

The Role of the Age Factor in Preserving the
First Language

By

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1.1- Introduction:

This research investigates the role of the age factor, the age of arrival and period of stay in the host community of the first language attrition, especially in the phonological domain. Therefore, the bilingual participants hired for the study are divided into two groups, namely, children bilingual group and adults' bilingual group. The former immigrated to the UK at the ages varying from five to nine, and the latter immigrated to the UK at the ages varying from nineteen to twenty four in order to precisely measure the level of attrition among both population. It also demonstrates whether the critical period hypothesis is valid. The full definitions of the arrival age and the period of stay in the L2 setting are given. Additionally, they are supported with case studies.

Key Words: Critical Period Hypothesis, Age of Arrival, Period of Stay, L1 Phonological Attrition.

2.1- The Age Factor:

The age factor is considered as one of the main variables in L1 attrition/preservation, having a strong influence in terms of the depth, the pace and the extent of its impacts (De Leeuw, 2008). The influence of maturation on erosion is found, differentiating between adults and children initiation bilinguals, and between consequential and simultaneous children initiation bilinguals (Montrul, 2008). It is observed by Bylund (2009) that few researchers have made a comparison between children and adults in a direct way. Hence, the comparison has commonly been done between several variant case studies, each of which dealing with children or adults. Of course this causes some methodological apprehensions, because of contradictory test techniques and instruments. Notwithstanding, the studies performed in such domain yet suggest the impacts of maturation on the tendency of erosion, relying on the L2 initiation with regard to the L1. Another hurdle in methodology is the fact that a bilingual speaker's initiation age and the age at which the person is moved to the L2 setting usually synchronize (if the person is not previously born in the community where the L2 is utilized), therefore making it hard or even impossible to differentiate between these two elements.

Considering age as one of the decisive factors of language alteration, researches are split into three classifications: studies of language in the elderly, in adults and in children. Furthermore, these classifications determine three key phases of language improvement. In children, the erosion of language is deemed the most serious one (Köpke, 2007). Children who are exposed to an L2 becoming predominant in the social community and the school will show the fastest pace in suffering from the loss of the skills of L1 (Bolonyai, 1999). Ecke (2004) believes that some children relinquish their L1 entirely and substitute it with the L2. The proof yet might appear to assume that L1 erosion among adults and older children varies from the process of L1 erosion among pre-pubescence children (Kaufman, 1991). Conversely, another potential is that the remarkably greater depth and rate of attrition in children made seemed as if the attrition in children was a divergent operation from the attrition in adults, as in adults erosion does not influence the system of linguistics to the same range as it does in children. It has to be heard in our mind that the divergences discovered between the two set might be variations not in kind, but in degree (Kaufman, 1991). Kaufman's suggestion might

be reinforced more significantly, if it were discovered that the erosion of a wide extent of features of linguistics were evidenced in a different way (i.e., showed qualitatively divergent erosion styles) in adults and children, not unambiguously that similar characteristics attriting in children do not erode in adults or do so to a lesser range. Although intriguing the examination of L1 erosion among children is controversial, due to the variations of processing of language between child and adult (De leeuw, 2008). In the study at hand, L1 attrition in children and adults will be discussed in order to portray the difference of the attritional levels among the two populations.

In addition, researches on late and early bilingual speakers often show the influence of age on the efficiency of L1 (Yeno-Komshian et.al, 2000 for pronunciation). Moreover, several research studies have examined the studies of language erosion on adults, and little overall erosion is discovered in the population whose ages vary from 20 to 60 (De Bot et.al., 1991). Conversely, the aged population whose ages are 65 and over demonstrate reduced language capabilities.

2.2- The Critical Period Hypothesis (CPH):

In order to grasp the importance of the age factor in the erosion of L1, it has to be clarified in light of the Critical Period Hypothesis (CPH). Ever since Lenneberg (1967) formulated the CPH, one of the key interests in the Second Language Acquisition (SLA) field has been to illustrate the different efficiency levels which have been found in the learners of L2 with regard to different ages of initiation of acquisition. Lenneberg (1967) affirms the role of maturation of biology by relating the offset of the CP to the accomplishment of lateralization of cerebrum for language to the left hemisphere, and to adaptation and deficiency loss for reorganization in cerebrum. Endorsement for this supposition comes from reports of luckily very scarce occurrences in which persons under disastrous conditions are fully secluded from the linguistic input of L1 from early childhood or even birth (for example, “Genie” and “Chelsea” cases, see Hyltenstam and Abrahamsson, 2003a). When a child is supplied with the motive of linguistics later (for instance, after the pubescence’s initiation/beginning), such persons never attain usual dominance of their L1. In contrast, other assumptions are raised concerning the upper border of critical/sensitive period for the acquisition of L1. In addition, it is postulated by Ruben (1997) that

there is a CP for each linguistic domain of a language (i.e. for phonology, semantics and morphosyntax) (Seliger, 1978).

