

Małgorzata SZUPICA-PYRZANOWSKA
Uniwersytet Warszawski

Language attrition – implications for second/foreign language acquisition

Abstract

The inquiry provides an overview of the central issues that arise in the consideration of second/foreign language attrition. The seminal articles included provide an insightful view of what constitutes the phenomenon in question. The research on non-native language attrition is still weak (K. Bardovi-Harlig/ D. Stringer 2010) and requires more attention not only on the part of linguists studying the problem but language teachers as well. Non-native linguistic knowledge is not given once and for all and as such cannot be taken for granted. It requires maintenance, effort, and diligence. Learners may begin to attrite long before they fully acquire the language they study. Consequently, teachers have to be aware of the means to prevent language decline.

Languages are intuitively associated with the processes of acquisition, learning, speech production or linguistic use. In other words, we associate languages with a gain. Therefore, it seems less intuitive to think of them in terms of breakdown, loss or attrition. However, language attrition is very much a linguistic reality. Overall, the term refers to longstanding loss rather than temporary losses of linguistic material (Brown 1994) and is triggered by “disuse, lack of input or reduced input” (K. Bardovi-Harlig/ D. Stringer 2010:34). More specifically, it covers a range of possibilities where language is lost by communities or individual speakers in both neurologically pathological (i.e., patients with language impairments due to a stroke or trauma to the brain) and non-pathological populations (i.e., language users or learners). Furthermore, the problem of language attrition in healthy individuals, is at least three-fold as it concerns: 1. first generation immigrant population - L1 (first language) loss in L2 (second language) environment; 2. second-generation speakers (also known as “heritage speakers” or “incomplete learners”) - loss of the heritage language; 3. (advanced) learners of second or foreign languages (FL) learned at school - loss of L2/FL in L1 environment which is the scope of the present inquiry. In the domain of non-native language acquisition a further division is made between L2 attrition (the context of immersed learning) and FL attrition (the context of instructed learning). They differ in terms of the quality and amount of input, exposure to and the use of non-native language as well as involvement of memory (M.S. Schmid/ T.H. Mehotcheva 2012). The literature recognizes a variety of reasons

contributing to the attrition of second/foreign language skills. The most common causes include the strength and quality of learning at the initial stages of the process, motivational factors triggering acquisition, and the way the acquired language is actually used (B. Weltens/ A.D. Cohen 1989; R.D. Lambert/ B.F. Freed 1982). Likewise, J. Holmes (2008) argues that language erosion is characterized by shrinking phonetic inventories, simpler phonetic rules, lack of grammatical flexibility, and smaller lexical repertoires (p.59).

M.S. Schmid (2002) emphasizes a dual nature of attrition and identifies it as both a process and phenomenon. The first perspective assumes a non-pathological decline in a language learned before (B. Köpke/ M.S. Schmid 2004:5). In the case of the non-pathological language loss we consider the loss of linguistic material a L1 speaker or late L2/FL learner previously possessed. In other words, we acknowledge the absence of linguistic knowledge that was once present and tangible, and could no longer compete with the other, more frequently used linguistic system. Attrition, as understood here, is not neurologically-conditioned and relates to a gradual change in one's linguistic behavior triggered by a lack of contact with a community in which the language is spoken natively. The severed or less frequent contact with the community results in a loss of language fluency and its proficient use. This is fuel for the argument that in order to be maintained, languages have to be constantly supplied with linguistic material. Otherwise they erode. The question remains, however, whether attrition is driven by insufficient input maintenance or linguistic competition. In the context of language loss, linguistic knowledge naturally divides itself into the phase leading up to the loss (a pre-attrition stage) and the part where attrition is full-fledged (an attrited stage). It is stipulated that the phenomenon of attrition is a by-product of the difference between the two aforementioned stages involved in the process of loss. We can draw a direct comparison between language acquisition and attrition in a sense that the complexity of language loss is compatible to that of language acquisition. For instance, the population of language attriters is as heterogeneous as the population of language learners. Some language users may attrite sooner than others. What contributes to the lack of homogeneity is a myriad of extra-linguistic (i.e., gender, education, age, personality), language-related (i.e., attitude towards languages, motivation to learn, B. Köpke/ M.S. Schmid 2004) as well as subjective and emotional factors (M.S. Schmid 2002) responsible for language loss. The list is by no means exhaustive as some of the reasons are not easily predictable.

