Second Language Acquisition often creates a broadened perspective of the world. Not only does speaking another language open doors of communication with people from other lands, it also enhances one’s own view and perception of the world. Learning to see the world through the eyes of a foreign language can be advantageous and very rewarding. However, learning to speak a second language can also simultaneously have an encroaching effect upon the span of the original tongue. The process of learning a second language often comes with a small price: loss of the first.

Not many are aware that this phenomenon even exists. However, through personal experiences, and in talking with others who have identified similar tendencies in themselves, I have gained insights into the linguistic processes of language attrition. In this article, I explore language attrition meaning, the loss of the speaker’s first language, in respect to the acquisition

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* The Title not only reflects an aspect of language attrition, but also coincides with my inability to officially finish the written version of my undergraduate senior thesis due to medical restraints. I would like to extend my gratitude to the Linguistics Department at Swarthmore College for taking my circumstance into consideration and allowing me to finish my thesis orally. I would like to thank my thesis advisor, K. David Harrison, my faculty reader, Donna Jo Napoli, my student readers, Jonathan Ference and Tiana Pyer-Pereira for all of their suggestions on my project. I also extend my utmost appreciation to all of the people who so willingly shared their language learning experiences with me. In addition, I especially thank my family and my best friends, Heather Gage and Karen Wismer, for their patience, encouragement, and guidance throughout my thesis writing, my language acquisition and attrition experiences, and my current language maintenance frustrations. And above all, I thank my grandfather, J. Kenneth Kreider, who taught me that there is a world outside of my own country, and Katrin Lometsch, who first showed it to me.
of a second language. I will be limiting my scope to solely immersion environments and I will also be analyzing some of my own language attrition experiences. The central component of the paper is the analysis of what effects second language acquisition in an immersion environment has on the speaker’s native tongue.

Extensive studies of language attrition in relation to aphasia from instances of brain damage are well documented. However, language attrition triggered by the acquisition of a second language, is not well understood. There especially appears to be a large gap in the literature relating to L1 attrition in the context of L2 acquisition. Therefore, the initial goal is to discover and evaluate whether people other than the author who were in the same situation of L2 immersion also showed signs of L1 attrition. I separate the different areas where attrition has been discovered to occur in my data, and compare those findings to what has already been previously documented in other L1 attrition studies and literature. There is a clear paucity of previous work in this specific area. Therefore, my thesis serves as a synthesis of what is already established to be related to the attrition of L1 in the presence of L2, in addition to offering new data in support of these theories in hopes of better understanding the complexities of language attrition.

1. Types of Attrition:

There are four different types of language attrition and four situations in which language loss may occur. What is lost is either the first or second language and the environment in which it is lost is either the dominant L1 or L2 environment, (Kouritzin 1999:12). The possible configurations are:

1.) Loss of L1 in the L1 environment.
2.) Loss of L1 in the L2 environment.
3.) Loss of L2 in the L1 environment.
4.) Loss of L2 in the L2 environment.

Possible examples that tend to be the most common reasons for attrition of each of the above situations are as follows:

1.) First language loss by aging and elderly people.
2.) Loss of native languages by immigrants.
3.) Foreign language loss due to disuse.
4.) Second language loss by aging and elderly migrants.

Language attrition occurs in a variety of contexts and, “attrition phenomena develop in bilingual individuals as well as bilingual societies, in both indigenous and immigrant communities. At its extreme, attrition leads to what has come to be known as ‘language death,’” (Seliger and Vago 1991:3). However, for the purposes of this paper, I will only be looking at number 2.) the loss of the first language in the environment of the second language. While delving into the arena of language attrition in the unique context of second language acquisition, I have chosen to thoroughly explore this phenomenon only in adult subjects whose L1 was fully acquired before the onset of L2. As a result, this paper deals mostly with “sequential bilinguals,” those people who learned their second language (L2) after their first language (L1) was adequately acquired and sufficiently developed. Since that is the primary focus of the paper, “simultaneous bilinguals,” those who acquired more than one language from birth, (Lightbown and Spada 1999), are only mentioned briefly.

I have also chosen to only briefly mention the phenomenon of code-switching. There is already a vast literature on the subject and an established finding is that code-switching does not necessarily lead to, nor indicate, the presence of attrition, since there are documented instances
where people can be long-term stable bilinguals and still code-switch without showing signs of any attrition.

It was through the conscious realization and awareness of my own personal language attrition experience that I was lead to this topic. Although involuntary code-switching is what first alerted me to the possibility of my own personal language loss and of the existence of language attrition in myself and others, upon further exploration, I soon discovered that code-switching in and of itself does not necessarily indicate the presence of a language loss issue. My personal, albeit, subjective insights on my own experience spurred me on to find out whether or not this was a common experience for learners and speakers of a second language.

Like Laura Sicola did in her article, "'Communicative Lingerings': Exploring Awareness of L2 Influence on L1 in American Expatriates after Re-Entry," (2005), I started investigating the attrition of L1 from a personal perspective. It is through my personal experience in losing aspects of my mother tongue, after having lived for a significant amount of time in an immersion environment, that I was first introduced to the complex phenomenon of language attrition.

I spent 11 months during my junior year in high school living with a French family in Parthenay and going to school with other French students my own age. Four months into my stay, when I sat down at the computer to write a Christmas letter to my family at home in the United States, was when I first significantly noticed the real impact of language attrition. I was struggling to produce a coherent English paragraph. I was second guessing myself constantly. It was extremely frustrating and difficult to try to express myself again in a language I once thought was my own. Throughout the rest of my stay in France and in the months following my return home, I had been yearning to know what it was I had experienced and why. I wanted to know why I went through what I did in relation to losing my first language and why I had the
instantaneous reactions I did in certain situations. I didn’t understand at the time what was happening, but I knew it was happening for a reason that should be able to be explained. In a letter I wrote to a friend looking back on the whole language loss experience, I commented that, “they never tell you stuff like this. They never prepare you for stuff like this. And it quite possibly could be because they just don’t know about it either.”

