The Influence of the Cross-linguistic Factors on First Language erosion

By

Ahmed Abd Elmejid Ahmed

1.1- Introduction:

This research investigates the influence of one of the cross-linguistic factors on first language attrition/maintenance of two bilingual groups moved to the UK. This factor is called the regression hypothesis. The bilingual participants in this research 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. This research initiates with defining the cross-linguistic factors. In addition, it concentrates only on the regression hypothesis in the field of L1 attrition in the L2 community. The regression hypothesis is supported by cases studies. In addition, the methodology used in order to gather the required information is fully explained. Finally, it shows the results and it is fully discussed.

Key Words: Cross-linguistic factors, Regression Hypothesis, First Language Attrition.

2.1- Cross-linguistic factors (interlanguage hypothesis, transfer and interference):

It is assumed by Sharwood Smith and Van Burren (1991) that the alterations occurring in the attrition of the language would be connected to the deficiency of pertinent information. This is because it is generally proposed that adults' L1 are normally constant in comparison with interlanguages or improving systems of L1, being distinguished as usually unsteady. It would seem from this supposition that when the L1 is fully acquired during childhood without exposing to another language till adulthood, the L1 will be stabilized. There is no need for further input. However, why then shall the process of attrition take place? According to Sharwood Smith and Van Buren (1991), there are two apparent reasons; namely, the deprivation of the L1; and cross-linguistic effect from an L2 which is learnt.

According to Jaspaert and Kroon (1992), there are two distinguished operations, namely, an intralinguistic and interlinguistic operations which may affect the attrition of L1 and extensively the acquisition of L2. Seliger and Vago (1991), assumed that the internally and externally induced processes may also influence the attrition of L1 and the acquisition of L2. The first type is stimulated by universal rules or connected to some fact in the specific L1 grammar or in the divergent concepts of forgetting and learning, general cognitive rules of language reorganization. The second kind which is named "interference", "cross-linguistic influence", "transfer" or "convergence" (Seliger & Vago, 1991), the construction/element/ form of L1 is designed in similarity with L2 (ibid.). In order to understand the effect of the cross-linguistic factor in L1 attrition, we have first to clarify this phenomenon and its different types.

Singleton (1987) assumed that transfer was straightforwardly seen as a fact which can possibly create dilemmas for translators and learners of any language for a long time. This comprehension of transfer was general until a center phase was entered by Weinreich and Lado in the 1950s. Transfer was initially tested more neatly than in any former research in their studies languages in contact (Weinreich, 1953) and linguistics across cultures (Lado, 1975). Predominately the study of Weinreich serves as a beneficial point of reference for elevating alteration and constancy in the studies on

transfer (Odlin, 2003). After the World War II, the perspectives of structuralism and behaviorism on the acquisition of language became dominant, triggered the analysis of contrastivism and paid an attention to language transmission. Within the frameworks of structuralism and behaviorism, the comparison between the habits of L1 and L2 led to learning obstacles (Badstübner, 2011). Transmission was generally realized negatively. Conversely, constructive analysis as an anticipator of mistakes in the L2 was scanned and scholars started to doubt the cross-linguistic effect role in the process of learning a language at the beginning of 1970s (Badstübner, 2011). Furthermore, the original recognition of an interlanguage appeared as a result of reduction of the contrastive analysis hypothesis (Fries, 1945; Lado, 1957). Regarding the acquisition of L2, this later hypothesis assumes that when feature of L1 and L2 are equivalent, positive transfer from the first to the second language will occur (Gass & Selinker, 1983, cited in Dechert & Raupach, 1989). However, in case that the languages are divergent, negative transmission from L1 to L2 will take place (Lado, 1957). It can be said that the acquisition of L2 will be more strenuous, if languages are divergent. However, the process of acquiring L2 will be easier, if languages are similar. With regard to the attrition of L1, this can be interpreted as the resemblance would prevent the attrition of L1, but divergence would reinforce it (De Leeuw, 2009). The contrastive analysis predicative force was questioned. This is because the opposite was overwhelmingly happened. It is proposed by Baird (1967) that the odd is overwhelmingly more easily known then the clearly frequent.

