually up to that point. For instance, when they were introduced to the concept of "insect" in the second grade, they could neither enumerate the characteristics of insects, nor could they name any insects in L_2. Every single example belonging to the set of insects, such as a bee, fly, butterfly, gnat, mosquito, etc., had to be learned as new vocabulary items in L_2 and memorized. Since they could not volunteer to give other examples, not knowing the L_2 equivalents, even if they understood the concept, children had to remain passive and endure one-way communication; an atmosphere of boredom and monotony prevailed in the class. In effect, children were prevented from engaging in cognitive activities they could easily manage, and were forced to function at a lower level intellectually because of their lack of command in L_2 in lower grades, and limited command in upper grades. It was a case of "induced retardation," and the cumulative effect in upper grades was frightening. Yet the parents supported the program wholeheartedly believing that the earlier their children started learning L_2 and the more years spent on it, the better prepared they would be for getting jobs in the L_2 culture. Lacking a yardstick against which to measure or compare their children's achievement, the monolingual parents appeared to be satisfied with the limited progress their children were making in L_2. In fact, to them their children appeared to be making great progress. Since many of the leaders in the community (American Samoa) had had a similar start in L_2 education and had become successful biliterate individuals, they were strong supporters of the program, and believed that this approach was the best way to learn L_2, which they considered essential for the economic and political advancement of their community. There was, however, a major difference in the L_2-over-L_1 education these leaders had received. They attended a well-established private school for children of higher

socioeconomic status where they were taught by better-trained teachers than were the above children in public schools.

Socioeconomic status (SES) as an important variable has been evidenced consistently, including the study of reading comprehension in fifteen countries by the International Association for the Evaluation of Education Achievement (Thorndike, 1973). Smith (1977) restates the relationship between SES and reading proficiency as follows:

> Children are unlikely to learn to read by osmosis (by the mere fact that books are around them), from direct parental instruction, or because they see the value of reading by watching adults perform what initially must seem a pretty meaningless, silent activity. Rather, I would be inclined to credit the simple possibility that such children are merely more likely than other children to hear written language being read (p. 393).

The point Smith is making is essentially the same as Olson cited earlier, namely exposure to "language as text." How then can we explain the relationship between SES and literacy by the first generation of literate people in a non-literate society? As children, they did not have parents who could read to them, so how were they prepared to deal with language as text? The answer may very well be something as follows. The child of a high SES family in a non-literate society is likely to have greater exposure than other children in the same community to "formal language" as distinct from conversational speech through the oratory his father gives as a leader in the community. His father is also likely to have some contacts with the outside world through exchange of visits with leaders of other communities. Through these contacts it is likely that he has been exposed to impersonal speech (to be discussed later), and quite possible that some of the visitors may have given some written material and even read aloud a portion of it. A single exposure to such an event is expected to have a great impact on the child, particularly if it aroused in him an interest in the outside world of which he got a glimpse.

The American Samoan case raises another important issue in biliteracy acquisition, namely the age at which the child should be introduced to reading in L_2, which is structurally unrelated to L_1.

Age and Learning L_2. Preschool children are known to learn to speak in L_2 with greater ease when placed into a natural setting where frequent personal interactions take place. There is, however, lack of agreement as to whether children, as opposed to adults, have greater facility in learning an L_2. Those who accept the critical-period hypothesis tend to think so, while those who do not argue that adults can learn an L_2 as well as a child if not better. There seems to be a general confusion in distinguishing between language learning in a natural setting (such as in L_1 acquisition) and learning through formal instruction, both by those who accept as well as by those who reject the critical-period hypothesis. Since the critical-period hypothesis is based on neurolinguistic evidence, it is related to the child's general development when an enormous amount of perceptual learning (Gibson, 1972; Gibson & Levin, 1975) is taking place. Hence the child's ability to acquire language with great ease should be interpreted as applying to learning in a natural setting, through exposure to personally directed, context dependent speech, through which the child personally abstracts the distinctive features and rules of phonology, syntax and semantics to give a structure to the language and not to formal instruction in the classroom where language study is an academic subject. When L_2 is learned through formal instruction, the child is not likely to have much of an advantage over an adult. Witlin (1974), in comparing adults (18 to 40 years) and children (10 to 11 years) learning a foreign language, found that adults had better study habits and motivation to learn the language, but generally required more time and repetitions than children to learn the material at the same level. In grammatical ability and memory tasks, education and experience were found to be the determining factor, not age.