The study of language attrition, especially in cases of second language acquisition, is a fairly new field. Early studies in this type of attrition did not deal as much with the, “loss phenomenon as such, but only in the retention of what was taught in the preceding language course. No interest [was] exhibited by the researchers in the nature of, nor in any explanations for, the loss sustained…” (Els 1986:3-18). It is really only within the past 20 to 30 years that any studies have been done in this area and, “the questions on this topic still by far outweigh the answers,” (Schmid 2004:239). Monika Schmid goes on to say that, “it cannot even be said with any certainty whether a first language in which a mature level of proficiency has been reached can ever undergo significant attrition, let alone how or why, (Schmid 2004:239).” I disagree with Schmid purely through my own personal experience of language attrition. In exploring my own personal experiences, as well as those of others I have documented, I hope to add more support to the argument that there legitimately is such a thing as L1 attrition. The motivation for and the process of language attrition are topics that merit further investigation in more in-depth studies in the future.

In a way, in exploring what effects second language acquisition in an immersion environment has on the speaker’s native tongue, I am also seeking to answer some of my own questions about what happened to me individually. This topic is something that is tangible for me because I experienced it first hand. When I first learned that this process is actually an
academically recognized area, I could point to it and say, “that’s me. That’s what I’m going through. That’s what’s happening to me.” It was a realization that I was not alone. It was a new found awareness that it did exist, it is possible, and it is legitimate. I just did not know that it was going to happen before it actually did. Before studying abroad, I was prepared for my French to vastly improve but I had not anticipated a decline in my ability to speak English.

I was prepared for it the second time around. I was a smarter student the second time I immersed myself in a foreign language for an extended period of time. I had experienced attrition once already, so that when I went into a German immersion environment, I knew what was coming. I was prepared. I used that to my advantage and took that knowledgeable vantage point in order to evaluate and monitor my progress and mistakes in addition to those of my fellow program participants. In 2006, I studied the German language for two months in an intensive German-only immersion environment at Middlebury College in Vermont. Even in that short amount of time, I came across several instances where language attrition was at work in myself and in others.

Middlebury College’s intensive summer language immersion program is unique in that the participants must take a language pledge saying that they agree to speak, read and write only German for the entire length of the program. The pledge is strongly enforced, creating a unique German immersion environment in the hills of Vermont where everything is conducted solely in the target language. Most of my data consists of my own observations of our language behavior following the lifting of the language pledge at the conclusion of the program and the subsequent return to speaking English. I have also included comments that were made by some of the participants in respect to their language attrition experiences. The primary data were collected
over a period of seven weeks, and I solicited follow-up comments by e-mail during the following 5 months.

For the most part, the participants of the program were undergraduate or graduate students. The age range of the students was roughly 18 to 25, with a few outliers who were studying German in relation to their professional careers. As a result, there were various skill levels present. My data does not take into account how long German was studied by these participants nor whether there were any previous study abroad experiences in the target language before arriving to campus and beginning the immersion sequence. The participants came from a range of backgrounds. Most were citizens of the United States of America and spoke English as their L1. There were also participants from places as far as France, Canada, Korea, China and Chile. I chose only to evaluate instances of language attrition in the cases of the native English speakers.

I was an active program participant, not solely a researcher conducting a study. Therefore, I was limited in my ability to adequately observe and collect data. After hearing an utterance that was obviously related to first language attrition of some sort, I often found myself grabbing for any scrap of paper that was nearby. I took notes on the back of my class handouts, I jotted observations down on napkins, and I scribbled examples of attrition in the margins of my books. As a result, my data is anecdotal and consists of participant (and self) observation.

Language attrition is an intricate phenomenon and is often very language specific. It is my assumption that different combinations of L1 and L2 would yield various attrition results as different impacts on L1 would be made depending on what the L2 language is. Therefore, I limit my investigation primarily to English speakers who have been in a German immersion environment. Participants in the Middlebury College summer language immersion program
(including myself) are the primary subject group. To balance the picture out a little bit, I examine this group alongside of data on German speakers who have been in an English immersion environment. In addition, examples of speakers of other languages who have also acquired a second language via an immersion environment are also used to supplement the English/German data.

From the assessed data, the areas that are most commonly affected in L1 are established. The attrition data is broken down into types for ease of discussion. I introduce the subtopic of lexical transference with Finnish-English data recorded by Helena Halmari before moving into the German-English data of my own. I first start out by looking at two interesting instances of lexical transference by a native German speaker whose L2 was English, then examine the data I collected at Middlebury College. Instances of lexical transference, including a brief look at code-switching, are examined. This is then followed by examples collected at Middlebury College of syntax attrition. I then move into problem areas in pronunciation that, in turn, are often manifested in the writing system. This will also include instances of over-generalization of English rules. Additional areas of investigation include intonation and stress, idiomatic expressions, and a final category of miscellaneous items that primarily have to do with concepts that are not translatable across languages.

My convention for displaying morpheme tags of the data will be as follows:

ACC accusative
AUX auxiliary
DAT dative
IF informal
IN infix
INF infinitive
NEG negator
PL plural
PP past participle
Words in the morpheme by morpheme analysis that are underlined have been imported from English. German is unique in so far as that it, “distinguishes between separable and inseparable prefixes. Separable prefixes attach to the front of the root verb in some situations, yet are detached in others. Inseparable prefixes… never separate from the root verb,” (Rankin and Wells 2004:414). These are distinguished as:

I.PRE inseparable prefix
S.PRE separable prefix

2. Lexical Transference:

Extended exposure to English for the native Finnish speaking subjects of Halmari’s (2005) study resulted in lexical transfer. She notes that one of her subjects, “replaces the Finnish word tietokone ‘computer’ (literally, ‘knowledge machine’), with a non-word kompuutteri, derived from the English and showing total phonological assimilation to Finnish sound patterns,” (Halmari 2005:414).