There is no consensus as to the exact nature of language loss. The field of L1 attrition is prolific. Numerous theoretical approaches tackled the issue of language attrition (K. Bardovi-Harlig/ D. Stringer 2010). We begin with the first language perspective which is a natural prerequisite to understanding foreign or second language attrition. Chronologically, the regression hypothesis (R. Jakobson 1941) is one of the earliest theoretical accounts of language attrition. Under this view, the order of language acquisition is opposite to the order of language loss. Those aspects of language which are acquired early are the most resistant while those acquired late are the most susceptible to language loss. However, it is argued that there is hardly any empirical evidence supporting this hypothesis in the L1 studies. The next approach, the threshold hypothesis, is not only conceptually close to its predecessor but also takes it one step further. It states that not what is acquired first but what is acquired best is the least prone to loss. To put it differ-

ently, the sequence of acquisition is not as essential here as the notion of quality or frequency of exposure (P. Jordens, K. de Bot, C. Van Os/ J. Schumans 1986). The threshold hypothesis comes in different forms; all but one go beyond the scope of the present inquiry - the critical threshold hypothesis. Proponents of this view identify a diagnostic level in the process of language acquisition. Those learners who cross the threshold and achieve the required level of competence are said to have permanent knowledge of that language. As a result, the frequency of reinforcement strengthens abstract, underlying representations making them less prone, if not immune, to loss (U. Neisser 1984). To test it, H. Bahrack (1984) examined Spanish learned in school and observed that certain aspects (i.e., lexical) of the non-native knowledge stabilized and were preserved for 25 years. Practically no linguistic material was lost during the time between 5 and 25 years post-training. The results obtained in the study indicated that the linguistic knowledge was retained despite the lack of accessing and rehearsing it during this time.

A different approach is represented by the interference hypothesis stating that attrition is triggered by the newly acquired language which does not only compete with the native one but gradually comes to dominate it. In the same vein, H. Seliger/ R. Vago (1991) proposed that due to an insufficient L1 input a learner begins to unconsciously parse L2 input and replaces complex L1 rules with much simpler L2 rules only when they share the same semantic function. E.P. Altenberg (1991) put this hypothesis to test and examined L1 German learners of English. She found that German plural allomorphs rather than gender assignment were more likely to attrite. Gender was less affected because English does not mark this category and could not have been the source of influence. The overall underlying assumption is compatible with a version of the interference hypothesis stating that attrition is not only triggered by L1 transfer but also stems from similarity between the L1 and the L2 which impedes the process of acquisition (C.T. Best 1995; J.E. Flege 1995). The next account of attrition, the markedness hypothesis also known as the parameter hypothesis, posits that unlike successful acquisition, which is argued to involve the setting of appropriate values to language specific parameters, language attrition is said to involve the unmarking of parameters and assignment of default values (M.S. Schmid 2002; K. Bardovi-Harlig/ D. Stringer 2010). The unmarking is driven and strengthened by a permanent lack of input. Although theoretically plausible, the hypothesis has not been supported by compelling evidence. Lastly, the discussion would be incomplete without the dormant language hypothesis, which tries to address the question whether language loss is an accessing or representational phenomenon. One can probe deeper into the issue and ask: provided that it is feasible to identify the exact end of attrition, does it imply a complete loss of linguistic material or rather its retention and storage but in a residual form? Numerous studies investigating L1 attrition point to rapid declines in performance and competence across different languages (i.e., D. Kaufman/ M. Aronoff (1991) reported on lexical and morphological loss in Hebrew, E. Nicoladis/ H. Grabois (2002) presented the case of Cantonese-based attrition, R. Burling (1959) examined the loss of Garo spoken in India). Other studies address the issue from the vantage point of adult language acquisition and report on reversing attrition. Individuals who were exposed to different languages during the first few years of their lives were later able to retrieve and relearn them as adults (B. Köpke 1999). This pre-pubertal linguistic exposure assured language retention however residual.

The necessary next step in the discussion on attrition was taken by P. Herdina/U. Jessner (2002) who proposed the Dynamic Model of Multilingualism (DMM). The authors identify the following factors as decisive in the process of language development: change of quality, reversibility, stability, complexity, non-linearity, and interdependence. The first component, change of quality, is understood as students' proficiency fluctuating between improvement and decline. The process is reversible. On one hand, with an increase in commitment and effort, deterioration can be reverted; on the other, language improvement can decline due to negligence. The process can also stabilize when the balance between improvement and decline is maintained. This model assumes the existence of two opposite trends, positive and negative growth. When there is enough time, effort and attention given to a linguistic system, it flourishes. If, however, there is a decrease in the amount of time, effort and attention, the linguistic system may attrite and eventually be lost. Teachers have to be vigilant as language attrition may escape their attention in its initial stages and be mistaken for less frequent use of language. Moreover, language development is not a by-product of a linear relation between cause and effect. By the same token, language attrition is nonlinear, dynamic, and results from a collective contribution of multiple variables. With regard to the last factor, developmental interdependence, the authors propose that the development of L2/FL competence to some extent corresponds to the level of L1 competence at the onset of L2/FL acquisition. The model also includes a *language maintenance effort* component that relates to a constant commitment required to preserve one's linguistic repertoire. If no such effort is made, owing to a lack of exposure to a language, this may lead to decline of linguistic competence. Though, the model predicts that lack of purposeful commitment to language maintenance does not have to be equated with mental representational losses because certain language aspects can be subject to crosslinguistic activation in a bilingual/multilingual context.