Age, or grade level, however, appears to be an important factor among children. In the study on Finnish children of migrant families in Sweden, Skutnabb-Kangas and Toukomaa (1976) found that children between the ages of six and eight as compared to both younger and older children had the greatest difficulty in learning L_2, a structurally unrelated language to L_1. The six-to-eight age group represents children who have just started school and are being introduced to reading through L_2 without having learned L_2 orally. What they are going through is similar to the case of American Samoa discussed earlier.

The importance of oral facility in the language before learning to read in that language has also been demonstrated in a well-controlled experiment by Chu-Chang (1976). In a study of Cantonese speaking children learning to read Mandarin, she found that reading is dependent on an existing oral language repertoire, lending support to other studies that found reading achievement in monolingual children to be related to oral language proficiency. Chu-Chang thus states that even in a logographic language like Chinese, where one might expect meaning to be directly accessible from the visual image, reading involves the mapping of visual representation of the written language into an oral language storage. Viwed from this perspective, one can better appreciate the difference in the child's preparedness in learning to read L_1 and an unfamiliar L_2 on entering school.

How then do we explain the greater ease in learning L_2 by children above the age of ten who enter on L_2 school without oral proficiency in L_2? The child who starts schooling in L_2 is prevented the continued use of L_1 just at the time abstract thinking is beginning to develop through the use of language. In contrast, the child who started schooling in L_1 and transfers to an L_2 school after the age of ten has already developed reading and cognitive skills in L_1 to be able to handle abstract thinking. In other words, if the stage of cognitive development is sufficently advanced, reading and other cognitive skills can be transferred.

Cummins (1979a) thus proposes a developmental interdependency hypothesis: "the level of L_2 competence which a bilingual child attains is partially a function of the type of competence the child has developed in L_1 at the time when intensive exposure to L_2 begins" (p. 233). In his later articles, Cummins clarifies the concept of language proficiency and distinguishes between (1) basic interpersonal communicative skills (BICS), such as accent, oral fluency, and sociolinguistic competence, and (2) cognitive/academic language proficiency (CALP) (1980a and b). He states that BICS in the L_1 context is largely independent of literacy-related language skills, pointing out that everybody except severely retarded and autistic children acquires BICS regardless of academic aptitude. On the other hand, CALP is strongly related to general intellectual ability.

He points out that what is easily acquired in L_2 by young immigrant children is BICS. Thus high expectations in school performance based solely on BICS in L_2 can meet with surprise; oral language fluency and cognitive ability must be distinguished. This was so in the Skutnabb-Kangas and Toukomaa study (1976) where Finnish immigrant children's fluency in Swedish as judged by themselves, their parents and teachers, turned out to be a surface fluency unrelated to their poor performance in CALP measures in both Finnish and Swedish (Cummins, 1980b). Cummins thus states, "Because L_1 and L_2 CALP are manifestations of the same underlying dimension, previous learning of literacy-related functions of language (L_1) will predict future learning of these functions (in L_2)" (1980a, p. 179). Reviewing many studies and reinterpreting the data of the Wright and Ramsey study (1970), also Ramsey Wright, 1972, 1974) of over 1200 immigrant students in Toronto, he concludes "older L_2 learners, whose L_1 CALP is better developed, manifest L_2 cognitive/academic proficiency more rapidly than younger learners because it already exists in the L_1 and is therefore available for use in the new context" (1980a, p. 184).