I came across a similar instance in my data of a native German speaker whose L2 is English. The following example also demonstrates the insertion of a word from L2 into a discourse taking place in L1. In this instance, the speaker inserts the L2 word into the correct German verb form template just as the phonological rules of Finnish are maintained in Halmari’s study.

Katrin, a German exchange student to the United States, remembers having some trouble speaking German again after living in the US for a year. Her mother specifically gave an example of a time she explicitly remembers Katrin having trouble lapsing into her native tongue.
The family was driving in the car shortly after the conclusion of Katrin’s stay in the States. Her father had just finished eating an apple and went to throw his apple core out of the car window. (Here, the German word used for “apple core” is *Apfelbutzen*. This is a regional term and is more commonly known as *Apfelgehäuse*. This nuance in vocabulary, however, is not pertinent to the attrition data.) Katrin’s reaction, as recalled by her mother, was:

(1) a. “Papa, *vermisse* das Fenster nicht,
    Papa, I.PRE-**miss**-3SG the-ACC window NEG,
    “Papa, do not miss the window,

    sonst *mußt* du den *Apfelbutzen auf*pick*en.”
    otherwise must-3SG you-IF the-ACC apple core PRE-**pick**-INF
    otherwise you must pick up the apple core.”

    While telling this story to me, her mother stressed that Katrin’s utterance was definitely not German and then proceeded to explain how the sentence would have been properly formed in German. She mentioned that it could have been said one of two ways. The second clause contains no explicit reference to the window; context allows the correct interpretation.

b. “Papa, *trifft* nicht neben das Fenster,
    Papa, miss-3SG NEG next to the-ACC window,
    “Papa, do not miss the window,

    sonst *mußt* du den *Apfelbutzen aufheben.”
    otherwise must-3SG you-IF the-ACC apple core S.PRE-**pick up**-INF
    otherwise you must pick up the apple core.”

c. “Papa, *trifft* nicht daneben,
    Papa, miss-3SG NEG it-next to,
    “Papa, do not miss it,

    sonst *mußt* du den *Apfelbutzen aufheben.”
    otherwise must-3SG you-IF the-ACC apple core S.PRE-**pick up**-INF
otherwise you must pick up the apple core.”

What Katrin had unknowingly done was to insert the English lexical items, “miss” and “pick” into her German sentence. She maintained, to a great degree, the correct grammar of her German sentence by fitting the inserted words into the German grammatical framework of the sentence. However, I will address the negation details in the following paragraph. She stayed within the grammatical parameters of her L1 while inserting lexical items from L2. What resulted were the verbs “vermissen,” which was correctly conjugated to “vermisse” and “aufpicken,” which was already in its infinitive form as a result of being the second verb of the phrase–müssen, correctly conjugated as mußt, being the first. What she actually produced was a sentence that sounded particularly funny to her parents’ ears because “vermissen” is actually a verb which exists in German but does not mean precisely what Katrin was trying to express. In German, “vermissen” is the verb used to express missing someone or something. “Aufpicken” does not actually mean anything else in German and here Katrin simply inserted the English word into the German verb template that was called upon by the framework of her sentence being produced in German.

Another interesting impact of this verb replacement is apparent in the negation scope of the sentence. The negator, nicht, is capable of being positioned in various locations within the German sentence. There is no strict word placement of nicht. It is, however, dependent upon, “what is being negated, whether the nicht relates to the clause in general, or focuses on a particular piece of information within it. In clause-level negation,” which is the case of this example, “the position of nicht is determined by the grammatical context as follows: Nicht follows conjugated verbs, dative and accusative objects, and specific time expressions. Nicht
precedes adverbs and prepositional phrases that are not specific time expressions, verbal compliments, and V2 structures,” (Rankin and Wells 2004:77).

According to these rules, Katrin negates her sentence correctly. She places *nicht* after the conjugated verb, *vermissen*, and the direct object, *das Fenster*. However, in her mother’s corrected version, the negator is placed in a different part of the sentence. The verb *treffen* on its own means “to meet” or “to hit,” while *nicht treffen* means “to miss.” The negator goes along with the verb in order to create the meaning “to miss.” In addition, *nicht* is also placed in front of *neben* which is acting as an adverb in this sentence indicating where the apple core would hit if it missed the window. This is unique to the German formation of the sentence and is not expressed in English. Therefore, Katrin did not have either of these two rules at her disposal in order to place her negator correctly. Katrin neglected to use *neben* in her sentence and formed her verb independently of the *nicht treffen* expression. As a result, she put *nicht* in final position, what otherwise would have been the correct location. Lexical substitution is not surprising, as that is one of the first signs of attrition. However, the domino effect on the syntax from the failure to include *neben* is also part of English interference. Katrin most likely did not use *neben* in her sentence construction, since the concept expressed by the German *neben* is not needed in the English equivalent.

3. **Code-switching:**

Stephen Clausing states that “one should not overlook the function of code-switching in language… code-switching is the mechanism by which this alternate lexicon is utilized,”(Clausing 1986:10). Carolyn is a native German speaker whose family has lived in the United States for 30 years. She is a German professor at Middlebury College’s language program. Her native German speaking parents came to visit her at Middlebury for an afternoon.
Afterwards, while reflecting on the visit with me, Carolyn made the assessment that her father continues most commonly to code switch conjunctions and adverbs in English while speaking in German.

At the conclusion of the Middlebury program, I noticed similarities in my own mistakes. I found the same thing to be happening with myself as well, only in the reverse as Carolyn’s father was experiencing, as my L1 is English. I also found that German conjunctions and adverbs would pop into my head first so that then I would have to “translate” them back into English mid-sentence. Specifically, I had particular problems with *und* (which is really close to its English equivalent, “and”) *oder* “or,” *aber* “but.” I also noticed issues with *ist, “is.”

At times, I also noticed difficulty with code-switching when I would come across the need to use a particular expression that was more commonly used in L2 than in L1. I often had common German phrases get mixed into my English phrases and incorporate themselves into my sentences.