The earliest specialty is the phonological domain, with a bordering of discrimination of phoneme by the offset of the first year of life. Ruben's (1997) postulation of a time period of increased acoustic sensitiveness coming to a termination at 12 month age, so suits duly into the noticed pattern in the early improvement of L1 acoustic classifications.

According to the experimental evidence from studies on the acquisition of L1, it is a significantly/extensively argued matter whether these hypotheses of one or many CPs may also apply to SLA. In light of the view of maturation introduced by Lenneberg (1967), many researches assume the decisive age for fruitful attainment of L2 to be around pubescence of adolescence (see Scovel, 1969 for phonology). On the other hand, other scholars presume that lower ages (for example, 6 or 7 years) frame the upper border for attaining native-like levels in L2 efficiency (for example, for phonology see Flege et al., 1995a).

Particularly, they presumed the presence of a period terminating around age nine, during such period a serious erosion might take place (Köpke, 2004). Köpke and Schmid connected their debate to Sensitive Period Hypothesis (SPH) in the acquisition of L2 with regard to Harley and Wang (1997) who assumed that in the attritional case, the SPH could mean/denote that it is easy for children to acquire L2, but as a result of exposing to L2, they will forget their L1. In addition to concerning to the research of L1 erosion and the debate of Harley and Wang (1997) on SPs, it is also referred by Köpke and Schmid to the outcomes of Olshtain (1989) on the erosion of English as an L2 in bilingual child whose L1 is Hebrew, that reportedly endorsed the notion of an age border around 9. Despite the fact that variation between the erosion of L1 and L2 (Van Els, 1986) has lately been impeached (De Bot, 2002), one might have doubts about the range to which age results on the erosion of L2 could be generalized to the context of L1 erosion.

In L2 acquisition literature, it is more than adroitly showed that in terms of ultimate attainment, children outperform adults (Abrahamsson & Hyltenstam, 2009). However, disagreement has become apparent as to where to set the limit of age after which the

nativelikeness of L2 is not attained. Whilst the earliest form of the CPH supposed that such limit of age is around pubescence. Later on studies have either declined the age limit by assuming that the age of six as the initiation of reduction (Johnson & Abrahamsson, 2003) or impeached whether L2 native-like efficiency is likely at all (Hyltenstam & Abrahamsson, 2003). Hyltenstam and Abrahamsson (2000) presume that the varying explanations of the limit of age for nativelikeness in L2 have appeared as a result of scholars utilizing divergent conceptualizations and methodologies of the nativeness concepts and CP.

Similar to the argument of the CPH in L2 acquisition, recent studies on the attrition of L1 has exhibited converging proof which indicates that the language system in children is attrited quickly and deeply (Yukawa, 1997), while the attrition of adults' language system is far less important (Scherag et al., 2004). In light of these results, the scholars of L1 erosion have begun formulating suppositions about the role of the factors of maturation in the process of erosion. As in the L2 acquisition case, the variation noticed between adults and children have raised conjectures about a specific limit of age which governs the result of the declined utilization of/ contact with L1. Scholars have tendency to link their results with/ to the accounts of CPH existed in L2 acquisition field (De leeuw, 2009).

This research will postulate the perspective of maturation in explaining the differences related to age in L1 erosion. Considering that the constraints of maturation are extremely approved in human improved events (Bornstein, 1987), it is disseminated frequently that the account of maturation of the capability of language has to represent the default illustration (Hyltenstam & Abrahamsson, 2003). Till now, the initiating point for debates on the effects of maturation in erosion has been that the flexibility loss in the processing system of language not only makes the achievement of nativelikeness more complicated (e.g., Dekeyser & Larsen-Hall, 2005), but also renders language efficiency acquired more reluctant to attrition (Köpke and Schmid, 2004). Individuals' efficiency levels in the L1 are also specified by the skills of cognition: studies have demonstrated that the plasticity of brain of children leads to a rapid and much more intense attrition of L1 after a decline in the L1 inputs (Pallier, 2007). On the other hand, after puberty, the preservation of L1 is possibly to take place even after several years of L2 utilization, though attritional

signs and the phenomena of contact with other language might manifest. For adults' immigrants, Schmid and De Bot (2004) assured that there is no experimental proof that the divergent time lapses since immigration have specific impacts on L1.