While in general agreement with Cummins, I would like to add another explanatory factor to the stage of cognitive development he

emphasizes--namely the child's knowledge of his own abilities. Children who transfer to an L_2 school after having done satisfactory level work in an L_1 school knows their abilities. They are likely to be able to take a temporary setback without losing confidence in himself. In contrast, children who move to an L_2 community just as they are entering school find their first schooling experience in L_2 confusing and their reading experience nonsensical. Not having established any prior knowledge about their abilities, they may prematurely resign themselves to the idea that "school is not for me." That is exactly what happened to one of my children who had been extremely verbal in L_1 (Japanese), when he entered an L_2 (English) school. It took years to change the child's self-concept in the positive direction. I myself, on the other hand, was fortunate enough in having had four years of schooling in L_1 (German) before transferring to an L_2 (Japanese) school. Without any oral facility in L_2--not to speak of orthography--it took two years before I could fully comprehend what was going on in class. Despite the teasing, harrassment and embarrassment I was subjected to, I knew all along that someday I would catch up with the rest. Thus the psychological factor of "knowing one's abilities" affects the attitude, motivation and expectations in learning to read L_2 and learning academic subject mattres via L_2.

From all the preceding discussion on the varying effects on learning to read in L_2 depending on the age in which the sudden shift in language occurs, it seems rather apparent that if the child is not yet fluent in speaking L_2 when entering school, the first grade instruction should be in L_1. This is the position UNESCO took in 1953, recommending the use of vernacular languages in beginning education (UNESCO, 1953). Bull (1955) in his review of the UNESCO publication, however, pointed out the practical and political issues, particularly in countries with numerous coexisting languages, such as Indonesia and the Belgian Congo (Zaire) with some two hundred languages each. He thus states, "What is best for the child psychologically and pedagogically may not be what is best for the adult socially, economically, or politically . . .," and, "while getting educated is a personal matter, in contrast, providing a modern education

is a social enterprise" (p. 290). UNESCO also came to recognize this problem as a result of its Experimental Literacy Projects, and modified its recommendations as follows:

> Literacy work in mother tongues is in principle more effective and better reflects the reality of national cultures. It does, however, raise problems in certain countries (untranscribed languages, a gap between the written and spoken word, numerous ethno-linguistic groups, lack of instructors and books, costs, etc.), and such problems should be taken into account. Linguistic research is necessary to improve the efficiency of literacy (dictionaries, vocabularies, grammars, literature for new literates) (UNESCO, 1976, pp. 192-193).

Currently in the U.S., those who hold the position that non-English speaking children should start their education in English, or the L_2-over-L_1 position, are anxious minority group parents and practitioners who would like to see their children get started in the dominant language (as was the case in American Samoa), or some minority group leaders who see the use of vernacular as a means of repression or segregation. There are also some researchers, namely Tucker and Lambart, who hold this L_2-over-L_1 position with regard to non-minority group children.

Lambert and Tucker carried out the successful St. Lambert experiment (Lambert & Tucker, 1972), and Tucker was additionally involved in an alternate-days bilingual experiment in the Philippines (Tucker, Otanes & Sibayan, 1970). In the St. Lambert experiment, middle-class English speaking children in Montreal were instructed in French from kindergarten up, and even though they received no English instruction except in English Language Arts, they were able to read as well in English when compared to English school control children, and yet came close to native speakers in their French by the end of primary school (Lambert & Tucker, 1972; MacNamara, Svarc & Horner, 1976).

As a result of this successful experiment, both Lambert and Tucker take the position that majority group children might start schooling in L_2 while minority group children should be encouraged to receive schooling in

L_1. The reasons for the position they take are slightly different. Tucker emphasizes the home and school environments in making the choice between L_1 and L_2. Schooling in L_1 is desirable "where the home language is denigrated by the community at large, where many teachers are not members of the same ethnic group as the pupil and are insensitive to their values and traditions, where there does not exist a pressure within the home to encourage literacy and language maintenance, and where universal primary education is not a reality" (1977, p. 39). On the other hand, where the home language is valued, and where the family background insures the child's success, he considers the choice of L_2 for initial schooling fully appropriate. Lambert takes a more socio-philosophical orientation and feels that the language more likely to be overlooked in a bilingual community should be the language of schooling (Lambert, 1978). This means that for the minorty group children it is their L_1, while for the majority group children their L_2, although the same language is involved in both instances. He maintains that "In this way trends toward subtractive forms of bilingualism or biculturalism can be transformed into additive ones" (1978, p. 226). By "subtractive" form of bilingualism, Lambert refers to the gradual loss of "the ethnic language and its associated cultural accompaniments, and its replacement with another" (1978, p. 218) which frequently occurs with many ethnic minority groups. In contrast, the "additive" form refers to adding the second language while maintaining the first language.