(2) a. “…I decided I wanted to be close enough to be able to go home for things like Christmas and so weiter.” (and so forth, et cetera)

When activating a common expression in German, it flows out easier that way than if time is taken to “translate” the phrase into English before proceeding with the discourse. In this way, common expressions naturally seemed to incorporate themselves into speech. In this particular example, however, “so” could be seen as acting as the catalyst. It is not entirely clear whether “so” is German or English in this utterance. Where the actual line of the code-switching break is located, is opaque. The bolded text in the following example indicates to what language “so” belongs. In b), “so” is German. In c), “so” is English.

b. and so weiter.
c. and so weiter.

In the example sentence a., I grouped “so” with the German because code-switching for one word at the end of a common phrase is very unlikely. This is in accordance with Carol Myers-Scotton’s hypothesis that code-switching occurs more often at phrase boundaries, (Myers-Scotton 1993). The common coupling of the German “und so” and the English “and so” could have been at play. However, it’s even more probable that the common German phrase, “und so weiter” was incorporated into English and simply blended with the use of the English, “and.” Therefore, it is plausible that “and” was actually acting as the catalyst despite correctly remaining in L1.

Code-switching is not necessarily a sign of attrition. Both sets of vocabulary are still present. One is just more easily accessed than the other. As Halmari (2005:399) summarizes from Pfaff 1979 and Seliger 1996,

In the same way as monolingual speakers are rarely as fluent in all the linguistic registers of their one language, bilinguals do not have equal command of different speech situations in both of their languages. One language may be more dominant in one situation; the other language in others. Thus, language switching in itself does not mean that there is attrition in either language.

While I agree with this argument and that code-switching is not necessarily a sign of language loss, involuntary code-switching might very well be a sign of attrition.

Wendy, an American who has been studying in Belgium, shared her experience of code-switching with me. She is in a unique position because her program is bilingual. Thus, everyone participating in it is fluent in French and English. This allows code-switching to occur that is comprehensible to all parties participating in the conversation. Both L1 and L2 are spoken by all
speakers regardless of whether L1 or L2 is French or English for that particular individual. What is important is that any given listener would be able to follow the conversation despite the occurrences of code-switching.

Because my program is bilingual, everyone speaks both French and English... and generally 1-3 other languages, which means we're constantly switching back and forth. Half the time, I find myself speaking French to my Belgian friend who's speaking back to me in English and we don't really notice it until someone else points it out.

As Wendy said herself, there are even times when the participants do not realize they are code-switching between themselves. Both speakers understand each other so there is no immediate need to streamline the conversation into one language. In this particular instance, the code-switching from one language to another between two people is comprehensible.

However, Wendy goes on to say that, “the downside to this schizophrenic language situation is that none of us can speak our own (native) language perfectly now either.” She is consciously aware that her English, and the native languages of others around her, are suffering. Even though she is code-switching in an environment that is favorable for such tendencies where she is able to practice both English (L1) and French (L2), her L1 is still suffering.

Wendy went on to use her friend as an example: “a British girl (who has Spanish parents and an Italian boyfriend) pointed to some water on the ground saying, ‘I can't remember what that is called!’ I felt incredibly intelligent when I could come up with ‘puddle.’” Wendy’s friend was unable to remember the English lexical item that Wendy was able to supply for her. Although we do not know the extent of her language loss, this still can be identified as a case of language attrition since she was unable to access that lexical item. This quote also gives us an interesting insight into Wendy’s thought process as she identifies herself as feeling “incredibly intelligent.” Coming up with the missing vocabulary word was very difficult and mentally
demanding for her. However, such effort at producing language in the context of language attrition is not surprising.

4. Syntax:

The following three examples all relate to word order. The German language has a different basic word order than English. In German, the verb must always be in the second position in the sentence. There are also cases when a verb would come at the end of a phrase, such as when there is already a conjugated verb in the phrase or if it is a dependent clause.

The Middlebury Language program is a very intensive experience, so it is not surprising that I would have uttered this sentence for purposes of encouragement and self motivation:

(3) a. “I could for 7 weeks go.”

As soon as I said that sentence, I knew it sounded funny. I had arrived at the end of my sentence and tacked on the second verb in last position as I was used to doing in German. The correct formation of the intension of that sentence would have been:

b. I could go (last) for 7 weeks.

The second verb of a sentence comes at the end of the sentence in German. Here, I had carried the German rules over into English. I was speaking in English, using English vocabulary, but fashioned the sentence in a German mold by using German word order.

Another instance of incorrectly arranged words in spoken discourse was:

(4) a. “She doesn’t have much too more of those.”

I had attempted to say,

b. “She doesn’t have too many more of those.”
This is also an instance of lexical transference. The German word, “viel” is utilized in instances where English would employ either the word “much” or “many.” While the form of “viel” changes with the additions of different suffixes depending on the noun(s) that it is modifying, the underlying root is the same. In the above example, “much” is used instead of “many” which would correctly modify the plural, “those.” In the process of this lexical interference, the word order was compromised.

I also came across a written instance in which word order and verb placement came into play. There is an online community called Facebook that acts somewhat as a directory of college students where people can stay in contact with one another. On the profile of a fellow language school participant, I encountered this sentence:

(5) a. “Katina is happy, because she now English to speak allowed is.”

Had that sentence been in German, it would have probably been formed as such:

b. Katina ist glücklich, weil sie jetzt Englisch sprechen darf.
   “Katina is-3SG happy, because she now English to speak-INF is allowed-3SG
   “Katina is happy, because she is allowed to speak English now.”