2.3- The Arrival Age (AA):

The age during which an individual moves from the L1 community and is stayed in a permanent way in the L2 setting is believed to be a significant factor to erosion, since this period commonly shapes an essential break in the individual's linguistic stance – less if any exposure to the mother tongue is available, whereas the utilization of L2 rises commonly significantly. Schmid and Keijzer (2009) term this period “age of arrival”, whilst other scholars use terms such as “age of reduced L1 contact” (Bylund, 2009) and “age of departure” (Schmid, 2002, 2007). The term that will be used in this research is the Arrival Age (AA). Studies have frequently revealed that AA is a highly essential predictor variable for the result of erosion (Bylund, 2009a).

Comparisons between children and adults suffering from attrition have demonstrated that children linguistic system is highly impacted to a higher degree that the linguistic system in adults. In essence, whilst erosion in adults is mostly detained to explicit restrictions in retrieval of vocabulary (Olshtain & Barzilay, 1991) and deviations in the order of words (Schmid, 2002), the mother tongue in children is greatly influenced to cover. For instance, deficiencies concerning to pronunciation (Yeni-Komshian et.al, 2000).

Such results have led to the general perspective that “the younger the child is when the language of her environment changes, the faster and deeper she will attrite” (Köpke and Schmid, 2004, p. 10). In other words, when an individual moves from the L1 community to the L2 setting during early childhood, his/her L1 will severely, quickly and deeply attrite.

The AA role in the L2 setting has particularly been examined in Pallier et al. (2003), examining the patterns of brain activation to Korean children who were adopted by French families and were examined in their mid-20s. The findings, likely astonishingly, revealed that when the adoptees were exposed to the phonetic input

of Korean, the subjects did not vary from the French control group in the patterns of cerebrum activation.

Conversely, according to the data collected by Bylund (2009a) on the patterns of conception of L1 goal-oriented movement in bilingual speakers (Spanish- Swedish) and by Yeni-Komshian et al. (2000) on the efficiency of pronunciation in the native speakers of Korean whose L2 are English, it might be assumed that the main alteration in erosion susceptibility occurs at the initiation of pubescence, or to be more accurate, at 12 age. Other researchers who have examined the erosion of L1 in bilingual speakers who have been situated in the environment of L2 during adulthood, but, report on unimportant impacts of AA on the attrition of L1 (Schmid, 2002). Such outcomes support the belief that AA is a foreseeable element of the preservation/attrition of L1, mainly in bilingual interlocutors leaving their L1 community before the age of twelve. However, for those who leave their L1 setting after the age of twelve, the preservation of L1 stays high to some extent even after several years of habitation in the community of L2.

In the previous subsection, the reviewed studies demonstrate that the function of age is clearly effective in erosion of L1, such that in children, the system of language erodes greatly and quickly in comparison with adult bilingual interlocutors particularly as was noticed in research which covered later and early attriters. There appears to be a key alteration in erosion susceptibility occurring approximately at age twelve. In fact this result comes from variant researches which have examined divergent areas of linguistics (e.g., pronunciation, grammatical intention, event conceptualization, and contrasts of TMA) have not to be viewed as a deficiency. However, age twelve seems to be evenly significant for the preservation of a diversity of features of linguistics and reinforces the notion that such age symbolizes a main alteration in erosion susceptibility. Additionally, a related notice for such explanation could be made: Age twelve appears to play an essential role for features preservation being gained at divergent ages. For example, the patterns of event conceptualization are gained after the age of ten (Sebastian & Slobin, 1994), but the phonological features are gained earlier, commonly around age of four. Nonetheless, some researchers such as (Yeni-komshian et al., 2000) assume that a divide between attrition and preservation is represented by age twelve. This could presume that

the period during which a given domain has been efficiently acquired in a native like level is of less significance for its maintenance than the age at which the contact with L1 is declined (i.e., after or before the age of twelve).

2.3.1- Cases Studies of Age and Age of Initiation:

The first of these studies is the study of Yukawa (1997; 1998). Yukawa (1997) reported on 3 longitudinal studies of the erosion and processes retrieval in 2 young bilingual interlocutors (one of these children was examined two times on variant events) at the ages of three years and ten months, five years and five months, and the age of seven. In this research a common notice which was made that erosion was most obviously appeared in processing onerousness which led to a huge decline in pronunciation. In contrast, the process of understanding stayed intact through the periods of erosion (Yukawa, 1997). Moreover, the data revealed that the depth of attrition and the rate of retrieval were linked to the AA of the subjects; more precisely, the extreme erosion and slower regaining of the knowledge which is eroded correlated with lower AA. This would be distinctly noticed in the subjects with AA seven years, whose rate retrieval and degree of erosion were remarkably faster and lower than subjects mentioned in the other 2 cases.

Two researches on L1 erosion of child bring drawing attention are the investigations of Ventureyra et al., (2004) and Pallier et al., (2003) on international adopted children. Given that as opposed to immigrant children, in the adopted children, contact with L1 is stopped in an effective way. Researches on such group have the possibility of offering worthy data over the course to which a language might erode when the contact with L1 is declined to zero and on the role that AA performs in such process. The subjects of Ventureyra et al. and Pallier et al. studies moved from South Korea to France between the ages of three and nine, and three and eight, consecutively, and at the time of examining, their age of chronology was about twenty five years. By utilizing functional magnetic resonance imaging (fMRI), Pallier et al. (2003) tested the patterns of brain activation in the adopted children when exposed caustically to their L1 (Korean) and L2 (French), among other languages. The outcome presumed that during the exposure to L1, there was no divergence in the patterns of brain activation between the control group and the subjects. Ventureyra et al. (2004) examined the ability

of the subjects to distinguish variant classes of voiceless plosives of Korean and didn't find variations between the performance of the subjects and that of a control group. Accordingly, it was debated that the early exposure to L1 appeared to have no merits in the tasks of discrimination in favor of the subjects. A part from the assessments of L1, notices which were informal were performed that the subjects appeared to have achieved native like efficiency in L2. Such results drive Ventureyra et al. (2004) and Pallier et al. (2003) to infer that the adopted children in both studies experienced a full acquisition of L2 preceded by total loss of L1.

3.1- Methodology:

The participants in this research are divided into two groups, namely, the children and the adults' bilingual groups. Both of them moved to the UK at the age of five and 19 or more respectively. Their period of stays in the L2 community vary from five years till 24 years. This data was elicited from a sociolinguistic and demographic questionnaires which include questions about the period of stay in, and the age of arrival to the host community.

4.1- Discussion:

4.1.1- The Influence of the Extra-linguistic Variables on the L1 Attrition/Maintenance:

There are many extra-linguistic factors, but this research focuses only on the age factor and the arrival age.

4.1.2- The Age Factor, the Arrival Age and L1 Attrition/Preservation:

The age factor is considered as the main variable in the L1 attrition/maintenance (De Leeuw, 2008). The influence of maturation on attrition is found to differentiate between adults and children (Montrul, 2008). According to Kopke and Schmid (2004), the attrition of L1 is deemed the most serious one among children. In the same vein, Harres (1998), Kaufmann (2001) and Ecke (2004) believe that children relinquish their L1 entirely and substitute it with the L2. However, in this research, the age factor and the Arrival Age (AA) influences do not show any significance. In the bilingual children group, P7 and P8 moved to the UK at the age of eight and nine years respectively, and they had the ability to maintain their L1 on the phonological level.

In the group of bilingual adults, P21, P22, P23 and P24 moved to the host community at the age of seventeen, twenty-five, twenty-nine and twenty-one respectively, and the maintained the phonological aspects of their L1 in a level which is similar to the native speakers of Egyptian Arabic. It can be proposed that the age factor and the AA do not portray the phenomenon of L1 attrition. Such result is in harmony with the study of De Leeuw (2008) who believes that the examination of L1 erosion among children and adults is controversial, due to the variations of processing of language between children and adults.

There are many studies supporting the influence of age on the efficiency of L1 (Bylund, 2009a; Pelc, 2001 and Yeno-komshian et al., 2000). In contrast, the studies which are against the influence of age on the attrition of L1 infer that the erosion of L1 is resulted from an essential break in the individual's linguistic stance (Schmid and Keijzer, 2009; Bylund, 2009; Schmid, 2002; 2007). In other words, in case that the exposure to the L1 is prohibited after moving to the L2, the result will be the erosion of L1 (Stolten, 2013). In the same vein, Hakuta and D'Andrea (1997) presumed that the more commonly the L1 was utilized at home, the higher the results in the tests of language.

Finally, through the results of the VOT of both populations which have been mentioned in chapter four and the discussion part in chapter five, it is obvious that there is no relation between the measurements of the VOT and the age factor, as among the children bilingual group, P6 and P9 results deviate from the results of VOTs of the control group of Egyptian Arabic. In the same vain, among the adults bilingual group, only two participants, namely, P20 and P24 deviate from the results of VOTs of the control group of Egyptian Arabic. However, in case that the number of participants, in the children bilingual group, who deviated from the control group of Egyptian Arabic are higher than the adults bilingual group, it would be clear evidence of the influence of the age factor on the VOT.

4.2- The Impact of the Period of Stay (POS) on the L1 Attrition/Preservations:

The Period of Stay (POS) symbolizes the number of years being spent in the L2 community. In conformity with Purcell & Suter (1980), Flege & Fletcher (1992) and Piske et al. (2001), the POS has

a significant influence on the attrition of L1. When an individual stays for a long time in the host country, it is hard to him/her to maintain access to his/her L1 (Schmid, 2011; Bylund, 2008; Kopke & Schmid, 2004; De Leeuw, 2008). However, in this thesis, such outcome is not confirmed. Among the bilingual children group, P7 and P8 stayed in the L2 community for about twelve years, but they succeeded in maintaining the phonological features of their L1. Additionally, in the group of bilingual adults, P21 stayed in the host community for about eleven years, and P22 and P23 stayed in the L2 environment for about twenty and twelve years respectively, but the three subjects were able to preserve the phonological features of their L1. They were classified by the Arabic judge group as native speakers of Egyptian Arabic on the phonological level. Therefore, the influence of the POS on the attrition of L1 was not observed in the study at hand. Such results agree with many studies, such as the study of Bylund (2009a), De Leeuw et al. (2011), Jaspaert and Kroon (1989), Schmid (2002), Bylund et al. (2010), Hopp and Schmid (2002; 2011), Tsimpli et al. (2004) and Kopke and Schmid (2004). The results of these studies do not support the POS experimentally. In the same vein, Yeni-Korshian et al. (2000) proposes that the POS of Korean subjects who moved to the USA did not have an essential impact on the scores of pronunciation of both L1 and L2. On the other hand, it is inferred by De Bot and Clyne (1994) that the POS in the L2 setting has a greater impact on the maintenance of L1 up to a decade after the break with the environment of L1. In contrast, such assumption is not proved in the study at hand. The minimal POS in the host country was nine years, and the maximum POS was twenty years. In addition, such long POS does not have any influence on the attrition of L1. Among the children and adults bilingual groups, P7, P8, P21, P22 and P23 were able to retain the phonological features of their L1. In conformity with De Bot (1991), the POS might only play an essential role when L1 contact is low. In other words, the amount of L1 contact determines whether the erosion of L1 will be observed or not after a long POS in the host country.

4.3- Conclusion:

In this research, the influence of the age factor and the period of stay in the L2 environment on the L1 attrition/maintenance have been examined. It is obvious that the age factor and the period of the stay in the L2 community do not have any effect on the attrition of L1.

The ages of children bilingual group who moved to the UK were between the age of eight and nine. The ages of the group of bilingual adults varied from the age of seventeen to the age of twenty-five. All participants in this research have stayed in the UK for more than eight years. On the other hand, the attritional phenomenon was noticed among both populations. For instance, among the bilingual children group, P7 and P8 moved to the UK at the age eight and nine respectively and stayed there from about twenty-nine and twelve years respectively. However, they were able to maintain the phonological aspects of their L1. From the group of bilingual adults, P20 moved to the UK at the age of twenty and stayed there for about 13 years. Conversely, His L1 was susceptible to erosion. On the other hand, P21, P22 and P23 migrated to the UK at the ages of seventeen, twenty-five and twenty-nine respectively, and their periods of stay in the UK were eleven, twenty and twelve years respectively. In contrast, they succeeded in preserving their L1 from attrition. Henceforth, it can be proposed that the age factor and the period of stay in the host country do not have any influence on the level of attrition.

5.1- References:

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