Even though Lambert's recommendation is carefully qualified, extreme caution is desirable in adopting it. Neither Lambert nor Tucker make any reference to the close linguistic relationship between French and English. Can similar results be expected if the linguistic relationship is as distant and the orthographies are as different as between English and Chinese? Supppse British children in Hong Kong, also a bilingual community, were to start their scooling in Cantonese in a program exactly like the one at St. Lambert. Would their English vocabulary and complexity of sentences in their compositions increase at the same rate as those who attend British schools? Would they master speaking, reading and

writing in Cantonese without Cantonese speaking classmates to model after or interact with in a segregated school as was the case at St. Lambert? It is doubtful whether these students would reach the level of competence of monolinguals in both Cantonese and English even if the program is as carefully planned and the school staffed with as enthusiastic and devoted teachers as those at St. Lambert.

Literacy, Schooling, and Age in Broader Perspective. It was mentioned in the preceding section that the ages of six to eight represent a period in cognitive development when abstract thinking is beginning to evolve. This point needs further examination. Does abstract thinking evolve at this stage automatically due to neurophysiological development, or is it because children get exposed to written language in school? Most of the theories on cognitive development were established in the West based on observations and experimentations with children in the West. During the past two decades, a large number of cross-cultural experiments on cognition were carried out in non-Western societies by Western social scientists. Reviewing past theories on the "primitive mind" and the recent experiments, Cole and Scribner (1974) point to the conceptual and methodological problems of these studies, which make it difficult to arrive at some conclusive summary of findings. They maintain that cognition should not be conceived of in terms of capacities or properties or characteristics, but rather in terms of processes or operations, and that "we are unlikely to find cultural differences in basic component cognitive processes" (p. 193). They note that learning in these non-Western traditional societies is by observation, and teaching by demonstration, without reliance on verbal explanations. Children in such societies rarely ask why questions because "so much of the child's learning occurs in real-life situations where the meaning is intrinsic to the context" (p. 177). They thus hupothesize two cognitive consequences of a reliance on learning by observation: 1) people with a great deal of experience in learning by observation will learn quickly if given the opportunity to learn by observing; and 2) these same people will encounter difficulties in a teaching or learning situation where the teacher and

student are not engaged in a common, ongoing activity. They also note that the population within a single traditional, non-technical culture does not constitute a homogeneous mass; and that comparisons of groups within the same culture are likely to provide more insightful information than intergroup comparison. In studies where such comparisons of groups within the same culture were made, the consistent finding was that social contact with urbanized people and attendance at Western-type schools seem to bring the responses closer to those found by children in the West. Apparently number of years of educational experience played a far more important role than chronological age.

Cole and Scribner's work has many implications for our current concern. First, it suggests that it is education, or the use of language in school, that stimulates the development of abstract thinking in children. Thus grade level appears to be a better index than age in discussing when the child should be introduced to L_2. Second, it brings to the fore one of the reasons for difficulties in school learning by children coming from non-Western traditional societies. Third, it forces us to examine the rural-urban differences in relation to cognitive skills. All three points can be considered to be interrelated through a common core problem which I will tentatively refer to as language for impersonal communication.

The functions of language have generally been dichotomized to interpersonal communication and communication of ideas through writing, variously referred to as speech and written language (Smith, 1977); utterance where the interpersonal function is primary and text where the logical or ideational function is primary (Olson, 1977); or the skills related to the use of these as basic interpersonal communication skills (BICS) and cognitive/academic language proficiency (CALP) (Cummins, 1980a and b). It may be well worth considering a third intermediate category, which might be called impersonal speech. In a face-to-face conversation between well-acquainted individuals, the likely situation in almost all communication among villagers in traditional societies, there is maximum

reliance on shared knowledge of the immediate environment--people, events, geography, customs, etc. In contrast, impersonal speech, which takes place between unacquainted people, makes assumptions on some shared knowledge of the wider world, but not of any particularistic knowledge, and thus has to be full and precise. Giving directions to get to a certain place, or providing information in response to a stranger's question are examples of impersonal speech. The language used in audio mass media is another example. Impersonal speech in many ways resembles written language, which Vygotsky (1962) characterizes as follows:

> Communication in writing relies on the formal meaning of words and requires a much greater number of words than oral speech to convey the same idea. It is addressed to an absent person who rarely has in mind the same subject as the writer. Therefore it must be fully deployed; syntactic differentiation is at a maximum; and expressions are used that would seem unnatural in conversation (p. 142).