Here, it is also evident that the German verb-final position was causing havoc for the native English speaker. Katina maintained the German word order and just replaced the lexical items with English vocabulary. The German verb, dürfen, “means ‘be allowed,’ ‘have permission,’ or ‘may’ (relating to permission). It is commonly used in polite requests,” (Rankin and Wells 2004: 113). This threw the speaker off a little bit when attempting to translate the single word darf into two, “is allowed.” Had it been a one-to-one transfer, the expected outcome would look like:

c. “Katina is happy, because she now English to speak may.”
Since the dual construction, “be allowed” of the verb dürfen was selected instead of the single construction, “may,” the auxiliary “is” is added. Her choice of placement for the helping verb is not expected. One might assume that she intentionally made this incorrect formation to describe her “status” – hence, her current frustrations of frequent word order confusion and mistakes. However, it should also be taken into account that the speaker chose to use a two word translation for darf. As a result, she was left with an extra “is” and was not quite sure what to do with it. So, in accordance with German syntax, it was also tagged on at the end.

Similarly, Eva Eppler identified the pattern of “V2 word order in subordinate clauses” as, “the most widespread tendency in code-mixed examples, but also –to a lesser degree– in monolingual German,” as well. In other words, subordinate clauses with the verb in second position, instead of in final position, are often generated by bilingual German-English speakers. She goes on to state that, “Verb second position for all clause types seems to be more acceptable in [English influenced German] than in Standard German,” (Eppler 2002:662).

Therefore, it is logical to conclude that L1 German, L2 English speakers are more likely to show L1 attrition effects while speaking German through incorrect V2 use in dependent clauses, while L1 English, L2German speakers are likely to show L1 attrition effects while speaking English by their tendencies to put the verb in word-final position.

5. Pronunciation / writing system:

I came across several instances of pronunciation issues. I found that in some cases, German pronunciation rules were being carried over into English. For example, while reading a text out loud in English, I pronounced the written j as y before I caught it soon enough to correct myself.

(6) “Yack” instead of “Jack”
The German written \( j \) is pronounced as English speakers would say written \( y \). I, of course, noticed this as soon as I said it. However, as I was reading it in English, I had pronounced the word in the German manner just by instinct.

Debbie, a US citizen who has lived and worked in Germany for five years, also mentioned similar issues she was having with pronunciation. She specifically commented on having problems pronouncing and knowing what sound to make in English when she came across the written letters \( w \) and \( v \). The German written \( w \) is pronounced as [v], while the German \( v \) is pronounced as [f]. Despite being fully capable of correctly producing the English [\( \theta \)] sound, Debbie also mentioned problems with saying the written \( th \) simply as [t] as one would do in German. Obviously, she was fully capable of producing the English [\( \theta \)], a sound the Germans often struggle with because it does not exist in their language. Debbie did not lose her ability to pronounce [\( \theta \)], she simply was conditioned by her exposure to the German language to pronounce \( th \) as [t] instead of [\( \theta \)] when she saw it in print.

Most of the above pronunciation issues are triggered primarily from reading written text. Other interesting things start to happen as people who have been exposed to a second language start to write their first language again after an extended period of time of working solely with their L2. One primary difference between English and German writing rules is German’s mandatory capitalization of all nouns verses English’s capitalization of only proper nouns. The frequently required rule of noun capitalization in German is originally difficult for native English speakers to get used to. However, once the native English speaker has been exposed to this method for an extended period of time, it suddenly becomes complicated to switch back. The tendency, even while writing in English, is to capitalize all nouns. I came across this issue quite often as I returned to writing in my native tongue.
Another issue that arose with writing was spelling. I found myself to have an inclination toward maintaining German spelling tendencies in English. The combination of *sch* is seen often in German. This sequence carried over into my English, as I began producing words that do not exist in either language such as:

(7) *schould* instead of “should”

The grapheme *k* is often used in German where English realizes the letter *c* as [k]. This also yielded non-existent words such as:

(8) *kommon* instead of “common”

I also found instances that were caused by this same problem but that created words that actually did exist. I argue that these mistakes were instances of spelling inclinations imposing themselves on English instead of an occurrence of code-switching. Common examples were words such as:

(9) a. *Musik* instead of “music”

   b. *Amerika* instead of “America”

   c. *Ist* instead of “is”

I do not think these are cases of code-switching as the sentences in which they were produced flowed correctly in English on both sides of the word in question.

6. Morphology:

Specific rules apply to English. However, native speakers do not have to think about these rules consciously on a regular basis in order to produce correct sentences. Children often make mistakes and even over-apply certain rules that they have learned. For example, the English past
tense –ed formation is often added to irregular verbs by children who are over-generalizing and over-applying this English rule that they just learned. This same thing started happening with second language speakers when speaking English, their L1. For example, I found myself saying:

(10) “It costed $xx.xx.”

(11) “I rewinded it.”

Although the presence of language attrition is apparent, this is a very unexpected attrition effect. A reason that these particular instances surfaced in German-English speakers could be because, though these past tense forms are irregular in English, their counterparts are regular in German.

*Kosten* (to cost) is a weak verb in German. This means that there is no stem change in the formation of the past participle. The formation of a weak verb past participle, as outlined by Rankin and Wells (2004), consists of:

“ge“ + [unchanged stem] + “t”
PP PRE - verb root - PP SUFF

If the root of the verb ends in a “t,” then a schwa [ə] is added before the suffix “t” to create a proper syllable formation since German does not allow the long consonant [t:]. *Kosten* is a regular weak verb. Its past participle is *gekostet*.

*Zurückspulen* (to rewind) is a composite of the verb *spulen* (to wind) and the adverb *zurück* (back). In this case, *zurück* takes on the characteristics of being a separable prefix. The formation of a weak verb past participle that includes a separable prefix consists of:

[separable prefix] + “ge” + [unchanged stem] + “t”
S.PRE - PP IN - verb root - PP SUFF
The past participle prefix becomes an infix and is positioned between the separable prefix and the verb. *Zurückspulen* is a regular weak verb. Its past participle is *zurückgespult*.

The verbs “cost” and “rewind” both have irregular formations of the past participle in English. The German verbs *kosten* and *zurückspulen* both have regular formations of the past participle, (Strutz 1998). This nuance could have easily been the source of attrition in these cases.