In addition, the negative transmission from the acquirers would not often be anticipated via the second language. It was assured by Wode (1981) that some acquirers of L2 showed errors which would not be assigned to the L1 or the L2. Such notices paved the way to the concept of interlanguage, features of which is some range of liberty. Additionally, Schmid (2002) interpreted the interlanguage concept in an endeavor to clarify the attrition of L1. The main theory was turned around by research done in the area of L1 attrition. Such research investigated whether the L1 is influenced by L2 acquisition. The assumption that L2 acquisition prompts the loss or alteration of the L1, has counterparts with the concept introduced by Jakobovitz (1970) called the reverse transfer. Such

term particularly depicts the L2 process which violates the L1, which Per Contra participates in the interlanguage.

The cross-linguistic divergences concerning the voicing dissimilarity realization have often been appeared in the investigation of the perception and production of stop. Concerning the perception of stop, hearers are commonly examined on their decisive realization of synthetically created cv-syllable in which the onset stop differs in equivalent ways along VOT continuum (e.g. Abramson and Lisker, 1973). This revaluation of transmission is further induced by the novel notion of interlanguage which readily becomes the predominant model in the research of acquisition of L2. For some researchers, transmission is now stood within a wide context as an element among other elements (Singleton, 1987), as well as some other researchers assume that transmission plays only a peripheral role. Conversely, at the beginning of the 1980s, transmission retreated to the lime stage and novel studies reverberated the novel perspective of cognitivist.

The phenomena of interference were interpreted in the seminal work of Weinreich (1953) titles Language in Contact as those examples of divergence form the standards of L1 or L2 occurring in bilinguals" speech as an outcome of their knowledge with more than a single language, i.e., as an outcome of exposing to more than one language. Transfer which is usually called interference is viewed as the major reason for the deficiency of L2 utilizers in reaching a native like level in their L2. In contrast, the term interference was rejected by Clyne (1972), because such term partially refers to the reason of the phenomenon, i.e., the acceptance of any features or elements from an L2. The researchers ascribe attrition influence to the exposure of individuals to L2 in the majority of studies that find proof for the attrition of L1 in adult bilingual speakers**.**

In contrast, in the recent research, the term intrusion is employed by Mackey (2000) to point out to the utilization of characteristics which belong to a language while writing or speaking another one. Conversely, the term transmission is used by Pavlenko (2003) to indicate to operations leading to the consolidation of constituents from a language to another language. Additionally, Pavlenko (2003) uses the term cross-linguistic effect comprehensively/thoroughly to point out to transmission and any

other type of influence that a language can have on another. Pavlenko's understanding of the term transmission is derived from the interpretation of the term cross-linguistic effect which is introduced by Sharwood Smith (1983a). In these two studies, the term psycholinguistics is used to refer to the effect on the learners which a system of language they gain could have on the system of another language. The term is proposed to comprehend more than transmission and covers other processes such as, the effect on L1 from L2, evasion of transmission, borrowings, etc. Such term includes a completely extensive range of processes.

According to the interpretation of Pavlenko (2003), transmission is seen as just one feature of the influence of cross-linguistics. In the same vein, language transmission is considered by Weinreich (1963) to be one aspect of linguistic intrusion. In addition, Weinreich stressed that this is one kind of intrusion which does not include an explicit transmission of constituents at all. However, the term transfer is utilized by Singleton (1987) as a broad term to include the range of phenomena involving the performance in, or acquisition of a specific language which is affected by other languages' knowledge at the disposal of the performer/learner. In contrast, other scholars such as Pavlenko and Jarvis (2002) utilize the expressions cross-linguistic effect and language transmission reciprocally/alternately to point out to such varied processes as borrowing, interference, L2-concerned features of attrition of language and transfer. In accordance with Ecke (2004), scholars embrace one of such divergent expressions relying on how they realize the extent and negative or positive influences on the notion.

Conversely, despite this explicit shortage of unanimity among such researchers relating to a thorough visualization of cross-linguistic effect, interference and transfer, researchers agree on one significant feature which is the nature of bidirectionality of such phenomena (Badstübner, 2011). Similarly, it is straightforwardly said by Pavlenko and Jarvis (2002) that they extend the grasping of transmission in the acquisition of L2 to comprise bidirectionality that is the concept that in the written and oral output of the some adult utilizer of L2, cross-linguistic effect can jointly work in both ways, from L1 to L2 and vice versa. However, some scholars such as Lado (1957) in the area of L2 acquisition, in an exclusive way address

cross-linguistic effect and transfer from the first to the second language.

It is preferred by individuals to transmit meanings and forms, and the meanings' and forms' distribution of their L1 and culture to the L2 and culture, both fruitfully when trying to utter the language and to perform in the culture, and receptively when trying to understand the culture and the language as practiced by the L1 users.

In accordance with Pavalenko and Jarvis (2002), the scholars specialized in the acquisition of L2 recently began to notice the ways in which the L1 could be influenced by the L2 in adults. In order to differentiate between the L2 effect on a formerly gained language and the L1 influence on the L2, Odlin (1989) utilizes the term "borrowing transfer" (p. 12) to describe the first phenomenon and the term "substratum transfer" to depict the second one respectively. In his viewpoint, such differentiation is important, because the both notions cannot be understood monolithically.

It is proposed by Weinreich (1963) that intrusion influences the very organized areas of language, such as the phonemic system's bulk, a large portion of syntax and morphology as well as some domains of the lexis into which foreign components are presented. Conversely, in accordance with the recent literature review, it is suggested by Pavlenko (2003) that an L2 or any additional language could affect the L1 in all domains, whether lexis, morphosyntax, semantics, rhetoric, phonology or representation of conceptualization. On the other hand, some researchers preserve that L2 effect on the first language mainly displays itself in the lexicon through borrowing lexis.

In consideration of the dispute that transmission may influence all domains of production of speech, a compare of case studies results could be rather complicated, essentially in view of the fact that most research studies do not examine the entire areas of language but rather concentrate on chosen domains (Badstübner, 2011). In order to address such issue, Pavlenko (2000, 2003) support that apparently various examples of the influence of L2 in such various domains such as semantics, morph-syntax or phonology can be gathered in a single frame. In this taxonomic frame, examples of influence of L2 on the first language are hypothesized as proof of one or more subsequent phenomena: 1) convergence, or the production of

a single system which is different from L1 and L2; 2) borrowing transmission or the L2 components" addition to the first language; 3) shift, or deviating from the values or structures of L1 to be equivalent with the rules of structures of L2; 4) restricting, transmitting or the integration of the elements of L2 into L1 causing some simplifications, substitutions, or alterations; 5) the attrition of L1, i.e., the loss of or failure to output some elements of L1, because of the influence of L2 (Pavlenko, 2000).

2.2- Language attrition/preservation and the Regression Hypothesis:

The phonological attrition of interlocutors shapes an odd condition for two reasons. Firstly, as it is scarcely assumed but nonetheless heard with the language attrition literature that an individual pronunciation may alter. Secondly, because the attrition of the phonological aspects exhibits a significant chance to examine the regression hypothesis (Grabitzky, 2014). Even if alteration in individual's L1 ostensibly seems to be outwardly induced, thus caused by the L2 acquisition, assigning the attrition of L1 merely to the L2 acquisition (as the hypothesis of the contrastive analysis and the theory of inter-language do) is not often potential (Seliger and Vago, 1991).

Attritions in an individual's L1 might on the other hand be caused by inwardly prompted alteration, for instance, the theories of the Regression Hypothesis. Jakobson (1941) incorporated the Regression Hypothesis into the framework of linguistics, explicitly regarding phonology in aphasic cases (quoted by De Bot and Weltens, 1991). Briefly, the theory hypothesizes that the type of language decay in aphasia is comparable, but in reflexive order to the language acquisition type in children (Caramazza and Zurif, 1978). However, according to De Bot and Weltens (1991) and Caramazza and Zurif (1978), it can be concluded that the Regression Hypothesis is broadly indefensible concerning aphasia. Recently, it has been examined in the L1 attrition domain (Keijzer, 2004). Keijer (2007; 2010) assume that the Regression Hypothesis can be expanded to cover non-morbid attrition. The regression hypothesis is directly testable, in case that the generic developmental order in the acquisition of L1 can be determined. If the acquisition of L1 could be deemed as a method during which an interlocutor begins with some groups of unremarkable characteristics of universal linguistics and

there after gains salient language-specific characteristic values, subsequently the Regression Hypothesis anticipates that these values which are salient have to be susceptible to attrition and in the reflexive sequence in which such characteristics (and their consequences of parameter are documented in common acquisition of L1. Here the anticipation is that the attritional sequence is the back-ward of language acquisition. In a new research, the Regression Hypothesis was examined with reference to the syntactic and morphological losses in immigrants moving from Netherlands to Anglophone Canada (Merel, 2010). The outcomes denoted that L1 erosion, as it could take place in accordance with the anticipation of the Regression Hypothesis, was more apparent in the morphological domain than the syntactic one, which was especially distinguished by the effects of L2 English on their L1 Dutch. This means that merely inwardly prompted alteration could not interpret the manifested L1 erosion. However, the significance of L1 alteration which could not be assigned to the L2 acquisition is assured by Dorion (1982) in her research of the death of language in Scotland. She stated that probably mistakes in a half-forgotten language have a reasoning of their own as well and are not mere phenomena of intrusion. It can be inferred that the erosion of L1 might lead to phenomena in the first language which do not resemble both L1 and L2. If such debate is moved a further step, one may wonder whether deficiencies in the interlocutor's L1 were occurred first, then filled with the components of the L2, or whether the components of L2 intervened in the system of L1 firstly (Schmid, 2002), it can be said that though the L1 phenomena might be similar to the L2, they might not de facto be happened by the L2.

The Regression Hypothesis as adjusted to non-morbid L1 erosion is portrayed by Montrul (2008). As it is noticed by Montrul, it is an attractive supposition to be examined in language erosion, since some acquisitional sequences have previously been founded through the research in L2 domain; but it is probably vague whether this assumption could be applied to solely some areas of linguistics or all domains, and within a single area, how properties' erosion react with the complexity of structure (a slightly unclear notion in and of itself) and what the Regression Hypothesis would anticipate particularly for the skills of performance such as production, perception and comprehension.

As the phonological features of the L1 are first acquired, it can of course be anticipated that phonology is not affected by the process of attrition if the regression hypothesis is true; whereas the phonological aspects of a language can in fact be exposed to attrition (Montrul, 2008). This drives Montrul to the presumption that the regression hypothesis can possibly be applied to the domain of morpho-sytnax, but it cannot be applied to all language domains. Another plausible concept could suppose the route which is foreseen by the Regression Hypothesis for each independent area; but this assumption has not been assured by studies (Grabitzky, 2014).

2.2.1- Case studies regarding the Regression Hypothesis:

Research studies on adapted Korean children to the French families (even at age of eight) demonstrate that L1 phonology may undergo to thorough erosion. It is elucidated by Pallier et al. (2003) that cerebrum activation types do not vary between the adopted Korean children and French speakers learning Korean as an L2. Moreover, it is discovered by Ventureyra et al. (2004) that these adopted Korean children and the French speakers who acquire Korean as an L2 are no better at differentiating phones typical for Korean language the L1 French interlocutors. Conversely, both studies were challenged by Bylund (2009) in a significant point. These two studies did not provide the adopted children with a pre-test traineeship or a long period of exposure to their first language. He supposes that the subjects' exposure to their L1 after the adoption might reactivate some of their knowledge of the phonology of L1 and achieve native-like levels.

Some language's areas such as the phonological system might even have the ability to hold implicitly language's knowledge for tens of years after the attritional onset/offset of L1 exposure, after implied knowing of syntax has previously been gone.

Oh et al. (2010) examined L2 Korean children who were adopted by American families in the United States of America (USA) and 13 control participants in their research. Such research demonstrated essentially better performance of the adopted Korean children on many phoneme differences similar to Korean; whereas, some other phone differences stayed without divergence between the learners of L2 and the adopted Korean children.

What is especially intriguing comparing Oh et al. (2010) study with the study of Pallier et al. (2003) is that the participants in the study of Pallier et al. (2003) were adopted during childhood, whereas the participants in the study conducted by Oh et al. (2010) (except a single participant adopted at 3 years-old age) were moved to the USA during the age varied from 6 months till 1 year. Pallier et al. did not have the ability to prove the capability to differentiate phones heard until 8 years-old age in some samples. However, Oh et al. noticed that their samples succeeded in making the right distinctions for some phones.

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. Therefore, the phonological features of the L1 of both groups are fully acquired and stabilized. Consequently, the phonological features of their L1 will be less susceptible to erosion.

4.1- Discussion:

4.1.1- L1 attrition/maintenance and the Regression Hypothesis (RH) among the bilingual children group:

The Regression Hypothesis (RH) focuses on the influence of age on the phonological attrition during childhood. Away from testing RH in the case of aphasia, in accordance to Kejier (2007; 2010), the RH can be expanded to cover non-morbid L1 attrition. In conformity with the RH, the sequence of L1 erosion is the back-ward of L2 acquisition, as the phonological features of the L1 are firstly acquired, it can of course be anticipated that phonetics are not influenced by the process of attrition, if the RH is true; whereas the phonological aspects of a language can in fact be exposed to attrition (Montrul, 2008). Such assumption is proved in this thesis. It is observed among the bilingual children group that the phonetics of their L1 was susceptible to attrition. According to the Arab judges who were hired in order to evaluate the pronunciation of the bilingual children group, it is assured that P6 and P9 suffered from severe L1 attrition on the phonological level. Consequently, it can be inferred that the RH is not true. In the same vein, Pallier et al. (2003) and Ventareyra et al. (2004) arrived to the same outcome. In the study of

Pallier et al. (2003) on the adapted Korean children at the age of eight years to French families, they showed that L1 phonetics may undergo to thorough attrition.

4.2- Conclusion:

Concerning the cross-linguistic factors, there are many hypotheses investigated in the field of L1 attrition especially on the phonological level in order to evaluate its validity. Such phenomena are code-mixing, the regression hypothesis (RH) and the activation threshold hypothesis (ATH).

The first hypothesis investigated in this research is the regression hypothesis (RH) in the frame of the non-morbid L1 attrition. According to the RH, the L1 erosion sequence is the back-ward of the acquisition of L2. However, such hypothesis is not confirmed in this research, because the phonological features of L1 are acquired firstly. It is of course anticipated that the phonological aspects of L1 are not impacted by the process of attrition. However, among both populations, the phonological aspects of L1 of P6, P9, and P20 are completely attrited in comparison with the control group of Arabic.

5.1- References:

Abramson, A. S. & Lisker, L. (1973). Voice-timing perception in Spanish wordinitial stops. *Journal of Phonetics, 1,* 1–8.

Badstübner, T. (2011). *L1 attrition: German immigrants in the U.S.* PhD dissertation, University of Arizona at Tuscon.

Baird, A. (1967). Contrastive studies and the language teacher. *English Language Teaching,* 21:130 – 135.

Caramazza, A. and Zurif, E. B. (1978). *Comprehension of complex sentences in children and aphasics: A test of the regression hypothesis.* In Caramazza, A. and Zurif, E. B., editors, Language Acquisition and Language Breakdown: Parallels and Divergencies, pages 145 – 161. John Hopkins University Press, Baltimore.

Clyne, M. (1972). *Perspectives on language contact: Based on a study of German in Australia.* Melbourne: Hawthorn Press.

de Leeuw, E. (2009). *When your native language sounds foreign: A phonetic investigation into first language attrition.* Unpublished doctoral dissertation. Queen Margaret University, Edinburgh.

Dechert, H. W., & Raupach, M. (1989). Introduction. In H. W. Dechert & M. Raupach (Eds.), *Transfer in language production* (pp. ix–xvii). Norwood, NJ: Ablex.

Ecke, P. (2004). Language attrition and theories of forgetting: A cross-disciplinary review. *International Journal of Bilingualism. 8, 3,* 321-354.

Fries, C. (1945). *Teaching and Learning English as a Foreign Language.* University of Michigan Press, Ann Arbor, MI.

Grabitzky, Vera Katharina 2014. "Vulnerable Language Areas In Attriting L1 German : Testing The Interface Hypothesis And Structural Overlap Hypothesis". *Iowa Research Online* (2014): 18 Aug. 2016.

Jaspaert, K., Kroon, S. and van Hout, R. (1986). Points of reference in first language loss research. In B. Weltens, K. de Bot, and T.

van Els (Eds.), *Language attrition in progress* (pp. 30-56). Dordrecht: Foris Publications.

Keijzer, M. (2004). First language attrition: A cross-linguistic investigation of jakobson's regression hypothesis. *International Journal of Bilingualism, 8(3),* 389-393.

Keijzer, M. (2007). *Last in first out? An investigation of the regression hypothesis in Dutch emigrants in Anglophone Canada.* Utrecht: LOT Publications.

Keijzer, M. (2010). The regression hypothesis as a framework for first language attrition. *Bilingualism: Language and Cognition, 13(1),* 9-18.

Lado, R. (1957). *Linguistics Across Cultures.* University of Michigan Press, Ann Arbor, MI.

Mackey, W. F. (2000). The description of bilingualism. In L. Wei (Ed.), *The bilingualism reader* (pp. 27–55). London: Routledge.

Odlin, T.(1989). *Language Transfer: Cross- linguistic influence in language learning.* Cambridge: CUP.

Pavlenko, A. (2000). L2 influence on L1 in late bilingualism. *Issues in Applied Linguistics, 11,* 175–205.

Pavlenko, A. (2003). _I feel clumsy speaking Russian': L2 influence on L1 in narratives of Russian L2 users of English. In V. Cook (Ed.), *Effects of the Second Language on the First* (pp. 32-62). Clevedon, UK: Multilingual Matters.

Pavlenko, A., & Jarvis, S. (2002). Bidirectional transfer. *Applied Linguistics, 23(2),* 190– 214.

Schmid, M. S. (2002). *First Language Attrition, Use and Maintenance: The Case of German Jews in Anglophone Countries.* Amsterdam; Philadelphia: John Benjamins Publishing Company.

Seliger, H.W. and Vago, R. M. (1991). The study of first language attrition: an overview. In H.W. Seliger and R.M. Vago (Eds.), *First Language Attrition* (pp. 3-15). Cambridge: Cambridge University Press.

Sharwood Smith, M. (1983a). On explaining language loss. In S. Felix and H. Woode (Eds.), Language development at the crossroads: *papers from the Interdisciplinary Conference on Language Acquisition at Passau* (pp. 49-69). Tübingen: G. Narr.

Singleton, D. (1987). The fall and rise of language transfer. In J. Coleman & R. Towell (Eds.), *The advanced language learner* (pp. 27–53). London: CILT.

Weinreich, U. (1953). *Language in Contact: Findings and Problems*. The Hague, The Netherlands: Mouton de Gruyter.