Because of the closeness of impersonal speech to written language, it may be safely assumed that a child who has had active exposure to impersonal speech is likely to find a smaller gap between conversational speech and textual language than the child who has not been exposed to it at all. The chance for exposure obviously is far greater in urban than rural areas. In non-literate traditional societies, leaders in the community and those who engage in trade with outsiders are likely to be exposed more to this type of impersonal speech than others. This may partly explain the consistent urban-rural differences found in studies in the West as well as in non-literate traditional societies.

The relationship between literacy and impersonal speech was substantiated in a study by Scribner and Cole (1978) in which they tried to isolate the effects of literacy from those of schooling. They tested more than 700 Vai adults in Liberia on a number of cognitive tasks, including sorting and verbal reasoning tasks which had been suggested as especially sensitive to literacy. The Vai have their own syllabic writing system invented about 150 years ago, which has been passed down to the present generation without schooling or professional teachers. According

to the researchers' observation, between 20 and 25 percent of Vai men were literate in the Vai script. The results supported previous research findings in that "improved performance was associated with years of formal schooling, but literacy in Vai script did not substitute for schooling. Vai literates were not significantly different from non-literates on any of these cognitive measures" (p. 453). Since the most common use of the Vai script was letter-writing, which in order to be effective, requires sensitivity to the information needs of the addresee, Scribner and Cole subsequently tested the Vai in a communication task. Individuals were taught without much verbal explanation to play a simple board game and were asked later to explain the game in the absence of game materials to a listener unfamiliar with it. They were also asked to dictate a letter explaining the game to a distant addresee who had never seen the game. It was found that men literate in the Vai script were far superior to non-literates in providing game-related information and describing the materials used in the game in both face-to-face explanation and the dicated letter. The researchers conclude that specific uses of literacy promote specific skills. In the case of the Vai, literacy practices through letter writing promoted skills closely related to those practices, namely information-providing communication in speech (impersonal speech) and writing, but they did not generalize to competencies in abstraction, verbal reasoning or metalinguistic skills. The authors suggest that practice in critical analysis of text, rote learning, or poetry writing should have different consequences for language skills, and that the more complex the technology of any society becomes, the greater the number and variety of tasks to which literacy skills will be applied.

The Vai study above proves the similarity of impersonal speech to written text. I will therefore categorize them together under the term impersonal communication. Formal education in Western-type schools introduces the child to impersonal communication and promotes his cognitive skills through the medium of impersonal communication. The language the teacher uses to address the whole class as well as the spoken responses expected of the student are in the form of impersonal speech..

The first school experience for the child, who has been used to context dependent personal speech up to that time, therefore represents a big jump in the use of language alone, not to mention all the other firsts. When the first formal exposure to impersonal communication is in an unfamiliar L_2, the difficulties the child encounters are immense. It is much more difficult to guess and learn the meaning of words and utterances used in impersonal communication than in personal interaction where the context supplies the clues. The child could even develop a habit of not attending to what the teacher says because it is meaningless to him, and delay the catching up process, which in turn can affect his later academic progress.

Literacy is applied to promote increasingly varied cognitive skills and to discuss matters of an abstract nature, distant from the here and now, as the child advances in grades. Children who transfer into an L_2 school in upper grades confront impersonal communication to a far greater extent. They are, however, better able to guess the meaning of words and sentences on abstract subject matters based on their knowledge acquired through L_1. In other words, their previously acquired knowledge serves as context. They know their abilities and if they have done reasonably well in his L_1 school, they will apply their study habits without easily giving up. Under this assumption, the higher the grade level at the time of transfer to an L_2 school, the less time it should take children to catch up because they have more knowledge to serve as context and more skills to transfer. This is exactly what Cummins (1980a) found, namely that the older children took less time to reach the grade norm level. These were immigrant children from various countries in Canada, hence L_2 was English for all of them. Whether the same results would be obtained if the L_2 is Chinese or Japanese, requiring the learning of logographic characters, needs yet to be examined.

Based on all the discussion so far, the desirable grade level at which to transfer to an L_2 school appears to be after the child had acquired some degree of literacy and familiarity with impersonal communication in L_1, at the earliest in grade two, preferrably later.

Starting in L_2 at grade one should be avoided unless the child has already acquired oral fluency in L_2 by then. If the family changes residence just as the child is to enter grade one, and there is no school available in the child's L_1, it may be best to put the child in kindergarten. The delay of formal education by one year may be far less damaging than letting the child fail in his first year of schooling with possible long range consequences.

Socio-Cultural Effects of Biliteracy. The preceding discussion pointed out conditions that hinder or facilitate the learning of reading in L_2. In the context of current interest in bilingual education, the disucssion had its focus on children. Biliteracy can also be attained by the study of L_2 in secondary school or college. To become bilingual, biliterate and bicultural, however, usually requires residence in a culture where the language is actively used.

The individual who grew up monolingually and who later becomes a bilingual through the study of L_2 as an academic subject in high school or college, or even study abroad, is proud of the additional language capability. The study of L_2 is usually an option that can be dropped anytime. The immigrant child, on the other hand, is under pressure at home as well as in school, to catch up in L_2 which is essential for his survival in the new society. Immigrant children are likely to feel self-conscious and inferior to their classmates until they reach the level of the class or grade norm. According to Cummins (1980b) it takes at least five years for children to approach grade norms in L_2 CALP if they immigrate at age six or later and if there is a concentration of people belonging to the ethnic group in the area. This means that for about five years, the child is going through an adjustment to the second culture (C_2) and L_2 while continuing to function in his C_1 and L_1 at home. The emotional conflict experienced with regard to values, identity and self-concept during this period can be particularly strong for the Asian/Pacific child because of the greater differences in value systems, and because of his physical difference. If the environment is not

tolerant and accepting, the child may come to suppress or reject personal characteristics that are not acceptable to the majority society and develop serious identity problems.

Even if the child does not experience serious emotional conflicts, by the time he has caught up with the grade norm, it is likely that L_2 has replaced L_1 as the child's dominant language. The gradual loss or weakening of L_1 in the process of becoming fluent in L_2 seems to be accepted with resignation by parents and teachers alike, since the subtractive form of bilingual education appears to be the norm, the additive form being more or less a theoretical ideal. The latter may be possible in French-English bilingual education in settings like Montreal, and possibly in cases where L_1 is essentially an oral language without a written tradition. However, in the case of an Asian language with its own orthography and literal tradition, it is extremely difficult, at least under prevailing conditions today, to go beyond maintenance of L_1 at the BICS level as the child progresses in L_2 to upper grades in the secondary school. The child's vocabulary and literacy in L_1 could well lag far behind those of L_2.

To acquire biliteracy that is fairly well balanced in English and an Asian language, particularly an East Asian language, may require a process of alternating periods of concentration in one of the two languages rather than maintaining a balanced degree of bilingualism and biliteracy throughout one's schooling.* It may mean after mastery of L_2, devoting some time to concentrated study of L_1 to bring it up to the level of L_2.

*I am not saying that progressing to upper grades of high school while maintaining balanced biliteracy is impossible; I am just saying that it is unrealistic today. There are second generation Japanese-American community leaders in Hawaii who did achieve it when they attended school more than fifty years ago. They graduated from a public American high school and a private afternoon Japanese language high school at the same time, being highly literate in both languages. They had several years of Latin besides science and mathematics, at the American high school which prepared them well for college education on the mainland U.S.A., while they received the equivalent of a Japanese high school education, including Japanese history, geography and literature, at their Japanese school which held classes in later afternoons and on Saturdays.

Paulston (1977) in examining the relationship between bilingual education programs and students' self-concept concludes that "bilingually-taught children showed self-concepts as positive as--and, more often, more positive than--monolingually-instructed pupils" (p. 123). Studies that measured students' bicultural attitudes also found them to be more positive than earlier after two-to-three years of bilingual instruction. An Asian/Pacific person in an English-speaking country is all the more likely to have a more positive self-concept and identify if bilingual and biliterate than if monolingual. Being biliterate means having gone through an arduous process to become so, and the cognitive theory of dissonance (Festinger, 1957) would predict that a state thus achieved will not be taken lightly. The biliterate ethnic-minority person, more than a monoliterate bilingual, is likely to accept a dual identity and not reject either of the two cultures. Such persons will be proud rather than ashamed of their ethnic heritage, being more aware of the cultural history and literary tradition of their land of ancestry. Such a person can serve as the link, the translator-interpreter between the two peoples. It is exactly individuals with these abilities who are in increasing demand in this interdependent world.

Are only the people, communities and agencies served to benefit from this biliteracy? What benefits accrue to the person individually? The theory of perceptual learning suggests that perception, through its selectivity, becomes economical. Living in one culture and speaking and reading only one language results in one's perception becoming so efficient and so economically tuned in to the salient features of that culture (C_1) and language (L_1) as to habitually screen out a host of things not important in C_1 or L_1. What is unimportant or irrelevant in C_1 or L_1 may, however, be a distinctive feature in C_2 or L_2. Thus, the strong, efficient habits acquired from growing up in C_1 and using L_1 have the effect of limiting one's perception, resulting in what I refer to as

"cultural delimitation" elsewhere (Sikkema and Niyekawa-Howard, 1977, p. 25). Tzeng (1981) also suggests there is some linguistic determinism because different orthographies impose different task-demands on their readers. It is, therefore, in learning a completely different culture and language that the strong habit of selectively focusing on C_1L_1 features and ignoring others is forced to be broken. This type of learning is qualitatively different from the usual type of learning that takes place in school. Advancement in education within one's own culture in general involves specialization, or finer perceptual discrimination of what was an undifferentiated whole before. Learning a dissimilar culture, such as an Asian learning a Western culture or vice versa, means not simply learning to make finer discriminations in a formerly undifferentiated area, but ignoring the system of distinctive features used in the first language and culture and learning to make discrimination along a new set of distinctive features organized in a different way. Foa and Chermers (1967) also point out this difference in role behavior differentiation when they state that socialization involves learning to differentiate, while acculturation requires both increase in differentiation and also the forgetting of certain previously learned differentiations. Where such unlearning is required, the learning of a new discrimination implies the learning of a new system of discrimination, and thus involves cognitive reorganization. The ease with which one can engage in cognitive reorganization is related to cognitive flexibility and creativity, and, in fact bilinguals have been found to be more cognitively flexible than monolinguals in a number of studies (Ben-Zeev, 1977; Peal & Lambert, 1962; Scott cited in Lambert, 1978).

The flexibility of being biliterate, bilingual and bicultural is not limited to the cognitive domain, but extends to general attitude as well. The knowledge that items categorized as "same" in L_1 get classified into distinctly different groups in L_2* or that what is valued in C_1 may not be

*For instance, "cold" in "The wind is cold" and "The ice is cold" is differentiated as 寒 and 冷 in Chinese and Japanese.

valued in C_2 leads to the realization of cultural relativity. The monolingual, monocultural person may assume that the values and behaviors of one's culture are universally shared by all human beings. In contrast, a bilingual, bicultural person, being aware of subtle differences in the two cultures s/he is familiar with, is less likely to be culture blind. This awareness of the relative nature of cultural values seems to make it easier for a bilingual, bicultural person to understand and learn a third and fourth language and culture. In a non-hostile environment, there appears to be a biproduct to having mastered two or more languages and cultures. It is the mental capacity to deal with the ambiguous, the unstructured with less anxiety and greater openness (Niyekawa-Howard, 1970; Sikkema & Niyekawa-Howard, 1977). In other words, the biliterate, bilingual, bicultural person, especially in two divergent languages and cultures like the Western and Asian/Pacific, not only has broadened his/her intellenctual horizon, but also has the potential of growing personally to be a more open and flexible person.

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