These mistakes, however, could also go beyond what German was specifically acquired and actually be reflective of a deeper issue. By reverting to applying rules that the speaker knew were correct in most instances, it becomes apparent that the speaker did not have a firm grasp on the English rules that are second nature to native English speakers who have fully acquired English. Therefore, this clearly points to being a case of language attrition. On both occasions, the speaker made generalizations over what should have been an exceptional suffix: the English past tense marker. Theoretically, according to the mind of the speaker (at this point, more equivalent to being in a language acquisition stage similar to that of a child) these sentences should be correct.

I uttered sentence (11) shortly after arriving back home after my immersion experience in Middlebury, Vermont. You can imagine my embarrassment upon being corrected by my younger sister, someone whose English grammar I used to correct. She exclaimed, “Did you just say, rewinded it? Don’t you mean, rewound it?” My language ability had regressed to a point where I needed to re-learn the next stage of English rules: there are exceptions to this rule that are irregular. The English ability of the speaker in both examples (10) and (11) had taken a step back. Whatever the source may be, these errors make L1 attrition apparent.
7. Intonation and Stress:

Admittedly, it is very hard not to continue doing what a speaker has been doing in an immersion environment for a long time. It is hard to turn off L2, and all of its components, completely. Just as, “culture is encoded in the lexicon and the syntax of a language,” (Kramsch 1998:90), intonation can also be largely culturally based. Kira, a native English speaker whose L2 was Russian, noticed that intonation was her main problem area. Russian intonation is very distinct and there are unique pitch contours to express various types of sentences. For example, as in English, a statement has a different intonation pattern than a question does. However, Russian depends much more on intonation patterns than does English, such as to express thanks, repetition, requests, negative exclamations, and irony, for example. These intonation patterns do not match up with what could be considered their equivalents in English. Even though Kira “deliberately didn’t have [her] Russian persona on,” as she put it, her Russian intonation was still noticeably carried over into English. This idea of intonation had even become more than just a way of signaling whether she was expressing a statement or a question. She had learned that there was an expected way of saying certain things and expressing certain states. She did not consciously incorporate this into her English. She had internalized it to the point where it was no longer unique to her Russian speech anymore. It had become a part of her general language “lexicon of inflection” and thus, was also a part of her English speech.

While I was studying abroad in France, I encountered an interesting dilemma with stress patterns. Over six months into my stay, I was having a discussion in English with Lisa, a Canadian who was also studying abroad. In the middle of my sentence was the word, “philosophical.” I realized at the end of the sentence that the way I had said it just did not sound right. I looked at Lisa and I could tell that she agreed; there was one word that was not quite
right. We both repeated the word several more times after that in attempt to fix the problem. We determined it was not a vocabulary issue. We had the correct word. Something else was the matter. It was not until afterward that I realized it was an issue with stress:

(12) a. philosophical

   English sometimes switches what syllable is stressed when the word changes what part of speech it is. Philosophy, for example, is one of these words. When the ending is changed to create the adjective, philosophical, the stressed syllable also changes.

   b. philosophy
   c. philosopher
   d. philosophical

   English stress varies according to the phonological rules, but French stress is always final. French does not shift the stress between different syllables depending on what part of speech the word is. All three of the following examples maintain the stress on the final syllable.

   e. philosophie
   f. philosoph
   g. philosophique

   I had carried this notion of maintaining stress over into English. I had kept the stress on the second syllable of the word as it is in the root of the English form. This is not a direct interference from French, as I did not stress the final syllable. Yet, my judgment of where the stress actually should be in English was hindered by my exposure to French.
Jonathan is a student of both French and Spanish who studied abroad for a semester. He had a similar problem with stress when he came across a new word in English, his L1, that he had never heard of before:

We were talking about metrical systems in [class] the other day and [the professor] asked us to read a word to prove we knew where to put the stress without thinking about it. Only problem--I kept wanting to put it a syllable after everyone else.

(13) a. hamamelidanthemum

The stress actually falls on the third-to-last syllable in this word instead of on the second-to-last syllable, as was Jonathan’s instinct:

b. hamameli\underline{d}anthemum

The stress pattern is regular in English. However, Jonathan preferred putting it on the second-to-last syllable, as in Spanish.

“This seems to be a symptom of having spent so much time learning foreign languages,” reasons Jonathan. “Most of the new words I was reading for six months last spring were in French… There’s interference from Spanish, as well.” The stress patterns in French and Spanish differ from the stress patterns of English. Jonathan was used to having to think about where the stress should go in the new French and Spanish vocabulary he was learning. Therefore, when he came across an English word that was unknown to him, his instinct was to apply these patterns from French and Spanish. As Jonathan was starting to realize himself, he was experiencing a form of language attrition as a result of foreign language interference.

8. Idiomatic expressions:

The area in which I noticed the most trouble for myself personally was with idiomatic expressions. Idiomatic expressions are language-specific and often do not make any sense when
they are directly translated into another language. Idiomatic expressions can also be very culture specific. I was not attempting to translate idioms from German back into English. However, what I did find myself doing was getting confused at what exactly the idiom was supposed to be in English. I had the basic idea. I was familiar with the idiom and knew what I was trying to get across. However, I could not correctly formulate the expressions. I had the general idea but somehow, I knew it just wasn’t quite right. I often found myself asking others for the correct form of the idiom I was attempting to say.

(14) “…hit the hammer on the head.”
(15) “…a shot in the dark.”
(16) “…I just kicked myself in the foot.”
(17) “If I really wanted to do that, then I’d have a huge foot up.”

These three examples are pretty close to being correct. The basic formation of the idiom is correct. All elements are present. The concepts are there, but the vocabulary just got a little messed up. I confused relatively similar vocabulary that should have actually been: (14) nail (15) stab (16) shot (17) leg.