Finally, the Neurolinguistic Theory of Bilingualism (NTB) and its Activation Threshold Hypothesis (ATH), developed by M. Paradis (1993, 2004, 2007) to account for a pathological language loss, have been successfully used to justify L1 attrition in healthy populations (i.e., M.S. Schmid 2007). The hypothesis is based on neuronal activation where cells execute action potentials only when a required level of activation is reached. Every linguistic component or subsystem has its own unique activation level which has to be achieved to activate it. Higher activation threshold levels require more impulses to activate them, lower levels are less costly and need fewer impulses. In order to select a desired linguistic item, inhibitory mechanisms are necessary so as to deselect potential competitors (i.e., eliminate interference or transfer) from the same or another linguistic systems. Once the activation is complete, the threshold level is lowered. The activation is in flux and depends on the frequency of use and recency of that particular lexical item or grammatical structure. Recognition of the lexical item is triggered by outside signals, whether auditory or visual, while production of the same item requires stimulation from within the system and is, thus, more costly. A speaker unable to access a particular word may nevertheless be able to recognize it. This observation is compatible with the findings that receptive rather than productive skills are less prone to attrition (H. Bahrck 1984; L. Hansen 2011). Prolonged disuse of a particular language co-occurring with an intense exposure to a different language triggers an increase in the activation

level. Consequently, problems with lexical accessing (i.e., word finding problems) precede those of grammar retrieving.

The technologies from the field of psycholinguistics and neurolinguistics as well as the advent of brain imaging techniques shed more light on the debate between loss of access versus loss of representation (K. Bardovi-Harlig/ D. Stringer 2010). This dilemma was studied by C. Pallier (2007) and C. Pallier *et al.* (2003) who set out to investigate the process of L1 attrition in adopted children by the means of functional magnetic resonance imaging (fMRI) and phoneme discrimination tasks. The results indicated that language could be removed from the brain following a long period during which participants were deprived of any linguistic input in that particular language. In this case, the observed onset of attrition occurred after the age of 8 years. Conflicting results were produced by R. Footnick (2007) who applied highly controversial age-regression hypnosis to show that language lost in childhood can be revived. In the same vein, T.K. Au/ L.M. Knightly/ S. Jun/ J.S. Oh (2002) tested childhood overhearers who were only exposed to Spanish and neither learned to speak nor learned to understand their heritage language. Those incomplete learners were compared to individuals who were not exposed to Spanish before the age of fourteen. The authors demonstrated that it is possible to reactivate L1 after a prolonged lack of exposure to it as the overhearers, unlike their experimental counterparts, were able to master a nativelike accent. T.K. Au *et al.* have not only shown that the brain does not “lose” long forgotten childhood languages, but also attempted to explain the previous fMRI results. In their view, the results of C. Pallier *et al.*'s study stem from inactive linguistic knowledge rather than a complete loss of a language.

Early studies on L2 attrition, which identified summer vacation as the *period of disuse*, focused on the loss of linguistic skills measured by test performance. Next emerged studies investigating changes in skill maintenance (reading, writing, speaking, listening) as well as linguistic structure (syntax, morphology) (K. Bardovi-Harlig/ D. Stringer 2010). The field of L2 attrition adopted some of the hypotheses formulated to account for L1 acquisition. The regression hypothesis was a natural candidate for L2-based studies. In its original formulation the hypothesis states that the order of acquisition is opposite to the order of attrition. All the studies done in the framework of the regression hypothesis, but in the context of L2 attrition, considered the notion of acquisition order differently. In A.D. Cohen's (1974) small-scale longitudinal experiment 2 of the 3 children learning Spanish lost some of the previously learned linguistic material as compared to their pre-summer test. The participants differed in the use of the verb “to be”, definite articles, and the progressive versus non-progressive aspect. L. Hansen (1999) and B. Hayashi (1999) tested the regression hypothesis in the domain of Japanese negation patterns in two groups of L2 Japanese learners (adults and children) and found evidence for regression which mirrored the acquisition order. As for the threshold hypothesis stipulating the existence of an acquisitional level beyond which linguistic material does not attrite, it cannot be directly applied to second language acquisition because the notion of threshold is more challenging to define in L2 learning (K. Bardovi-Harlig/ D. Stringer 2010). The remnants of the dormant hypothesis are detected in the savings hypothesis (K. de Bot/ S. Stoessel 2000) according to which relearning is less effortful than first-time learning. It is based on assumption that attrition is the problem of accessing rather

that lack of mental representations. The remaining hypotheses of attrition originally formulated for L1 (i.e., interference, simplification, and markedness) are predominantly used to discuss the results, and are themselves rarely the scope of testing. K. Bardovi-Harlig/ D. Stringer (2010) assess the research in L2 attrition as *weak* and requiring further investigation. Consequently, they advocate necessary changes. For example, in their opinion certain concepts (i.e., peak of attainment) have to be *operationalized*, populations tested ought to be more compatible, measures used should be more consistent, and studies have to be longitudinal rather than cross-sectional.

Despite the lack of L2/FL studies thoroughly investigating the phenomenon in question, it is imperative for language instructors to be familiar with attrition and with its different manifestations because they are the ones who provide an adequate remedy. Preventive measures should be implemented so as to maintain languages. Undoubtedly, it is much easier to prevent a problem than to recognize it and revert it. In order to prevent attrition, we have to first identify it and understand its scope. How to prevent attrition in a second/foreign language classroom? By facilitating retention and studying limitations in the retention of FL/L2. Needless to say, language acquired in a meaningful way is less likely to be forgotten and more likely to be retained. It is argued that the retention of linguistic material is further strengthened by the quality of learning at the initial stages of acquisition (D. Ausubel 1963; H.D. Brown 1994). In order to be effective, language learning has to be not only meaningful and embedded in meaningful contexts but also systematic. In his subsumption theory of learning, D. Ausubel argues against mechanic repetition, imitation or other memory-related habits which impede the learning process. An excessive rote activity is detrimental to the development of communicative competence and obstructs long-term retention. Unlike meaningfully learned language material embedded in context, the acquisition of materials which are rote learned is not based on interaction with cognitive structure. Instead, it is based on inference and associations. The goal of language learning is reaching an ultimate attainment, a native-like proficiency, and thus, making the language use effortless and automatic. H.D. Brown (1994) argues that not only learning but also the process of language forgetting is systematic. Following this line of reasoning, at the outset of language learning students have a wide range of devices at their disposal (rules to obey, paradigms to memorize, definitions to learn). These devices facilitate acquisition at the early stages and lead to language automaticity. However, they are short-lived and should be gradually eliminated as the students become more and more fluent. If the devices are not excluded in the course of learning they would constitute an obstacle on the road to achieving communicative competence in both comprehension and production. That is not to say that meaningfully learned linguistic material is not susceptible to loss. It is, but less likely so and requires more purposeful action to be forgotten. Even though there has been a paradigm shift in language teaching ever since, certain aspects considered by these early approaches still hold today.

Next, the quality of the initial stages involved in the process of language acquisition along with course grades and the number of language classes attended are vital to sustain linguistic material (M.S. Schmid/ T.H. Mehotcheva 2012). Certain classroom activities and appropriate instructional factors could be conducive to preventing language loss. Such factors refer to the way languages are acquired at the initial stages of the process.

In addition to cultural and personal contributors, T. Reilly (1988) identified four instructional areas crucial in diminishing language attrition: instructional objectives, intensity of instruction, developmental considerations, and curriculum design. Language skills show different levels of susceptibility to attrition (P.C. Smythe, G.C. Juras, J.R. Bramwell/ R.C. Gardner 1973; A.D. Cohen 1974). Early studies investigating attrition in the context of pedagogy reported on receptive skills being less prone to attrition. Students whose language curricula concentrated predominantly on productive (oral) skills showed rapid and extensive decline in comparison to those whose instruction targeted receptive (comprehension) and writing skills. Further, the intensity of instruction was identified as an important factor facilitating acquisition. Intensive language courses were shown to be more effective than less intensive programs including the same number of hours of instruction (i.e., H.P. Edwards 1976; H.H. Stern 1976). We can twist around the argument and state that not only acquisition but also attrition rates may differ in classes of different intensity of instruction. Language curricula have to be custom-made so as to best accommodate the particular populations they are designed to target. Early approaches to the problem of attrition recommended the implementation of different maintenance techniques and modification of linear syllabi to include lexical and grammatical recycling and frequent review sessions. It is vital to prevent or slow down, if not eliminate, attrition in its early stages (T. Reilly 1988). While considering the possibility of language attrition certain developmental considerations have to be taken into account. Specifically, learner types are crucial. Adult learners come well equipped to the process of language acquisition. They have good analytical, problem-solving, as well as metacognitive and metalinguistic skills. Also, they quickly grasp abstract patterns. However, adult language learners are famous for initial advantages only while children reach ultimate attainment as a result of prolonged, intensive exposure. Language curricula that capitalize on the aforementioned developmental differences do not only facilitate acquisition but also help prevent attrition.

Moreover, the more developed and established the linguistic system, in other words the higher the attained proficiency at the onset of attrition, the more likely it is to resist language decay and be retained. What stems from this is that beginner FL students have a greater tendency to attrite than advanced ones. Linguistic knowledge possessed by proficient learners is more resistant to forgetting (M.S. Schmid/ T.H. Mehotcheva 2012). Attained proficiency surfaced as a reliable predictor of language retention or attrition across different languages and populations (Dutch and English in Dutch immigrants – K. de Bot/ M.G. Clyne 1989; French in young learners – R.C. Gardner, R.N. Lalonde/ J. MacPherson 1985; French in adult Canadians – B. Harley 1993; FL Spanish in Dutch and German students – T.H. Mehotcheva 2010; Japanese in graduate students – S. Nagasawa 1999). However, length of exposure understood as the amount of time devoted to studying and speaking the language in the environment in which it is spoken natively was argued to be a much better predictor of language attrition or retention than attained proficiency. Needless to say, both phenomena cannot be easily torn apart and studied in isolation as suggested by L. Hansen (1999). Further, there is no consensus as to whether they indeed correlate. On the one hand, both factors correlated in the context of second language acquisition where longer exposure to the target language in its native environment contributed to more linguistic advances (A. Llanes/ C. Muños 2009). On the other

hand, T.H. Mehotcheva (2010) found no correlation between length of exposure and language retention in a group of foreign language students of Spanish (M.S. Schmid/ T.H. Mehotcheva 2012).

Age at the onset of attrition is a crucial non-linguistic factor in language retention. Attrition in children is much more severe than in adults (B. Köpke/ M.S. Schmid 2004; B. Köpke 2004). The early onset of attrition entails a considerable, if not complete, loss of language in children whereas such changes are usually less drastic and less recurrent in teenage and adult L2/FL learners (i.e., E. Nicoladis/ H. Grabois 2002). Even though young learners are more vulnerable to language loss, there is a shift in one's susceptibility to attrition around the age of 9. In B. Köpke's view greater resistance to attrition coincides with a development of literacy in children. Literacy helps children preserve language and vocabulary. Thanks to literacy, young learners are exposed to languages via books and other written materials. An extensive exposure to written language can compensate for the absence of spoken input. This is in line with an observation that educational level is one of the extralinguistic factors inhibiting attrition because it corresponds to the amount of declarative knowledge, the factual knowledge of a language possessed by learners (B. Köpke 2004). Undoubtedly, there is an educational merit to multisensory and multimodal exposure of young language learners. They have to be introduced to written materials in a language they learn. Early development of literacy skills in FL/L2 not only promotes reading and fosters acquisition but also prevents language deterioration.

Motivation is another non-linguistic predictor of attrition. This variable would predict the path of attrition differently in the context of L2 and FL acquisition. By nature the process of first or second language acquisition assumes a naturalistic use of the language, a greater need to communicate, and higher frequency of lexical and syntactic use. The FL communication often lacks spontaneity and authenticity and is frequently embedded in rather artificial context. Therefore, in the FL environment learners' need to communicate would be triggered by external factors (i.e. syllabus, teacher) rather than the inner-drive and necessity to get a message across. Motivation is intertwined with language attitude, that is students' outlook on the target language. Since both are known to facilitate language acquisition, it is only natural to assume that they will foster language retention as well. However, establishing the role of attitude in language attrition has proved challenging. Motivation and attitude are not stable entities and as such they are subject to dynamic adjustments and fluctuations (L. Nikitina/ F. Furuoka 2005). The only known to date studies demonstrating the role of attitude in the process of language attrition are based on self-reports, which are considered to be biased and, thus, unreliable measures of language attainment (T.H. Mehotcheva 2010; M.S. Schmid/ E. Dusseldorp 2010). It is unclear whether the results obtained in those studies were a by-product of the methodologies used or an accurate account of the participants' motivation and attitude. Lastly, taking into consideration motivation type, learners who are integratively motivated want to become part of the speech community around them and they are determined to use a language for social interaction. Therefore, integrative motivation, unlike its instrumental counterpart, is thought to lead to a linguistic success. Additionally, lack of integrative attitude concerning the corresponding culture can prompt language attrition (R.C. Gardner 1982). By embedding language in a cultural context teachers

would not only spark their students' interest in the target language culture but would also prevent language decline and, ultimately, enhance their motivation.

M.S. Schmid/ T.H. Mehotcheva (2012) identify contact with the language as a factor warranting language retention/preservation once the contact with the native community is either severed or sporadic. The higher the frequency of language use, the more successful its retention. M. Paradis (2004) found *frequency* of use and *recency* to be crucial in retention and accessing. Previously we stated, however, that rehearsal was not found to be a decisive factor of language maintenance in the situation of L1 or L2 attrition (see M.S. Schmid/ E. Dusseldorp 2010; T.H. Mehotcheva 2010). It goes without saying that contact with the language depends not only on the learning environment and teachers, but it also relies on students' ability to provoke situations in which the language is practiced outside classroom. The responsibility for the frequency and quality of language use has to be relegated not only to teachers but to students as well. Ultimately, they are in charge of their linguistic knowledge. One cannot stress it enough that to prevent language attrition teachers have to focus on providing students with a frequent opportunity to use a language in classroom. Students who are aware of their insufficient knowledge of language often resist using it, whether in a classroom or elsewhere. That is why teachers have to concentrate on helping students overcome this obstacle by encouraging them to practice the language from the earliest stages in the process of acquisition. Most importantly, teachers should work towards diminishing students' language speaking anxiety. If anxiety prevails, it may lead to a less frequent use of language, more resistance towards speaking, and consequently, it may cease language development and trigger deterioration. Also, the quality of classroom interaction and learning environment foster students' willingness to be actively involved in language learning.

The typological proximity or degree of similarity between L1 and FL/L2 has been identified as a factor fostering attrition. Even though cross-linguistic influence on language attrition and retention has not been studied extensively (K. de Bot 1997) we have to acknowledge a dual role of L1 in the context of foreign language attrition. On one hand, L1 motivates retention and leads to positive transfer triggered by similarity between languages. On the other hand, the similarity between languages could be the source of confusion and negative transfer. In the latter case, L1 interferes with and inhibits the process of language acquisition. Language domains are said to interact differently with typological similarity. For instance, linguistic proximity has been found helpful in lexical retention (L. Hansen 2011). In the study L1 played a role of a facilitator as the native speakers of English retained more Portuguese and Spanish words than L1 English speakers who studied Japanese, Korean and Mandarin Chinese.

Furthermore, attrition is selective in nature (H. Seliger/ R. Vago 1991). Different rates of attrition are predicted by different language modules. It is argued that, if attrition is detected at its early stages, it is more likely to influence the lexicon than syntax. Regarding syntactic structures, interfaces between syntax and other language modules (i.e., pragmatics, semantics) are more developmentally fluctuating than "narrow" syntax (i.e., phrase structure, agreement). In particular, instantiations of grammar at the syntax-discourse level are more likely to attrite than "purely syntactic" aspects of language. This should be reflected in teacher's attention given to language activities which target the vulnerable areas of language. Further, language deterioration does not have a steady

pace. Initially, attrition proceeds rapidly and reaches a plateau at later stages. A greater intensity of attrition has been observed during early years of language non-use (0-3) than subsequent years (5-25) (H. Bahrick 1984).

As a final point, we have to emphasize that an apparent benefit to be gained from attrition is the understanding of an unquestionable role of memory in language learning and teaching. Considering memory type, implicit rather than explicit memory is more resistant to forgetting and requires no consciousness to retrieve language material. The process of L2/FL acquisition is more dependent on explicit (i.e., intentional and conscious) type. However, implicit memory is not as resistant to attrition from the beginning as evidenced by, previously discussed, young children's linguistic sensitivity (B. Köpke 2004). Language attrition assumes a change in the linguistic repertoire and behavior. Change is an inherent feature of language. This fluctuation between presence and absence of language material or between linguistic gain and loss has always existed in languages. By nature, languages are dynamic entities and as such they are susceptible to different processes, whether alteration or attrition. In addition to teaching students syntax, phonetics, or pragmatics, in addition to exposing them to authentic language and providing them with intensive language practice, teachers should also communicate to their students that in order to prevent attrition, languages have to be maintained on a regular basis. If they are not, they get "rusty". Finally, language teachers should be aware of practical and pedagogical merit to attrition. Following T. Van Els/ B. Weltens (1989) as well as M.S. Schmid/ T.H. Mehotcheva (2012) we acknowledge that a thorough understanding of the nature of attrition might contribute to better designed language curricula, well-developed lesson plans, and teaching methods warranting long-standing linguistic outcomes.

References

- Altenberg, E. P. (1991), *Assessing first language vulnerability to attrition*. In: H. W. Seliger / R. M. Vago (eds.), *First language attrition*, 189–206. New York.
- Andersen, R. W. (1982), *Determining the linguistic attributes of language attrition*. In: R. D. Lambert / B. F. Freed (eds), *The loss of language skills*. 83–118. Rowley, MA.
- Au, T. K. / L. M. Knightly/ S. Jun / J. S. Oh (2002), *Overhearing a language during childhood*. In: *Psychological Science* 13, 238–243.
- Ausubel, D. (1963), *Cognitive structure and the facilitation of meaningful verbal learning*. In: *Journal of Teacher Education* 14, 217–221.
- Bahrick, H. (1984), *Fifty years of second language attrition: Implications for programming research*. In: *Modern Language Journal* 68, 105–111.
- Bardovi-Harlig, K./ D. Stringer (2010), *Variables in second language attrition. Advancing the State of the Art*. In: *Studies in Second Language Acquisition* 32, 1–45.
- Best, C. T. (1995), *A direct realist view on cross-language speech perception*. In: W. Strange (ed.), *Speech perception and linguistic experience*, 171–204. Timonium, MD.
- Brown, H.D.(1994), *Principles of language learning and teaching*. Prentice Hall Regents.
- Burling, R. (1959), *Language development of a Garo and English speaking child*. In: *Word* 15, 45–68. Rowley, Mass.

- Cohen, A.D. (1974), *Culver City Spanish immersion progress: How does summer recess affect Spanish speaking ability?* In: *Language Learning* 24, 55–68.
- de Bot, K. (1997). *Language loss*. In: G.R. Tucker / D. Corson (eds.), *Encyclopedia of language and education*, 51–62. Dordrecht.
- de Bot, K./ M.G. Clyne (1989), *Language Reversion Revisited*. In: *Studies in Second Language Acquisition* 11, 167–177.
- de Bot, K./ S. Stoessel (2000), *In search of yesterday's words: Reactivating a long forgotten language*. In: *Applied Linguistics* 21, 364–384.
- Edwards, H.P. (1976), *Evaluation of the French immersion program offered by the Ottawa Roman Catholic Separate School Board*. In: *Canadian Modern Language Review* 33, 137–142.
- Flege, J. E. (1995), *Second language speech learning: Theory, findings, and problems*. In: W. Strange (ed.), *Speech perception and linguistic experience: Issues in cross-language research*, 233–277. Timonium, MD.
- Footnick, R. (2007), *A hidden language: Recovery of a lost language is triggered by hypnosis*. In: B. Köpke / M. S. Schmid / M. Keijzer /S. Dostert (eds.), *Language attrition: Theoretical perspectives.*, 169–187. Amsterdam.
- Gardner, R.C. (1982), *Social factors in language retention*. In: R.D. Lambert /B.F. Freed (eds), *The loss of language skills.*, 83–118. Rowley, MA.
- Gardner, R. C. / R. N. Lalonde / J. MacPherson (1985). *Social factors in second language attrition*. In: *Language Learning* 3, 519–540.
- Grosjean, F. (1982), *Life with Two Languages. An Introduction to Bilingualism*. Harvard University Press.
- Hansen, L. (1999), *Not a total loss: The attrition of Japanese negation over three decades*. In: L. Hansen (ed), *Second Language Attrition in Japanese Contexts.*, 142–153. Oxford.
- Hansen, L. (2011), *The acquisition, attrition, and relearning of mission vocabulary*. In: M.S. Schmid / W. Lowie (eds), *Modeling Bilingualism: From structure to chaos.*, 115–134. Amsterdam/Philadelphia.
- Harley, B. (1993), *Maintaining French as a second language in adulthood*. Presentation at 10th AILA, Amsterdam.
- Hayashi, B. (1999), *Testing the regression hypothesis: The remains of the Japanese negation system in Micronesia*. In: L. Hansen (ed.), *Second language attrition in Japanese contexts.*, 154–168. Oxford.
- Herdina, P. / U. Jessner (2002), *A Dynamic Model of Multilingualism: Changing the Psycholinguistic Perspective*. Clevedon.
- Holmes, J. (2008), *An Introduction to Sociolinguistics*. Pearson Longman.
- Jordens, P. / K. de Bot / C. Van Os / J. Schumans (1986), *Regression in German case marking*. In: B. Weltens / K. de Bot / T. J. M. van Els (eds), *Language attrition in progress.*, 159–176. Dordrecht.
- Kaufman, D./ M. Aronoff (1991), *Morphological disintegration and reconstruction in first language attrition*. In: H. W. Seliger /R. M. Vago (eds), *First language attrition.*, 175–188. New York.
- Köpke, B./ M. S. Schmid (2004), *First language attrition: The next phase*. In: M. S. Schmid /B. Köpke/ M. Keijzer /L. Weilemar (eds), *First Language Attrition: Interdisciplinary perspectives on methodological issues.*, 1–43. Amsterdam.

- Llanes, A. / C. Muños (2009), *A short stay abroad: Does it make a difference?* In: System 37(3), 353–365.
- Lambert, R. D. / B.F. Freed (1982), *The Loss of Language Skills*. Rowley MA.
- Maher, J. (1991), *A crosslinguistic study of language contact and language attrition*. In: H. W. Seliger/ R. M. Vago (eds), *First language attrition*, 67–84. New York.
- Nagasawa, S. (1999), *Learning and Losing Japanese as a Second Language: a Multiple Case Study of American University Students*. In: L. Hansen (ed.), *Second Language Attrition in Japanese Contexts.*, 169–212. Oxford.
- Neisser, U. (1984), *Interpreting Harry Bahrick's discovery: What confers immunity against forgetting?* In: Journal of Experimental Psychology: General 113, 32–35.
- Nicoladis, E./ H. Grabis (2002), *Learning English and losing Chinese: A case study of a child adopted from China*. In: International Journal of Bilingualism 6, 441–454.
- Nikitina, L./ F. Furuoka (2005), *Integrative Motivation in a Foreign Language Classroom: A Study on the Nature of Motivation of the Russian Language Learners in Universiti Malaysia Sabah*. In: Jurnal Kinabalu, Jurnal Perniagaan & Sains Sosial 11, 23–34.
- Paradis, M. (1993), *Linguistic, psycholinguistic, and neurolinguistics aspects of interference in bilingual speakers: The Activation Threshold Hypothesis*. In: International Journal of Psycholinguistics 9(2), 133–145.
- Paradis, M. (2004), *A Neurolinguistic Theory of Bilingualism*. Amsterdam/Philadelphia.
- Paradis, M. (2007), *L1 attrition features predicted by a neurolinguistic theory of bilingualism*. In: B. Köpke /M. S. Schmid /M. Keijzer /S. Dostert (eds), *Language Attrition: Theoretical Perspectives.*, 121–133. Amsterdam/Philadelphia.
- Pallier, C. (2007), *Critical periods in language acquisition and language attrition*. In: B. Köpke / M.S. Schmid /M. Keijzer /S. Dostert (eds), *Language attrition: Theoretical perspectives.*, 155–168. Amsterdam.
- Pallier, C. / S. Dehaene / J.-B. Poline / D. LeBihan / A.-M. Argenti / E. Dupoux (2003), *Brain imaging of language plasticity in adopted adults: Can a second language replace the first?* In: Cerebral Cortex 13, 155–161.
- Reilly, T. (1988), *Maintaining foreign language skills*. ERIC Digest.
- Schmid, M. S. (2002), *First Language Attrition, Use and Maintenance: The case of German Jews in Anglophone countries*. Amsterdam.
- Schmid, M. S. / E. Dusseldorp (2010), *Quantitative analyses in a multivariate study of language attrition*. In: Second Language Research 26(1), 125–160.
- Schmid, M. S. /T.H. Mehotcheva (2012), *Foreign language attrition*. In: Dutch Journal of Applied Linguistics 1:1, 102–124.
- Seliger, H.W. / R. Vago (eds.) (1991), *First language attrition*. Cambridge.
- Smythe, P.C./ G.C. Jutras / J.R. Bramwell/ R.C. Gardner (1973), *Second language retention over varying time intervals*. In: Modern Language Journal 57, 400–405.
- Stern, H.H. (1976), *The Ottawa-Carleton French project: Issues, conclusions, and policy implications*. In: Canadian Modern Language Review 33, 216–233.
- Van Els, T./ B. Weltens (1989), *Foreign Language Loss Research from a European Point of View*. In: ITL-Review of Applied Linguistics 83–84, 19–35.
- Weltens, B. / A. D. Cohen (1989), *Language attrition research: An introduction*. In: Studies in Second Language Acquisition 11, 127–133.