The above examples were also spoken and I only realized afterwards that there was something just not right about them. I had trouble with idioms even in written conversations. In an online instant message conversation, I typed an incomplete idiom:

(18) “…in high school I really needed to get away… I would have been one of those ‘east-coasties’ to go all the way to CA but then studying abroad my junior year of high school in France kinda got it out of me.”
After I typed that sentence, I rethought through what it was I was trying to say. It just had not come out the way I was trying to say it. I realized later that the idiom I was trying to use was: *to get something out of your system*. Leaving out the end of the idiom obscured my intended meaning.

(19) “…but there was a bigger fish on the table that we should have been eating.”

This attempted idiom came out almost entirely unrecognizable it was so jumbled. The template of the idiom, in addition to the vocabulary that was not quite right, made this idiom almost incomprehensible. Not to mention, the laughter that ensued when the person I was talking to realized what it was I was actually trying to say. The idiom should have read: *having bigger fish to fry*.

Another way that language attrition is apparent is through *calques*, or loan translations. In other words, “calquing is another common transfer strategy affecting meaning: an L2 phrase or expression, especially if idiomatic, is translated literally into L1, where it is ungrammatical,” (Seliger and Vago 1991:8-9).” Idioms that exist in L2 can be preserved and transferred into L1. This, however, often results in incomprehensible sentences since idioms are often deeply rooted in culture. There has to be a consensus in a speech community as to what an idiom actually means when it does not take on its literal meaning. Therefore, when an idiom is directly translated and imported from L2 into L1, this is an explicit case of L1 interference directly caused by the presence of L2.

(20) a. “*Man muß am ersten Platz verrückt sein,*
    “One *must in the (an + dem)-DAT first-SUFF place* crazy be-INF,
    “One has to be crazy **in the first place**
b. “Man muß vom Anfang verrückt sein,”
   “One must from the beginning crazy be-INF,"
   “One has to be crazy from the beginning"

um Linguistik zu studieren.”
in order Linguistics to study.
in order to study linguistics.”

The English expression would have more correctly been translated into German by stating:

9. Miscellaneous untranslatable items:

Some things cannot always be directly translated. One thing about learning a new language is that it provides a mildly different way of viewing the world just because concepts might be expressed in a slightly different fashion. I came upon one such instance when I tried to use a German construction in English.

(21) “What for a course is this?”

In other words: “What kind of a course is this?” That would have been the most natural way to formulate the question I was trying to ask. Instead, I resorted to a construction that is commonly used in German: the “was für” construction or literally, the “what for” construction. I directly translated this phrase into English because had I asked the question in German, this is the construction I would have used. *Was für* is used in German when asking the type of something or inquiring after qualities.

Another issue that is not easily translated between languages is the concept of formal and informal uses of the second person. In German, the second person singular, nominative case, informal pronoun is “du.” The second person singular, nominative case, formal pronoun is
“Sie.” The second person plural, nominative case, informal pronoun is, “ihr.” And the second person plural, nominative case, formal pronoun is, “Sie.”

Native speakers of the German language are capable of using these pronouns without having to think twice about which one is appropriate in what situation. However, Katrin, the German exchange student to America, struggled with these differentiations. After she was back in her native German speaking environment following her year in the United States, she recalls having trouble remembering when to use the “Sie” formal form. Her default second person singular, nominative case, pronoun became “du,” whereas, before going abroad, she didn’t have to think about it. It was not a conscious effort for her to determine which pronoun would be appropriate.

Some German verbs can be linked with certain prepositional complements that are called Präpositionalobjekts. Like in English, these prepositions are paired with certain verbs in order to create specific meanings, (Späinghaus 2005:46, 333-334). When combined, the verb and the prepositional complement create a complete unit of meaning that is different from the meaning of either the verb or the prepositional complement alone. The verb and the preposition together form an expression with a distinct meaning. The combinations of verbs and prepositions that go together to create a particular meaning are different in German and English. The trouble lies in the literal translation of these Präpositionalobjekts into English.

(22) a. “I was thinking on…”

A native English speaker without any attrition interference and German exposure would be more likely to say either of these two options:

b. “I was thinking about…”
c. “I was thinking of…”

The German construction is *denken an*. Alone, *denken* is the verb “to think” and *an* is a preposition whose meaning can change based on context and case. Its most common meanings are “at,” “on,” “to,” “in.” The meaning of the unit *denken an* was split and the verb and the preposition were translated separately. Therefore, the resulting, “thinking on” is a logical construction.

In certain instances, the German *an* can also mean “about.” This nuance in meaning may have also contributed to this error. Since the meaning “about” is able to be attributed to the German preposition *an*, the speaker could have easily made the parallel association that the meaning “about” is also able to be attributed to the English word, “on.”

Another instance of a similar issue is apparent in this utterance:

(23) a. “The main purpose to showing that was…”

This sentence does make sense in English. The meaning is apparent. However, it would be more natural for a native English speaker to say:

b. “The main purpose of showing that was…”

The source of this error is able to be linked to the German phrase *zum Zwecke* which can be translated to mean, “for the purpose of.” *Zum* is the composite of *zu* “to” and *dem*, the dative article and thus yields the meaning, “to the.” In this instance, the speaker was probably influenced by the German construction *zum Zwecke* and thus literally translated it into the
English “purpose to” instead of keeping the meaning of the entire unit together as a whole and producing “purpose of.”

Relative Pronouns work in German fairly similarly to how they are used in English. However, the Beziehungswort, or antecedent, determines the gender of the relative pronoun. The case of the relative pronoun is determined by the grammatical function it plays in its clause.

In a conversation at Middlebury College where we were talking about the need for people who speak languages such as Arabic and Chinese, I came across a relative pronoun issue. Several governmental agencies had visited campus in search of potential employees. However, the consensus among my German speaking friends was that we were obviously extremely low on the list of “crucial languages.” The representatives were understandably more interested in the students from the Russian language school, for example.

(24) a. “They need languages who these people speak.”

In reality, the intended sentence was:

b. [The government agencies] need languages that these people speak.

The equivalent German sentence would have probably been:

c. Sie brauchen Sprachen, die diese Leute sprechen.

They need-3PL languages-PL that-ACC these people speak-3PL

In this case, Sprachen is the antecedent and it is feminine. Therefore, the feminine form of the relative pronoun, die, is used. The dependent clause also dictates that the relative pronoun takes the accusative case.
The source of this error lies in the issue of reference and a relative pronoun in German that can take on several different meanings, depending on context. Relative pronouns can often be translated into English as “that,” “which,” or “who.” Here, the speaker used the English “who” instead of “that” and was incorrect since its antecedent was inanimate. In German, the gender and case is important in determining the correct relative pronoun; whereas, in English the important factor is whether the antecedent is human.

a) other articles that affirm findings
   i) My findings are in accordance with Hanne Skaaden’s article, "First language attrition and linguistic creativity," (2005), which also finds two of the main manifestations of L1 attrition to be in grammar errors and lexical retrieval. Serbian or Croatian L1 and Norwegian L2. “Psycholinguistically, L1 attrition seems to affect the productive skills more massively than the receptive skills, (436).” One could feasibly be able to understand all that is said, yet still be experiencing effects of language attrition.
   ii) (Olshtain and Barzilay 1991:139-150). Study of primary language attrition – reduction in specific lexical accessibility by adult speakers: English L1 Hebrew L2. English and language maintenance is valued yet still experienced retrieval difficulties. “This is perhaps a unique context in which language attrition has the least chance to develop and yet we found an obvious feature of reduction in vocabulary retrieval,” (149). Supports my claim that lexical retrieval is the most noticeable and first symptom of language attrition. And therefore, could also support that some code-switching is a result of language attrition. Here we see a parallel between code-switching and language attrition. This overlap in the code-switching and language attrition data might just be the link between the two. Code-switching is a real thing, a known process and can be a long term stable state. However, I predict that given enough time deprived of the L1 environment, this could turn into a state of language attrition.

b) articles whose findings are not in line with mine
   i) Helena Halmari’s article, "I'm forgetting both': L1 maintenance and codeswitching in Finnish-English language contact," (2005), explores the language abilities of Finnish-English bilinguals by mainly focusing on lexical deviations and codeswitching tendencies. In this study, the complex Finnish morphosyntax is determined not to have been affected by the prolonged exposure to L2. This result is in direct contrast with some of the data that is presented in my paper. (The syntax of German-English bilinguals was affected.)

c) Problem areas of type of data collection
   i) Gaps left by being at the mercy of observations
   ii) No long term following of attriters
   iii) Issue of self report validity
iv) Consciously realized data – since I noted my own mistakes. Other mistakes that I could have made that I didn’t realize on a conscious level were lost.

v) Monika S. Schmid’s article, “First language attrition: The methodology revised” critiques the very method I used to gather my data and suggests alternate ways to go about it in the future.

vi) (Lapkin, Doug and Swain 1995:67-94) investigated self-assessment ratings vs. language test scores. Data correlation did not overwhelmingly encourage the dispensing of language testing in favor of self-assessment methodology. However, their study did largely benefit from self-assessment data as ceiling effects rendered test information unusable.

2) 10. Discussion and Predictions:

a) This is where personal accounts could be incorporated? Make a synthesis of where those personal accounts fit into the above established attrition categories.

i) (25) pure lexical transference in Katie not realizing German words were inserted into her English while talking with the Bus driver

ii) (26) major complaints about word order problems from program participants at close of program while writing evaluations in English and only speaking in German. Get to the end of the sentence and realize that a verb hadn’t yet been incorporated. Exclamations like: “I don’t remember how to write in English!” and questions such as, “Where does the verb go?”

iii) (27) France experiences of code-switching: clean switching - “the switched items are given the proper pronunciation of the language from which they are derived” vs. ragged switching – “the switched elements are pronounced according to the phonetics of the pre-switch language,” (Clausing 1986:5). My utterance: “This is the “mie” (soft part) of the pain.” “Pain,” the French word for bread, was said with English pronunciation.

iv) Analysis of English-German data… The speaker is building words out of parts of different languages and accommodating two grammars at once. Not combined haphazardly. There is structure involved. There are certain rules to follow.

Prediction: in L1 German speakers inserting English vocabulary into German morphology, prefix and suffix will both be in German.

v) However, different result and expectations with L1 English speakers. In a Bavarian Inn, Kenneth (English L1, German L2) said:

(28) “Ich habe daß gemissed.”
I AUX that PRE-miss-SUFF
“I missed that”

Analysis: used the German past formation, including correct auxiliary. Added German ge- past tense prefix onto the English word conjugated in English past tense. Simply inserted English word into the German past tense template. Maintained English past tense marker –ed. Not a case of attrition. Instance of incomplete L2 acquisition. However, shows above theory of PRE and SUFF always being in the same language as being unique to German native speakers and does not carry over to speakers of English learning German.
b) Exploration of how data leans more towards proving attrition
   i) Effects of attrition first appear in lexicon
   ii) Attrition than starts to impact other areas such as morphology and syntax. Theses are the next main areas where the effects of attrition can be seen in German-English bilinguals.
   iii) Predict: as time goes on, changes in these areas increase. Attrition further impacts other areas as well.

3) **Summary and Conclusion**
   a) Why is it significant?
   b) In what ways can this knowledge be implemented?
      i) Classroom aspects
      ii) Preparation for going abroad
      iii) Readjustment needs
      iv) Counseling availability “debriefing” reentrance issues
      v) Accepted issue – don’t have to go through it alone

4) Going further/what is left to be investigated:
   a) Larger more varied sample group
   b) Follow-up studies
   c) Restate issue of self-report validity and random observations
   d) Looking for different or confirming results
   e) It may also be interesting to explore if there is a particular hierarchy of these characteristics. What is most quickly lost? What is more likely to be retained? The answers to these questions may also be contingent upon how much exposure the speaker had to L2 and how long L1 was neglected. Another similar area of exploration might be to determine the length of these effects. How much time is needed after the speaker returns to regular use of L1 before the impacts of L2 have been corrected?
Works Cited:


