Morphological Integration of Foreign Elements in Russian:
A Comparison of Bilingual Speakers in Lithuania and Estonia

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I. INTRODUCTION AND BACKGROUND

A. Research Premise:

The Baltic States, comprised of Latvia, Lithuania and Estonia, provide ample opportunities to study language contact in a dynamic and continuously evolving linguistic environment. Following the disintegration of the Soviet system, isolated Russian communities within the Baltic States have steadily transitioned from a state of predominant monolingualism to various degrees of bilingualism. Prolonged language contact between the indigenous languages (Estonian, Lithuanian, and Latvian) and the ethnic Russian linguistic communities has culminated in several structural shifts in the Russian language varieties spoken in these regions. These shifts are expressed in several ways. First, the influx of new vocabulary due to increasing levels of bilingualism and social interaction significantly expanded and altered the nature of the current regional Russian lexicon. Latvian, Lithuanian, and Estonian words are pervasively incorporated into Russian speech and are frequently used by Russian speakers in place of previously existing Russian vocabulary. Second, several studies (Verschik 2004, 2005,2007; Avina 2006) observed the syntactic, morphological, and semantic restructuring of Russian due to increased contact with the Baltic languages. Overall, the Russian language spoken in this area is rapidly adapting and evolving under the social and linguistic pressures exerted by a highly dynamic and fluctuating linguistic environment.

The main objective of this thesis is to thoroughly analyze one particularly striking linguistic phenomenon which developed as a result of prolonged language contact and the establishment of extensive multilingual Russian speech communities. Recent studies conducted by Verschik (2004, 2005), and Avina (2006) address the phenomenon of code-switching and

lexical borrowing among bilingual Russian speakers residing within Estonia and Lithuania. After a thorough comparison of these studies, I have identified key differences in the morphological integration of foreign elements by bilingual Russian speakers in Estonia and Lithuania. Data presented by Verschik indicate a consistent non-assimilation of Estonian morphemes into the Russian morphological matrix. Conversely, Avina's study shows fluid and comprehensive integration of Lithuanian morphemes by Russian speakers.

My research analyzes the established disparity in successful morphological integration in two main ways: first, by expanding the available data set, I attempt to provide a more thorough examination of the patterns in morphological integration established by the initial comparison and to determine the extent to which these patterns are recurrent. Understanding whether the observed phenomena are ubiquitous and consistent outcomes of the current language contact situation or are merely isolated occurrences is important for determining whether restrictions in productive morphological integration is a significant contributing factor to language convergence. Second, I conduct a thorough analysis of these patterns by examining the phonetic, phonological, and morphological structures of Estonian and Lithuanian morphemes used by Russian speakers and how they may restrict or enable integration. I argue that the crucial factor influencing or restricting successful integration is acoustic and morphological distance between a speaker's L1 (Russian) and L2 (Lithuanian or Estonian). In the course of this study, I hope to shed light on subtle acoustic and phonological cues which may play an important role in a speaker's successful use and integration of foreign words and morphemes and to establish a foundation for further, more intensive research in this field of study and region of the world.

The thesis begins with an overview and introduction to the Baltic States, their interrelated history with the Russian peoples, and the current social and linguistic demographic situation in

Estonia, Lithuania and Latvia. Following this overview there is a discussion and analysis of a number of influential studies conducted on language contact, bilingualism and code-switching. These studies are relevant not only to Slavic-Baltic interactions, but also provide insight into the more theoretical nature of this method of research which lays the groundwork for the subsequent analysis and comparison of language contact relations between Russian and Estonian and Lithuanian provided in section II of the thesis. Also presented is a cursory overview of the general phonetic, phonological and morphological attributes of the Estonian and Lithuanian languages in comparison to the Russian language. This information is important for establishing a system of similarities and disparities existing between languages which can be used for a more comprehensive and complete analysis. Examination of data provided by other researchers as well as my own independently collected data follows in sections III and IV.

B. Historical and Ethnic Background of the Baltic States:

The history of the Baltic States is a tumultuous chronicle, punctuated by frequent invasions, catastrophic wars, and extensive periods of foreign rule. Located on the shores of the Baltic Sea and within close proximity to Western Europe, the Baltic States occupy an area of geopolitical and economic importance which a multitude of foreign powers aggressively sought to control over the past millennium. As a consequence, the Baltic nations frequently became the primary target of territorial expansion by neighboring empires and as a consequence endured extensive periods of foreign occupation and rule. During the occupation of these regions, foreign powers actively sought to impose their languages and cultures at the expense of the indigenous people (Hogan-Brun 2004).The repression of local cultural practices, linguistic and social freedoms, and the ability to self-govern has had a protracted and negative impact on the

indigenous people of Lithuania, Latvia, and Estonia. Over the past few centuries, these nations sporadically enjoyed brief periods of sovereignty and freedom from foreign dominance. As a result, the Baltic peoples successfully adapted to living alongside foreign cultures and languages brought into their homelands by waves of invaders. The protracted periods of foreign rule as well as the massive influx of ethnic and cultural minorities culminated in the establishment of multi-linguistic and multiethnic societies within the Baltic States which continue to exist and evolve under the direction of the Baltic governments (Hogan-Brun 2004).

The extent to which the indigenous populations of the Baltic States endured linguistic and political subjugation by occupying foreign powers is most clearly exemplified by the complex and often difficult relationship shared between all of the Baltic nations and their Russian-speaking neighbors. While both Polish and Russian speakers left a significant impression on the social composition of these regions over the course of the past 500 years, the extent of Russia's influence manifests itself in the pervasive and enduring Russian social and linguistic presence in the Baltic States. The Russian presence significantly restructured the fundamental social and linguistic dynamics of Lithuania, Latvia, and Estonia. The occupation of the Baltic States by the Russian Empire and their re-annexation by the Soviet Union resulted in an incursion of Russian-speaking individuals and the development of numerous Russian communities, where Russian language and culture continue to predominate today. However, the Russian presence in this region came at the expense of the native populations, whose language, culture, and autonomy was subjugated and oppressed in order to promote the dominance and ubiquity of the Russian language and its speakers.

In the Baltic regions, Russian language and culture was disseminated and reinforced through a series of political and social policies developed by the Russian Empire in the attempt

to quell a growing anti-Russian sentiment and the thirst for national autonomy which arose during the latter half of the 19th century. Across the Baltic region, many members of the indigenous peasantry experienced a period of "national awakening" instigated by the reformist atmosphere of the early years of Alexander II's (1855-1881) reign (Raun 2001, 57-58). In response to the growing social and political dissent in the Baltics, the Russian Empire instituted an aggressive administrative policy in the period between the 1880s to early 1890s which aimed at curbing the growing nationalistic sentiment among the Balts by inundating the area with Russian speakers and by promoting social policies which aimed to expand the social and official dominance of the Russian language (Raun 2001, 59). Furthermore, the Russian Empire greatly desired to achieve a high level of homogeny not only in the heartland of the Empire but throughout its peripheries. The process by which the Russian Empire attempted to secure a homogenous empire based on Russian culture and language is aptly named "Russification."

The main objective of this "Russification" was to unite "the borderlands with the centre of the empire through the gradual introduction of Russian institutions and laws and the extension of the use of Russian in the local bureaucracy and as a subject of school instruction (Romanov 2000, 61)." Under the guidance of the administration as well as the promise of land and lucrative social privileges, waves of Russian-speakers left the mainland of the Russian Empire to settle in Estonia, Lithuania, and Latvia. Moreover, during this time period the Russian Empire was undergoing a significant industrial and economic expansion. The strategic position of Lithuania, Latvia, and Estonia made the Baltic region a prime location for the development of factories, naval yards, and shipping facilities. As a result, the Russian Empire transplanted numerous workers in order to develop the economic and industrial viability of these regions. For example, the number of industrial workers within Estonia alone increased from 6,500 to 24,000

in the period from 1860 to1900 (Raun 2001, 70-71). Through these actions, "Russification"

prevailed to a restricted degree in the Baltic region during the 19th century and moderately

altered both the demographics and the social climate of the region (Romanov 2000, 61-63).

Provided in the following paragraphs is a historical description of each Baltic State which aims

to detail their tumultuous and complicated interactions with Russians during the period of the

Russian Empire as well as the Soviet Union. We shall begin with an overview of the history of

Estonia.

The Russian Empire's occupation of Estonia began in the early part of the 18th century,

following Russia's defeat of the Swedish Empire at the Battle of Poltava (Tannberg and Maesalu

1997, 135). This victory led to the incorporation of the Baltic territories of Estonia and Livonia

(modern-day Latvia) into the realm of the Russian Empire. During the following two centuries

of Russian tsarist rule, Estonian life was predominantly agrarian and peaceful. However, in the

later-half of the 19th century, the prevalent attitude of the Estonian people turned toward

nationalism. Fueled by the desire to acquire political and social autonomy, Estonians instigated

several social uprisings among the peasantry of rural Estonia and distabilized the political control

of the Russian Empire's administration(Raun 2001, 56). The growing dissent among the

indigenous people of Estonia in the 1860-1880's prompted the Russian Empire to initiate an

aggressive policy of "Russification" within the Estonian territory. However, the extent to which

these actions were felt in Estonia was moderate at best. According to a census taken in 1897, of

an entire population of 958,351, Estonians comprised 90.6% while Russians comprised a mere

3.9% of the total population (Raun 1965).

In the chaotic period following the Russian Revolution in 1917, Estonia gained

independence from the Russian Empire and became an autonomous nation. However, the

duration of Estonian autonomy was ephemeral, effectively ending at the start of World War II in 1939 under the secret Molotov-Ribbentrop Pact between Germany and the Soviet Union. Under this treaty, the independent and neutral Baltic States were to be ceded to Soviet control following their invasion and conquest. Initial Soviet control lasted little more than a year. In 1941, Nazi Germany invaded Estonia and seized control of the Baltic nation from 1941-1944. This period of occupation brought substantial population declines in Estonia, resulting from war, famine and mass emigrations to Finland (Raun 2001, 165). The total population of Estonia decreased from 1,045,000 to approximately 855,000 by the end of World War II. In 1944, the Soviet Union re-annexed the Baltic States from Germany, and Estonia officially became a Soviet Republic. The outcome of a protracted occupation and a costly war was a homogenous population, of which indigenous Estonians comprised 97.3% in 1945. However, under Soviet rule the demographics of Estonia rapidly changed. Owing largely to a sequence of mass diasporas of Russian-speaking Soviet citizens, a comparably large deportation of Estonian dissenters to the Siberian GULAG system, and a general decrease in birth rates among indigenous Estonians (Raun 2001, 182), the proportion of native Estonians fell to 61.5% by 1989 (Rannut 2008, 151).

Unlike Estonia, Lithuania enjoyed a considerably longer expanse of independence and sovereignty over the past 500 years. From the early 13th century through the mid 16th century, Lithuania established itself as one of the predominant powers of what was then medieval Europe. The development of the Grand Duchy of Lithuania in the early 16th century created one of the largest European empires, which incorporated present day Belarus, Ukraine, as well as sections of Russia and Poland (Kiaupa 2004, 100-106). In 1569, Lithuania merged with the Polish Empire under the Union of Lublin, leading to the creation of the Lithuanian/Polish Commonwealth which lasted for nearly two centuries. Lithuania's main interactions with the Russian people

began in 1795, when Lithuanian was annexed by Russian Empire. During the following century, numerous political and social changes took place in Lithuania. Numerous social uprisings and peasant rebellions lead to fierce Russian military retaliations as well as extensive attempts to implement various aspects of "Russification" policy among the native Lithuanian population (Kiaupa 2004, 180-187). According to the 1897 Russian census, nearly 2.7 million people inhabited Lithuania. Of these 58.3% spoke Lithuanian, whereas 21.5% spoke Russian (Kiaupa 2004, 196).

Like the other Baltic States, Lithuania gained its independence from the Russian Empire in 1917, following the Russian Revolution. The history of Lithuania during the period of World War II resembles that of Estonia, with its autonomy ending in 1940 after Lithuania's annexation by the Soviet Union and the arrival of Soviet troops. Following the period of Germany occupation from 1941 to1944, Lithuania was assimilated by the Soviet Union and became an official Soviet republic. Under the Soviet Union, Lithuanians actively sought to gain independence and autonomy, resisting many of the forced political and social changes brought about by the Soviet system. In response nearly 128,000 dissenting Lithuanians were deported to the Siberian GULAG system. Regardless of mass arrivals of Russian-speaking Soviet citizens and casualties from the World War II, the demographics of Lithuania did not change substantially during the early years of Soviet control. In 1959, Lithuanians comprised 79.3% of the population while Russians comprised 8.5% (Poles and other ethnicities comprised the remaining population) (Kiaupa 2004, 310). These figures remained relatively unaffected up to the fall of the Soviet Union, wherein 79.6% were Lithuanian and 9.4% were Russian (Kiaupa 2004, 310).

Since the 13th century, Latvia and Estonia for the most part shared a common history. Both nations belonged to the Livonian Order which managed to successfully maintain its political autonomy until it suffered a crushing military defeat and annexed by the Swedish Empire in 1561 (Germanis 1998, 109). Swedish rule was maintained for nearly two centuries, until the Swedish Empire was defeated at the Battle of Poltava in 1721. At this time Latvia became a reluctant constituent of the Russian Empire. During the 18th century, the indigenous peoples of Latvia experienced a profound succession of social movements known as "national awakenings", which provoked a renewed sense of nationalism and a need for autonomy. These movements led to significant social unrest and several peasant uprisings (Plakans 1995, 91-95). As in Estonia and Lithuanian, the Russian Empire attempted to quell the social unrest by "Russifying" the native population. In Latvia, the main period of "Russification" began during the early 1880s as the Russian Empire attempted to solidify control over its peripheral territories (Hogan-Brun 2007, 490). The effects of this process can be seen in the significant changes in population demographics from beginning of the "Russification" process and to the end of the 19th century. In 1881, Latvians comprised 77.0% of the total population whereas Russians comprised a mere 4.0% (Plakans 1995, 158). In 1897 Latvians comprised 68.3% of the total population, whereas the proportion of Russians living in Latvia increased to 12.0% (Plakans 1995, 158).

In the chaotic aftermath of World War I, Latvia secured its independence from the Russian Empire, which lasted from 1918-1940, when it was re-annexed by the Soviet Union. Following the brief period of German occupation from 1941 to 1944, Latvia was integrated into the Soviet system until 1991, when it gained its independence during the collapse of the Soviet Union. During the 20th century, the indigenous population of Latvia shrank significantly and an

influx of ethnic minorities drastically altered the social composition of the region. In 1935 the pre-war population of Latvia Russians comprised 10.5% of the total population, whereas nearly 75% consisted of native Latvians (Plakans 1995, 158). In 1959, following the increased efforts of Soviet "Russification" policies the percentage of Russians increased to 26.6% of the total population, whereas Latvians fell to 62%. This trend steadily continued up until 1989, wherein 52% of the Latvian population was Latvians and nearly 34% were Russians (Plakans 1995, 158).

The complicated relationship that all three of the Baltic nations shared with their Russian-speaking neighbors over the past 500 years was instrumental to the creation of the current social and linguistic environments of Lithuania, Latvia and Estonia. Fluctuations in population levels of both indigenous and Russian-speaking groups have resulted in a dynamic cultural, social and linguistic setting, where multilingualism and evolving language policies define the the Baltic region. During the occupation of the Baltic States by the Russian Empire and the Soviet Union, many aspects of "Russification" policies significantly contributed to the alteration of the linguistic and social dynamics of this region. Following the collapse of Soviet system, a new process began which is directly responsible for some of the recent sociolinguistic developments currently being played out within Lithuania, Latvia and Estonia. Several scholars ironically named this process "Baltinisation." This term refers to the present government efforts and policies being implemented by the Baltic nations in the attempt to achieve social and political unity within their countries. Many of these efforts closely parallel the once-abhorred language and social policies purported by the administrations of the Russian Empire and the Soviet Union during their attempts to "Russify" the Baltic Republics. The process of "Baltinisation," its attributes, and its consequences for Russian language communities still residing the Baltic States will be discussed in the following section.

C. Demographics & Linguistic Situation in the Baltics from Soviet Era to Present

Following the Second World War, the Baltic States were re-annexed by the Soviet Union from German control. The Soviet government implemented a wide series of social and political changes within the newly formed Baltic Soviet republics in an attempt to proliferate Soviet ideology as well as the Russian language. These processes paralleled earlier attempts at "Russification" made by the Russian Empire during the later-half of the 19th century. Similarly to the objectives of Empire's administrative linguistic and social policies, the main goal of the intensive Soviet "Russification" was to ensure social and linguistic unity among the Soviet republics. As the chief component of this endeavor, the Soviet government implemented an aggressive relocation program which fueled widespread social and linguistic diasporas of Russian speaking individuals out of the Soviet Union and into the Baltic Republics (Rannut 2008, 151). Nearly half a million Russian-speaking workers as well military and official Soviet personnel moved to Estonia, Lithuania and Latvia from 1945 to1950 to take advantage of the higher standards of living and previously unavailable opportunities to occupy privileged positions in the government and business where Estonians were barred from working (Rannut 2008, 151). The Soviet era influx of Russian-speaking individuals was considerably more prolific than the 19th century attempts at "Russification" and effectively shifted the social and linguistic composition toward a Russian-centric paradigm.

Before the fall of the Soviet Union in 1991, Russian was the dominant language of all state and government organizations in the Baltic Republics. In many ways, Russian operated as the *lingua franca* of the entire Soviet system, serving an important functional role in administrating Soviet governmental policies and various other aspects of official life within the Soviet Union. In comparison with the indigenous inhabitants, the total population size of native

Russian-speaking inhabitants was, and presently remains, significantly smaller and restricted to urban areas. The 1989 USSR Census detailing population demographics of Soviet Republics shows the disparity between the size of indigenous peoples and ethnic Russians. In particular, the social composition of the Lithuanian Republic was consistently more homogenous than either Estonia or Latvia, with Lithuanians comprising 79.6% of the total population and Russians comprising only 9.4%.

Indigenous and Russian Population Levels in the Baltic Republics in 1989:

	1989 Indigenous Population	1989 Russian Population	1989 L1 Russian Speakers
Estonia	963,281	474,834	551,551
	61.5%	35.2%	35.2%
Lithuania	2,924,251	344,455	444,390
	79.6%	9.4%	12.1%
Latvia	1,387,757	905,515	1,133,298
	52.3%	34.0%	42.5%

Note: This table is adapted from Pavlenko (2008, 10)

In 1989, 34.8% of Estonia's, 42.5% of Latvia's, and 11.6% of Lithuania's citizens claimed Russian as their native language (Hogan-Brun 2004). According to Hogan-Brun, nearly all those who claimed Russian as their first language were predominantly monolingual. However, in the Baltic Republics monolingualism was only prevalent across one component of the social spectrum; in order to hold government positions, attend school at primary, secondary, and post-secondary levels, as well as participate in other aspects of society, a significant proportion of Estonians, Lithuanians, and Latvians became successful, balanced bilinguals with Russian as their second language. As a consequence, a significant part of the indigenous Baltic population was able to successfully communicate in Russian with members of the Russian minority, whereas very few native Russians had the capacity to reciprocate: most Russians

remained monolingual and were isolated from the local indigenous communities (Hogan-Brun 2004).

Due to divergent language capabilities and a clear delineation between Baltic and Russian communities, a diglossic linguistic environment developed throughout the Baltic States (Hogan-Brun 2007, 509). Russian was spoken solely within the Russian linguistic communities and within social institutions such as education, government, and business. Non-Russian linguistic groups reluctantly acquired proficiency in the Russian language in order to receive an education, conduct business, and engage to a limited degree in government (Hogan-Brun 2007, 509-511). However, the indigenous languages (Estonian, Lithuanian and Latvian), continued to predominate as the preferred means of colloquial and common discourse, and were used freely in informal settings and in areas where few monolingual Russians had established residence. Evidence of this diglossic environment can be observed in language use surveys conducted in the Baltic Republics during the late 1980's. One such survey conducted in Latvia in 1989 demonstrated that only 62% of the population claimed to speak Latvian, while 82% claimed proficiency in Russian (Romanov 2000, 59). This figure is particularly striking since native speaking Russians comprised 30-33% of the overall population of Latvia at the time (Romanov 2000, 58).

Many aspects of the 1989 USSR Census provide an excellent depiction of the sociolinguistics environment of the Baltic Republics and a means of quantifying language use patterns across the Soviet Republics just prior to the collapse of the Soviet Union. The table below provides both the number of indigenous speakers fluent in Russian as well as the number of Russians fluent in the indigenous languages.

Language Fluency in Estonia, Lithuania, Latvia in 1989:

	1989	**1989**
	Indigenous people fluent in Russian	Russians fluent in the indigenous language
Estonia	333,426	71,208
	34.6%	15.0%
Lithuania	1,100,113	129.255
	37.6%	37.5%
Latvia	947,797	201, 669
	68.3%	22.3%

Note: This table is adapted from Pavlenko (2008, 15)

As can be seen, a significant disparity existed between the number of indigenous individuals in

Estonia and Latvia who considered themselves fluent in Russian in comparison to the percentage

of Russians who considered themselves fluent in the local languages. In Estonia, 34.6% percent

of Estonians described themselves as fluent in Russian while only 15% of Russians felt that they

were fluent in Estonian. Similarly, in Latvia, nearly 68.3% of Latvians claimed to be fluent in

Russian, whereas only 22.3% of all Russians described themselves as fluent Latvian speakers.

Interestingly, in Lithuanian comparable percentages of both Russians and Lithuanians claimed to

be fluent in either Lithuanian or Russian. These statistics provide us with a general idea

pertaining to the social and linguistic dynamics of the Baltic Republics leading up to their

independence in 1990-1991. Primarily, the percentage of Russian speakers claiming fluency in

the indigenous language is significantly smaller than the number of Balts who claimed to be

fluent in Russian.

Following the disintegration of the Soviet Union, many former Soviet republics

experienced social and political upheaval, resulting in the reestablishment of indigenous

sovereignty and the degradation of the social and political status of Russian speakers. In the

Baltic States, this social turmoil most clearly manifested itself in the multiple language policy

reforms which occurred shortly after the end of the Soviet regime. In many ways these

administrative language policies can be seen as a method of "Baltinisation", by which the newly autonomous governments attempted to implement their authority and attempt to solidify control by promoting linguistic and social unity. Much of this "Baltinisation" focused on developing the extent to which the indigenous languages of the Baltics where used and limiting the extent to which use of the Russian language continued to prevail in the social and political establishments of Lithuanian, Latvia and Estonia. The reinstatement of indigenous languages as official state languages was a key feature in securing and maintaining the newly acquired independence of the Baltic nations (Hogan-Brun, 2004). One of the first post-independence acts by the Baltic States was to reinstate Estonian, Lithuanian, and Latvian as the official languages of social and political domain, and relegate the Russian language to minority status. For the remainder of the thesis, I will turn my attention to the comparison of Estonia and Lithuania since the present language situation in these countries is of primary importance for this thesis. While the linguistic situation in Latvia is worthy of attention, it falls outside of the scope of the current analysis and shall not be included in the following discussion.

Estonia passed its first comprehensive language law in 1989, which declared Estonian as the only official state language (Rannut 2008, 151-152). The Language Act of 1989 regulated language use and required that official state and private businesses, government, all primary, secondary, and post-secondary public education be conducted in the Estonian language. However, this act initially was formulated around the gradual development of Estonian-Russian bilingualism, where anyone who worked within the above mentioned sectors had to be reasonably proficient in both Russian and Estonian (Rannut 2008, 152). In this sense, the Estonian government aimed at increasing Russian's proficiency in Estonian by requiring Estonian to be used as the primary form of communication. If Russian was retained as an official

state language, this would be to the disadvantage of Estonian speakers, who in many situations would still be obligated to speak in Russian with the vast number of monolingual Russians residing in Estonia. The Language Act of 1989 was retained until 1995, when the Estonian government passed a second Language Act, which required more stringent language requirements regarding the use of Estonian in official communications as well as all post-secondary education.

The establishment of these Language Acts was intended to mitigate some of the more challenging linguistic dilemmas faced by Estonian society. Widespread monolingualism among the Russian communities severely hindered fair and balanced communication, wherein Estonians were still obliged to speak in Russian since few Russians could manage even a basic conversation in Estonian. Estonia instituted a series of language requirements for the naturalization of citizens who arrived in Estonia after 1940. All individuals who had arrived in Estonia during the Soviet era were forced to fulfill a strict language requirement in order to receive full Estonian citizenship. Russians were significantly affected by this policy, many of whom found themselves state-less following Estonia's declaration of independence. Faced by a lack of citizenship and an increasingly difficult social and economic situation, many Russians quickly began to learn Estonian and became bilingual to varying degrees in order to gain Estonian citizenship (Bulajeva and Hogan-Brun 2008, 130). It comes as no surprise that these compulsory social and linguistic adjustments created a significant amount of social and political tension between the Russian-speaking minority and indigenous Estonians. Russians, both monolingual and bilingual alike "experienced a feeling of 'betrayal' and resisted the new government..." which they saw as discriminatory and persecutory (Rannut 2008, 154). Today this tension continues to be exploited by politicians from the Russian Federation, who actively

support the removal of the Estonian language requirement for citizenship and the restoration of Soviet-patterned language laws (Rannut 2008, 154-155).

Lithuania, the first of the Baltic States to successfully declare its independence from the Soviet Union in 1990, reestablished Lithuanian as the official state language, effectively barring Russian from being used in governmental communications. Lithuania acknowledged the Lithuanian language to be the official state language in a pre-independence declaration in 1988 (Bulajeva and Hogan-Brun 2008, 129). This declaration was legally confirmed post-independence in the Law on State Language passed in 1995. The Law on the State Language set in place a series of regulations meant to "expand the sociolinguistic functionality of Lithuanian," while limiting the extent of the influence which Russian language continued to exert on Lithuanian society (Bulajeva and Hogan-Brun 2008, 125). While these policies also aimed to protect the language and cultures of minorities, the extent to which this protection was effective and well-intentioned is debatable and is increasingly a source of discontent among the Russian-Lithuanian minorities. Unlike Estonia, Lithuania's language policies for naturalization allowed any and all individuals "normally residing in the republic at the time of the restitution of independence to become Lithuanian citizens" without the enforcement of language based requirements (Bulajeva and Hogan-Brun 2008, 130). However, policies aimed at developing proficiency in Lithuanian among the Russian-minority has been much more aggressive than in Estonia, wherein Russians must fulfill numerous Lithuanian language requirements in order to hold even basic jobs.

The main outcome of the sudden and comprehensive social and linguistic conversion manifests itself in a cascade of social and linguistic dilemmas for monolingual ethnic Russians. These individuals currently find themselves in a difficult economic and social situation and are

unable to fully engage in Baltic society without intensively learning the native languages. Perhaps the most unfortunate situation is faced by Russians residing in Estonia. Without the appropriate Estonian language skills, ethnic Russians are unable to receive Estonian citizenship and effectively became nation-less. These individuals, generally members of the older generations, carry out their daily lives in a political and social limbo, unable to receive many of the social and economic benefits which accompany citizenship. Other ethnic Russians, understanding that language competency directly corresponds to their ability to survive in these countries, have started to intensively learn the indigenous languages. As a direct result of this involuntary and compulsory language transition, a significant percentage of ethnic Russian minorities became bilinguals over the course of the past 18-20 years with varying degrees of success (Hogan-Brun, 2004). The institution of Estonian, Lithuanian, and Latvian as the official state languages and the relegation of the once dominant Russian language to minority status significantly altered the social and linguistic composition of Russian linguistic communities.

According to the most recent Estonian census conducted in 2006, Estonians comprise nearly 68.6% of the country's 1.4 million total inhabitants. Russians constitute nearly a third of this number, comprising 25.7% of the total population (Estonia 2006). Furthermore, the census numbers detailing language competency in Estonia place Estonian as the native language of 67.3% of the population, whereas Russian is the native language of 29.7% of the population (Estonia 2006). Due to the presence of many other ethnic minorities who speak Russian as their native language, the total number of L1Russian-speakers closely approximates 400,000 individuals. This number significantly outstrips the total number of individuals who claim to be ethnic Russians (i.e. 345,000) (Rannut 2008, 155). Perhaps the most reveal statistic which demonstrates the evolving and dynamic linguistic environment in Estonian is the increase in the

percentage of non-Estonians claiming to speaker Estonian proficiently. Since 1989 and the official instatement of Estonian as the official state language, the number of non-Estonian individuals who claim to speak Estonian proficiently substantially increased from 14% to nearly 38% (Rannut 2008, 156).

The sociolinguistic environment in Lithuania also endured a series of social adjustments since the declaration of Lithuanian independence in 1990. However, the Lithuanian population demographics are not nearly as dynamic as they are in Estonia. According to the most recent Lithuanian Census conducted in 2001, 83.45% of Lithuania's total population claim to be native Lithuanians whereas only 6.31% claim to be native Russian (Bulajeva and Hogan-Brun 2008, 126). Of Lithuania's 3,483,972 total population, 2,855,780 claim to speak Lithuanian as their native language. In comparison, only 277,318 individuals claim Russian as their native language (Bulajeva and Hogan-Brun 2008, 126). This demonstrates that Lithuania has remained fairly homogenous, even after nearly a century of foreign rule.

Russian speaking communities in Lithuania and Estonia tend to be centralized in urban environments. Nearly 91% of all non-Estonians residing within Estonia tend to live in the most densely populated urban regions of the country (Rannut 2008, 155). Most native Russian speakers tend to live in the cities of Tartu or Tallinn in Estonia, and Vilnius or Kaunas in Lithuania. These cities represent the central metropolitan and industrial areas of their respective countries, with Russians and Baltic peoples living in close proximity. These dense urban environments have resulted in prolonged, consistent contact between Russians and Lithuanians or Estonians. Such a close multi-ethnic and multilingual social environments have been instrumental in hastening the development of bilingualism among native Russian-speakers over the past 20 years.

II. Language Contact Studies and Language Contact in the Baltic States

A. Language Contact, Bilingualism and Russian in the Baltic States

Scholarly interest in bilingualism, minority languages, and language change has grown substantially in the past few decades as has the quantity and quality of research investigating these phenomena. Studies in language contact and bilingualism have provided valuable insights about how language contact and the development of bilingual speech communities are linked with language evolution (see Thomson, 2001; Aitchison, 2001; Fishman in Bhatia, 2006). Many such studies developed an empirical basis for examining the linguistic outcomes of language contact and bilingualism. A thorough understanding of the putative processes affecting bilingual speech production is necessary for conducting a complete analysis of the language contact phenomena in the current study. Specifically, the investigation of how a bilingual speaker's native language (L1) and second language (L2) interact may provide some insights into the use and integration of foreign elements by bilingual Russian speakers of Estonia and Lithuania. Discussed below are the concepts of linguistic/language transfer, convergence and their relation to code-switching (CS).

Several investigations of the L1-L2 interaction in bilingual speakers and L2 learners demonstrated that bilingual speakers' knowledge of their native language can directly influence their L2 speech. This process is known as language/linguistic transfer and is a significant outcome of protracted language contact. According to Gass and Selinker, language transfer initiated by language contact is "the use of native language (or other language) knowledge-in some as yet unclear way- in the acquisition of a second (or additional) language (Gass and Senker 1992, 234)." That is, bilingual speakers use their subconscious L1 knowledge in the process of second language acquisition. A recent study conducted by Portin *et al* (2008) revealed

that among bilingual speakers, L1 structure plays an important role in the morphological

processing of L2 speech (Portin 2008, 462). However, examples and analysis provided by

Portin's study and Gass and Senker's valuable research exclude an examination of the possible

role L2 structure plays in influencing the direction and degree to which language transfer and

convergence occurs.

Further research investigating the L1-L2 relationship recognized that language contact

and second language acquisition is a highly dynamic process and began to examine the manner

in which the structure of a bilingual speaker's L2 influences the outcomes of language contact

processes. A study conducted by Jarvis & Pavlenko (2002) demonstrated that instead of a

unidirectional relationship, where the L1 determines and controls the L1-L2 interaction, a

bidirectional relationship more accurately represents how a bilingual speaker's L1 and L2

interact. Their study focused on the nature of bidirectional transfer in the L1 and L2 of early

ascribed bilingual Russian speakers living within the United States. In particular, this study

examined both syntactic and semantic aspects of bidirectional influence. Jarvis and Pavelenko

stated that "instances of L2 linguistic transfer in L1 data suggest that the restructuring of

language-related competence may extend beyond semantic representations to areas of formal

linguistic competence (Jarvis and Pavlenko 2002, 210)."

Their data strongly indicate that both L1 and L2 simultaneously affect each other in

varying manners and to varying degrees. Specifically, bilingual Russian (L1)-English (L2)

speakers' second language (English) had a pronounced effect on case marking and lexical

elements in the speakers' L1. Conversely, L1 (Russian) word order and other syntactic elements

strongly influenced corresponding L2 structures (Pavlenko and Jarvis 2002, 210). The concept

that both L1 and L2 can skew the direction of language transfer, or even influence the manner in

which a bilingual speaker uses specific elements of either language is a particularly interesting insight into language interaction. If specific structural attributes of a bilingual's L1 or L2 can affect general language production, such as a restructuring of semantic continuity among bilingual speakers as indicated by Jarvis and Pavlenko, then it is possible that overt structural aspects of a language, such as phonological or morphological structure, may also influence linguistic outputs among bilingual speakers.

Currently there exists much debate within the linguistic community over the nature of language contact as well as the dynamics of linguistics convergence. One of the underlying principles in language change, as detailed by Thomson (2001), is that the more complex, prolonged, and intensive language contacts are, the more likely that the final outcome of said language contact will be language change. This theory has been expanded upon by two prevalent sociolinguists, Carol Myers-Scotton and Michael Clyne, who recently attempted to comprehensively describe and define the dynamic nature of language contact and how the complex interaction of languages manifests itself in linguistic change. As detailed by Clyne (2003) the most general notion of linguistics convergence is the process in which contact languages become structurally more similar to each other over time (Clyne 2003, 103). Myers-Scotton's (2002) more complex and detailed analysis of convergence suggests that linguistic convergence is the result of prolonged language contact and multilingual relations which culminate in a "polymorphosyntactic frame or matrix language", where "all surface morphemes come from one language" but the more abstract lexical structure of bilingual speech is a composite of two languages (Myers-Scotton 2002, 164). According to this analysis, convergence is a mechanism of language change, which "promotes a splitting of abstract lexical structure in one language variety and its combining with abstract lexical structure from another (Myers-

Scotton 2002, 164-165)." While this definition is accurate in many respects, I find that it confines language convergence to a specific sphere of language structure, namely the syntactic and morphological interface.

Convergence as it will be defined and used in this study draws parallels from both models posited above. I suggest that linguistic convergence is the common process which occurs in bilingual speakers when the codes of a bilingual speaker's native and second language begin to intertwine, resulting in varying degrees of hybridization of both languages. The degree to which convergence may occur can vary from simple code-switching, where a bilingual speaker uses an unvarying lexical item from one language during a stream of speech in their other language, to more complex hybridization and mixing of various aspects of both languages, where lexical, syntactic, morphological and even phonological attributes of one language are combined with another. Emphasis is placed on the difference between code-switching and borrowing, and the role that these processes may have in determining the linguistics outcomes of the language contact phenomena currently being examined. Specifically, the possibility that examples of morphological non-integration presented in this thesis are merely examples of code-switching will be discussed thoroughly in the conclusion.

B. Overview of the Linguistic Features of Lithuanian and Estonian

The main assumption of this study is that fundamental phonetic and morphological properties of language play a significant role in determining whether lexical borrowings from (morphemes and words) from an L2 are successfully integrated into the native morphological matrixes of bilingual speakers. At the most basic level, phonological and acoustic differences between languages are driven by the inherent genetic diversity which occurs between languages belonging to different language families. Each language family has unique linguistic attributes

which may or may not be shared by other language families. In the current study, genetic differences between languages play significant role in the outcomes of language contact. The language demonstrating the most significant degree of interference in morphological integration, Estonian, belongs to the Finno-Ugric language family and is closely related to languages such as Finnish and Hungarian. Lithuanian, on the other hand, is more closely related to Russian and other Slavic languages and represents one of the two living constituents of the Baltic branch of the Indo-European language family.

The structural differences between languages belonging to different language families can be considerable. The process of second language acquisition becomes appreciably more difficult for speakers whose native language does not belong to the same language family as their L2. The lack of familiar structures, sounds, vocabulary and other language patterns is a potential stumbling block for many language learners. In an attempt to accentuate the most significant similarities and disparities held between the languages being examined in this study, it is necessary to conduct a cursory comparison of the phonemics and phonology of Estonian and Lithuanian with that of the Russian language. The goal of such a comparison is to identify unusual and potentially significant characteristics of these contact languages which may restrict or permit successful morphological integration of Lithuanian and Estonian morphemes and word by Russian speakers.

i. Lithuanian Language

The Lithuanian language belongs to the Baltic sub-family of the larger Indo-European language family. It is closely genetically related to the other existent Baltic language, Latvian, as well to the Slavic sub-family of languages (Gordon 2005). Of the extant Indo-European languages, Lithuanian is one of the more linguistically conservative, having retained several

archaic attributes (Ambrazas 2006, 5). Lithuanian is classified as a fusional/flectional language, in which most word forms are created using numerous derivational and inflectional morphemes. Lithuania has a complex and rich system of nominal inflection with six active cases in Standard Lithuanian: nominative, genitive, dative, accusative, instrumental, locative. A seventh case, the vocative, still exists among most dialects of Lithuanian. Further contributing to the complexity of Lithuanian inflection, are five nominal declensions: *-(i)a,-(i)u, -(i)o,-e, -i* (Ambrazas 2006, 96) as well as two grammatical genders, masculine and feminine.

In general, the Lithuanian sound system corresponds well with the phonemic inventory of Russian; most vowels and consonants are acoustically similar in their production and many are shared by the Russian phonemic system. One distinguishing feature of Lithuanian vowels is phonemically contrastive short and long lengths. Lithuanian syllable and morpheme structure as well as the predominant phonological patterns are not significantly different from that of Russian. For example, Lithuanian has paired palatalized consonants which occur as allophones of hard consonants when followed by front vowels or the voiced palatal approximant [j]. This corresponds directly to the phonological system of Russian.

Consonant Inventory of Lithuanian:

	Bilabial	Labio-Dental	Alveo-Dental	Alveolar	Alveo-Palatal	Palatal	Velar
Plosives	p b		t d				g k
Nasal	m		n				
Trill				r			
Fricative		f v	s z		ʃ ʒ		x ɣ
Approximant	ʋ					j	
Lateral-approximant			l				
Affricates			ts dz		ʧ ʤ		

Table 1: This chart presents the consonant inventory of standard Lithuanian. When two symbols occur in the same row, the one on the left is voiceless. All symbols are standard IPA. All consonants, with the exception of the palatal approximant [j], have a palatalized (softened) counterpart which occurs in certain phonological environments.

There are 10 monophthongs of Standard Lithuanian: 6 long monophthongs and 4 short

monophthongs. Long and short vowels are qualitatively contrastive. Two other short vowels [e]

and [ɔ] occur only in international borrowings, and are not considered to be part of the

Lithuanian phonemic vowel inventory. They are, listed in the charts below for the sake of clarity.

Vowel Phoneme Inventory of Lithuanian:

	Front	Central	Back	
High	i			u
	ɪ		ʊ	
Mid	e	(ʌ)		o
	ɛ	(ə)	ɔ	
Low	æ	a	ɑ	

Note: Lithuanian vowels differ in terms of long and short degrees. The difference is not so much in length as it is in quality. "Long" and "short" degrees correspond to tense and lax, where the amount of muscular tension required to produce the tense vowels is greater than in lax vowels (Ambrazas 2006, 25). Long and short degrees are contrastive. The mid central vowels [ʌ] and [ə] are not phonemes, but rather allophones of vowels that reduce when unstressed.

ii. Estonian Language:

The Estonian language belongs to the Finno-Ugric language family; a smaller sub-family

of the larger Uralic language family. Estonian is closely related to Finnish which is spoken to the

north across the Baltic Sea and is related to the more geographically removed Hungarian

language (Gordon 2005). The Estonian language, like many members of the Finno-Ugric

language family is typologically classified as agglutinative but is more fusional/flectional that

other languages of the northern branch of the Finno-Ugric Family. Due to its geographical

location and social history, the structure of Estonian has been influenced by several languages

including German, Finnish and Russian. English is exerting a significant influence on the lexical

and structural attributes of present-day Estonian (Viitso 2003, 7-8).

Estonian is a vowel-driven language. The number of contrasting consonant phonemes

that utilize different places and manners of articulation is relatively small while the

diversification of both monophthongs and diphthongs is quite remarkable. In significant contrast

to Russian and Lithuanian, the Estonian language has 14 nominal cases: Nominative, Genitive,

Partitive, Illative, Inessive, Elative, Allative, Adessive, Ablative, Translative, Terminative,

Essive, Abessive, Comitative. Seven of these cases refer to location and serve the same function

as prepositions in English. Case and number are marked on the noun through a complex and

multi-layered process of inflectional affixation.

In standard Estonian there are 11 native and 3 foreign consonants of phonemic quality.

All 11 native Estonian consonants, with the exception of /v/, may occur in three *phonemically*

distinct lengths/quantities (Q1, Q2, and Q3). Q1 refers the short length of the consonants, Q2

refers to the length of long consonants, also termed short geminate consonants, and finally, Q3

refers to the length of overlong consonants (Lehiste 1966, 1-4). Non-native Estonian phonemes

do not share this three way contrast. Since all three lengths have the potential to be phonemically

distinct, this can lead to a three way contrast based purely on the length of a consonant in certain

phonological environments. This three-way contrast helps the language balance its limited

diversity in consonant quantity.

Estonian Consonant Phoneme Inventory:

	Bilabial	Labiodental	Dental	Post-Alveolar	Palatal	Velar	Glottal
Plosive	p pː pːː		t			k	
Fricative		f v	s [z]	[ʃ] [ʒ]			
Nasal	m (m̥)		n (n̥)			(ŋ)	
Approximant			l (l̥)		j		
Trill			r (r̥)				

Note: This chart presents the consonant phoneme inventory of Estonian. All consonants, with the
exception of [v], have three contrastive lengths (p, pː, pːː). Consonants in parentheses
represent important allophones which occur regularly in Estonian speech. Consonants in brackets
represent sounds that only occur in foreign borrowings and are not considered part of Estonians
phoneme inventory. The consonant /f/ is a foreign borrowing. It use is ubiquitously in Modern
Estonian and is now considered more or less a normal Estonian phoneme (Kiul'moia 2003). The

phoneme, [v̥] represents a lenis consonant, whereas [f] represents a fortis consonant. Estonian does not contrast on the basis of phonation. There are no native voiced Estonian obstruents

Unlike most Finno-Ugric languages, some Estonian consonants become palatalized before front vowels. These consonants are primarily the dental obstruents [t, n, l ,s ,z]. This phonological feature was most likely acquired from the neighboring Slavic languages, all of which differentiate between palatalized and non-palatalized consonants (Viitso 2003). Typically, phonemic distinctions are made between palatalized and non-palatalized consonants when they occur in word final position (Raun 1965). This is especially clear with the voiceless dental stop [t] and its palatalized allophone, [tʲ], which are contrastive in word final position, but are in complementary distribution in all other positions. This observation of [t] pertains to all other consonants that have a palatalized variant (i.e., /p, t, s, n, l/). Thus, when palatalized consonants occur in other contexts, these variants are allophones of corresponding non-palatalized consonants (Lehiste 1966).

Estonian has nine phonemic monophthong vowels, each of which can have 1 of 3 phonemically distinct lengths (Q1, Q2, Q3), in which Q1 stands for short (simple) vowels, Q2 long, and Q3 overlong. Two lengths, short and long, convey phonemic differences at the segmental level. The third length represents suprasegmental qualities of the syllable's tonal structure and is also phonemically contrastive. In the first syllable of polysyllabic words, it is possible to have monophthongs of all 3 lengths occur in contrastive distribution (Lehiste 1966, 2)

Three Degrees of Contrastive Length in Estonian:

	IPA	English Gloss	Estonian Orthography
Vowels	[sɑ tɑ]	'hundred'	sada
	[sɑ ːtɑ	'send!'	saada
	[sɑ ː ːtɑ]	'to get'	saada
Consonants	[linɑ] (Q1)	'sheet'	lina
	[linnɑ] (Q2)	'town's	linna
	[linnnɑ] (Q3)	'to the town'	linna

Note: In Estonian orthography the consonants /b,d,g/ represent short voiceless sounds.

Estonian Vowel Phoneme Inventory:

	Front		Back	
	Unrounded	Rounded	Unrounded	Rounded
High	i (iː,iːː)	y(yː,yːː) [yi]		u (uː, uːː)
Mid	e (eː,eːː)	ø (øː,øːː)	ɤ (ɤː,ɤːː)	o (oː,oːː)
Low	æ (æː, æːː)[ɛ]		ɑ (ɑː, ɑːː)	

Note: Those vowels occurring in the parentheses represent the contrastive lengths (Q2, Q3) of the Q1 vowels listed in the table. The IPA symbol for long vowels is a specialized colon [ː]. Those vowels occurring in brackets are the allophones of the neighboring Q1 vowel.

Along with its rich monophthong vowel system, Estonian also has 23 possible diphthongs. In Estonian, diphthongs in word initial syllables end in [i], [e], [ɑ], [o], [u]. Only the dipthongs [ei], [ɑi], and [ui] are possible in non-intial syllables of native words. In the initial syllable of polysyllabic words, 19 of the 23 dipthongs may occur in two contrastive quantities, Q1 and Q2 (Lehiste 1966).In genral, dipthongs ending in [i] in a non-initial syllable denote plurality or a superlative (Viitso 2003, 21).

Estonian long monophthongs and diphthongs:

	i	e	æ	ø	y	ɤ	ɑ	o	u
i	ii	(ie)					(iɑ)	(io)	iu
e	ei	ee					eɑ	eo	(eu)
æ	æi	æe	ææ					æo	æu
ø	øi	øe		øø			øɑ		
y	yi	(ye)			yy		(yɑ)	(yo)	
ɤ	ɤi	ɤe				ɤɤ	ɤɑ		ɤu
ɑ	ɑi	ɑe					ɑɑ	ɑo	ɑu
o	oi	oe					oɑ	oo	ou
u	ui	(ue)					(ua)	(uo)	uu

Note: Diphthongs in parentheses occur only in borrowings are not considered to be part of standard Estonian. The table above lists significantly more than 23dipthongs. Many are of foreign origin and are retained solely in foreign borrowings. The table was adapted from Viitso 2003. All symbols are standard IPA Unicode.

Syllable structure in Estonian is very complex. The basic Estonian syllable is CV while

many other syllable configurations exist (VC, VV, CVC, etc.). The variable syllable structure in

Estonian also contributes to the highly complicated morphological structure of Estonian roots

and stems. In general, Estonian root structure is highly variable, with some roots ending in either

a consonant or a vowel: *elu* (*life*), *jalg* (*foot*). Many Estonian roots consist entirely of vowels: *öö*

(*night*), *au* (*honor*). The morphological and phonological structure of Estonian morphemes,

roots, and stems is further complicated by a phonological process called gradation, which affects

a large class of mono- and disyllabic nouns and adjectives. Gradation is series of stem

alternations which occurs when a word is inflected from Nominative case into either the Genitive

or Partitive case.   The main outcomes of these alternations are: 1) stem final obstruents

"weaken" (i.e. change in overall consonant quality) or 2) stem final obstruents are assimilated to

the preceding sonorants, mutated or completely elided (Viitso 2003, 25-26). Examples of

gradation are provided in the table below.

 Stem Gradation in Estonian Nouns:

	NOMINATIVE	GENITIVE	PARTITIVE	GLOSS
Weakening	laat	laada	laata	'market, fair'
	välk	välgu	välku	'lightning'
Assimilation	kand	kanna	kanda	'heel'
	vend	venna	venda	'brother'
	vars	varre	vart	'stalk, shaft'
Mutation	härg	härja	härga	'ox'
	aeg	aja	aega	'time'
Elision	koht	koha	kohta	'place'
	nägu	näo	nägu	'face'
	uus	uue	uut	'new'

Note: The table above demonstrates how gradation affects the overall stem shape of Estonian
words. The 11 other nominal cases built by affixing a flectional morpheme to either the genitive
or partitive stem. In modern Estonian quality alternation (weakening, assimilation, mutation, and
elision) resulting from gradation is unpredictable and most be memorized. The graphemes *b,d,g*
do not represent voiced sounds, but rather weak voiceless sounds. The graphemes *p,t,k* are strong
voiceless sounds.

III. Analyzing Language Contact in Estonia and Lithuania

A. Preliminary Comparison of Previous Studies

Upon comparison of data previously collected by Avina (2006) and Verschik (2004, 2005, 2007), I have established several key differences in the morphological integration of Estonian and Lithuanian lexical items, which has in turn prompted a more thorough examination of these phenomena. Provided below are several examples given by Avina (2006) and Verschik (2004, 2005, 2007) which emphasize the contrastive nature of the morphological integration of Lithuanian and Estonian lexical items. The specific patterns of morphological integration can be subdivided into the following categories:

1. Successful integration of foreign lexical items into the Russian matrix

2. Non-integration of foreign lexical items into the Russian matrix

3. Hybridization of foreign lexical items with Russian derivational or inflectional affixes

These categories will be used to analyze the varying manner in which Russian speakers use Estonian and Lithuanian morphemes and lexical items in both spoken and written speech.

My detailed comparison of data sets provided by Avina (2006) and Verschik (2004, 2005, 2007) revealed a consistent disparity between the integration of Estonian and Lithuanian morphemes and lexical items. Verschik (2004, 2005) provides several examples of non-integration of Estonian lexical items by Russian speakers. These examples clearly contrast with the relative fluidity in the successful integration of Lithuanian elements by bilingual Russian-Lithuanians demonstrated in Avina (2006). More specifically, a highly consistent trend arises among Russian-Estonian speakers who either incorrectly assimilate or simply do not assimilate

Estonian morphemes or lexical items that end in vowels. In opposition to this trend is the general

tendency among Russian-Estonian speakers to correctly integrate Estonian words or morphemes

terminating in a consonant phoneme. As is demonstrated by data presented below, Russian-

Lithuanian speakers, on the other hand, successfully and pervasively assimilate Lithuanian

morphemes and lexical items ending in both consonant and vowel phonemes (Avina 2006).

Examples elucidating the third category listed above, hybridization of foreign morphemes

with Russian inflectional or derivational affixes, can also be found in data sets provided by

Verschik (2004, 2005) and Avina (2006). Hybridization refers to the process by which a speaker

utilizes a morpheme or stem from one language in order to derive a functional lexical unit in

another language. This is a highly sophisticated word-formation process, which requires the

speaker to classify the underlying morphological structure of root or stem of a foreign morpheme

into a native grammatical class (Adjectival, Nominal, and Verbal). If this is achieved, either a

derivational or an inflectional morpheme is affixed to the foreign stem in order to create a

functional part of speech. In the data provided below, the process of hybridization of Estonian

morphemes occurs in a restricted set of words and morphemes. Consistently Estonian words

ending in consonants which do not undergo any morphophonemic alternations during case

declension are candidates for successful hybridization. In opposition, Lithuanian words and

morphemes are frequently hybridized with Russian affixes in a fluid and seamless process,

regardless of the deep phonological or morphological structure of the Lithuanian lexical item.

i. Successful Integration of Lithuanian Elements in Avina (2006):

Avina (2006) provides several good examples of assimilation of Lithuanian nouns and

morphemes. The following sentences demonstrate the morphological assimilation of an entire

Lithuanian stem:

1. **Russian:** купили с **нолайд-ой** (Lithuanian: *nolaida*)
   Gloss: (They) bought(3rdPers.Plr.) with discount(Fem.Sg.Instr.)
   IPA: [kup^j ɪ lisnɔ lajdɔ j]
   Trans: *"They bought (it) with a discount."*

2. **Russian:** А он мне говорит: У вас два **трукумас-а** (Lithuanian: *trūkumas*)
   Gloss: And he me(1st.dat.) says(3rdpr.) you(plr.) have two weaknesses(gen.sng.)
   IPA: [aɔ nmn^j ɛ gɘvʌ r^j it/ʊ vasdvatru ːkumas]
   Trans: *"And then he tells me, "You have two shortcomings""*

In example (1) the Lithuanian word for "*discount"("nolaida")* is interpreted as a feminine "a"

stem noun. The word final vowel Lithuanian vowel [a] corresponds well with the feminine

singular Russian inflection morpheme. The speaker elides this grammatical ending and affixes

the nominal stem with the appropriate feminine singular instrumental inflectional morpheme "-

oj". The correct morphological inflection displayed in example (1) demonstrates the recognition

of perceived morpheme boundaries by the Russian speaker, which allows the correct inflectional

affix to be attached to the Lithuanian nominal stem in accordance with the sentence's syntax.

Example (2) demonstrates that Lithuanian words ending consonants are also successfully

integrated into the Russian morphological matrix. The Lithuanian word "*trūkumas*"

(*"weakness/shortcoming")* is affixed with the Russian inflectional masculine genitive morpheme

"*-a*" due to the preceding number which requires the genitive singular case of all following

nouns. Like example (1), the Lithuanian word functions perfectly within the Russian sentence,

conforming to the syntax and convening the appropriate meaning.

Examples (1) and (2) suggest that the perceived correspondence between the

morphological structure of Lithuanian words and Russian words allows for the successful and

complete integration of Lithuanian elements into Russian speech. Furthermore, example (1)

demonstrates that there is a strong similarity between the Russia and Lithuanian vowel [a], which

allowed for the Lithuanian word to be interpreted as a feminine noun. These examples imply

that Lithuanian words correspond well to the familiar structures of Russian words, allowing

Lithuanian lexical items to be treated similarly to standard Russian lexical items.

ii. Hybridization of Lithuanian Elements in Avina (2006)

One particularly interesting phenomenon in contact linguistics is the process by which

bilingual speakers are able to hybridize words from both of their languages in order to create a

fully functional lexical item. Avina (2006) gives several examples of hybridization of Lithuanian

root morphemes with Russian derivational morphemes:

3. **Russian:** нам **раган-к-а** в дом не нужна (Lithuanian: *raganka*)
   Gloss: we(dat.) a witch(fem.sg.) in(to) the house(msc.sng.) do not need (Fem.Sg.)
   IPA: [namrʌ gaŋkəvdɔ mnɪ nuʒ nə]
   Trans: *"We don't need a witch coming into our house."*
   (Avina 2006, 151)

4. **Russian:** решение этой **калбос-н-ой** инспектии
   Gloss: the decision(neut.sng.) (of) this(fem.sg.gen.) language (fem.sg.gen.)
   inspection(fem.sng.gen)
   IPA: [rʲ ɪ ʃ enʲ ɪ jəɛ tɔ jkalbɔ sʲ nɔ jɪ nspʲ ɛ ktɪ ː]
   Trans: *"The decision of the language inspector"*
   (Avina 2006, 152)

In example (3), the Lithuanian word for, "*ragana*" (*witch*) is interpreted as a feminine noun. The

Russian speaker created a diminutive Russian hybrid by first removing the Lithuanian feminine

ending –*a*- and then adding the diminutive nominal derivational morpheme, -*(o)k*-, to the

Lithuanian nominal stem. Moreover, the Russian speaker successfully inflects the newly

constructed hybrid by affixing the appropriate inflectional morpheme for a feminine nominative

singular noun in accordance with the sentence's syntax. It is also important to note that the

modal particle "*nuzhna*" is fully declined to reflect the full assimilation of the Lithuanian

element into the Russian matrix.

In example (4), the Lithuanian word "*kalbos*" ("*language*") has been transformed into a

Lithuanian-Russian adjectival hybrid by adding the all-purpose Russian adjectival derivational

morpheme *-(e)n-* to the end of "*kalbos*". The speaker successfully affixed the appropriate

inflectional morpheme *-oi-* to the derived adjective, indicating that the adjective is appropriately

declined into the genitive singular case and is modifying a feminine noun. Both examples (3) and

(4) confirm the hypothesis that Lithuanian stems or morphemes of varying structures (either

terminating in vowel phonemes or consonant phonemes) can be easily integrated into Russian

morphology. The process of hybridizing morphemes or lexical items from one language with

derivational or inflectional affixes in another is a highly complicated and sophisticated process.

Examples (3) and (4) clearly demonstrate the fluid morphological integration and lexical

hybridization of Lithuanian morphemes. This suggests one of two things. Either, Russian

speakers easily recognize the inherent similarities between Lithuanian and Russian

morphological structure, allowing them to divide Lithuanian words into their composite stems,

morphemes and affixes and assimilate these morphological structures into the Russian matrix.

Or, there is fundamental recognition of the phonological and acoustic structure of Lithuanian

phonemes as inherently similar to Russian phonemes, allowing Russian speakers to treat

Lithuanian phonemes as inherently Russian in nature.

iii. Non-Integration of Estonian Elements in Verschik (2004, 2005, 2007):

In comparison to the Lithuanian data provided by Avina (2006), successful

morphological integration and hybridization of Estonian lexical items occurs with a more

restricted class Estonian words and morphemes. Verschik observed several habitual errors in her

research data regarding the unsuccessful morphological integration of Estonian elements into

Russian declension patterns. The general trend established in her examples show that Estonian

words are either not affixed with appropriate inflectional endings, or simply are declined

incorrectly. Two good examples of this pattern follow:

5. **Russian:** пожалуйста творог с **маасик-а** (Estonian: maasikas)
   Gloss: please (some) quark with strawberry (sg.)
   IPA: [pəʒ alʊ jstətvɔ rəgzmaasika]
   Trans: "*Please give me some quark (curded cheese) with strawberry*"
   (Verschik, 2004)

6. **Russian:** Этого в **айнекав-а** не написано (Estonian: *ainekava*)
   Gloss: This(msc.sg.gen.) in (the) syllabus(sg. EST) not written (PastPassivePart)
   IPA: [ɛ təvə/vɑ inekɑ vɑ /nʲ ɪ nʌ pʲ isənə]
   Trans: "*This is not written in the syllabus*"
   (Verschik, 2007)

Example (5) presents an interesting example of non-integration. The Estonian word for

maasikas (*strawberry)* is not assimilated into standard Russian morphology[1]. Specifically, the

Russian speaker has not affixed the Estonian word with the appropriate feminine singular

instrumental inflectional morpheme "*-oi*" as is required by the preceding preposition and would

be expected for a word ending in the vowel phoneme /*a*/. In Russian, the process of nominal

inflection requires the removal of the nominative inflectional morpheme and its replacement with

an inflectional morpheme in order to convey the noun's syntactic function. In example (5) the

Estonian word remains in its nominative form.

Example (6) shows the same tendency of non-assimilation with the Estonian word

ainekava (*syllabus*). Here, the speaker has not successfully removed the word final vowel

phoneme nor have they affixed the nominal stem with the Russian prepositional ending –*e*.

Examples (5) and (6) suggest that some aspect of these Estonian words is interfering with their

successfully assimilation into the Russian morphological matrix. Sine both of Estonian words in

examples (5) and (6) end in the vowel /*a*/ and are not appropriately declined, this may suggest

that the element causing interference in the word final Estonian vowel /*a*/. This non-assimilation

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[1] Interestingly, the word final [s] of the Estonian word *maasikas* has been removed by the Russian speaker. One possible explanation of this that in Russian several main words for fruits and vegetables follow into a grammatical class of words which end in the vowel phoneme [a]: свёкла (beet), клубника (strawberry). This will be discussed further in the following sections.

clearly contrasts with the Lithuanian examples above, where each speaker assigned the Lithuanian words *nolaida* and *ragana* to the feminine class of Russian nouns and affixed them with the appropriate inflectional morphemes. Upon comparison, *"nolaida"* and *"ainekava"* are structurally similar; both end in a vowel and have a superficially similar syllable structure. However, the Estonian word remains curiously uninflected element, indicating that some aspect of these Estonian words is interfering with their successful morphological assimilation.

iv. Successful Integration of Estonian Elements in Verschik (2004, 2005, 2007):

In her data, Verschik provides one example of complete morphological assimilation of an Estonian word into Russian morphological paradigm, where the Estonian word terminates in a consonant phoneme, rather than a vowel phoneme:

7. **Russian:** "это будет без **кайбемакс-а**"
   Gloss: that will be(3rdsg.) without value-added-tax(sg.)
   IPA: [ɛ təbudʲ ɪ tbʲ ɛ skɑ jbemɑ ksə]
   Trans: "*This will be without the value-added-tax (tax free)*"
   (Verschik 2007)

In this example, the correct genitive singular masculine/neuter inflectional morpheme is affixed to the Estonian word "*kjaibemaks*" (*"value tax"*). The correct integration of this word contrasts with examples (5)-(6). One possible means of explaining this disparity is that Russian speakers are able to assimilate Estonian words which end in consonants with greater ease than words that end in vowels. This suggests that underlying phonetic/phonological properties of Estonian vowels may play an important role in determining the success of a word or morpheme's assimilation. This is further supported by the fact that no examples of successful integration of Estonian words ending in a vowel are provided by either Verschik or my own research. In the attempt to further explore this phenomenon and determine whether this is a ubiquitous

characteristic of bilingual Russian-Estonian speech, I have compiled a series of valuable examples below for analysis.

IV. Expansion of the Investigation

A. Methodology

My examples of bilingual Russian speech are gathered from a wide variety of sources: bilingual television broadcasts, Russian radio programs broadcasted in Estonian and Lithuania and streamed via the World Wide Web, online social forums located on websites designed for Russian speaking individuals living within Estonia and Lithuania, as well as numerous online blogs from Russian-language newspapers published in Estonia and Lithuania. Serious attempts have been made to locate speech material that is relatively unprompted and informal in nature, in order to provide a more accurate view of how non-Russian words are used in Russian speech at a spontaneous level in colloquial speech. As the investigated phenomenon occurs most widely among population of the Russian-speaking youth, much of the material gathered comes from sources which are used predominantly by individuals aged 15-40.

The Russian communities within Estonian and Lithuania are selected for comparison owing to similarities in their linguistic and social compositions. The overall size and diversity of the Russian speech communities in both Estonia and Lithuania provide two dynamic and parallel linguistic environments for examination. Selecting areas with similar demographic and linguistic environments allows for the control of peripheral social and economic factors. These factors can have a pronounced affect on which language a bilingual speaker chooses to use in a given situation and can alter the outcomes of language contact. For example, bilingual speakers residing in heavily impoverished regions who are native speakers of a minority language may

feel overly hostile towards the more socially dominant and prestigious language and may be less willing to use this language in regular communication (Rannut, 2008). However, while these factors do influence speaker's language choices, they will not have significant bearing on the overall goal or analysis of this thesis. Assuming that all things are equal, neither of the communities in Lithuania or in Estonia is significantly worse off than the average citizens of their respective countries.

The analysis of all data collected from the above mentioned sources focuses on establishing and isolating the specific phonetic structure of Estonian and Lithuanian words used by Russian speakers. For the purposes of cross-comparison and accurate analysis, all examples are transcribed into a semi-narrow IPA transcription. As is the case with English orthography, standard Lithuanian, Estonian and Russian orthographies do not accurately capture and convey the specific phonetic properties of their sounds. IPA transcriptions are particularly important for accurately representing the acoustic properties of Estonian sounds. Standard Estonian orthography contains the letters *b, d, g*. For an English speaker, these letters seemingly represent voiced obstruents. However, Estonian does not have any voiced obstruents in its sound system, and *b, d, g* represent weak voiceless stops. Furthermore, Estonian has three vowel phonemes, *ö, õ, ü*, which are not shared by English, Lithuanian and Russian. Examples from Lithuanian and Estonian sources which have been transcribed into IPA will be compared order to elucidate the contrastive differences in phonetic structure as well as morphological integration.

In the attempt to expand upon the putative trends established in the initial examination of studies conducted by Verschik (2004, 2005, 2007) and Avina (2006), I compiled numerous examples of integration, non-integration, and hybridization of foreign elements by Russian speakers in Lithuania and Estonia. Emphasis was placed on the morphological assimilation of

lexical items/morphemes ending in vowels in comparison with those that end in consonants as well as on limitations or restrictions in successful hybridization of foreign elements with Russian inflectional and derivational morphemes. In the following examples, my analysis will focus on determining prevalent patterns in morphological integration and assessing whether phonetic or morphological structures of Estonian and Lithuanian significantly influence successful or unsuccessful morphological assimilation and integration of foreign morphemes and other lexical items.

B. New Examples of Integration, Non-Integration and Hybridization

The initial examination of previous studies revealed three main patterns in the integration/non-integration of Lithuanian and Estonian lexical items:

1. Successful integration of foreign lexical items into the Russian matrix

2. Non-integration of foreign lexical items into the Russian matrix

3. Hybridization of foreign lexical items with Russian derivational or inflectional affixes

My examples, which are provided in the sections below, help to further reinforce these categories as well as reveal variations within their parameters. In the sections which analyze successful and unsuccessful morphological integration the focus of the examination will be the manner in which Russian speakers affix Estonian and Lithuanian lexical items with inflectional morphemes in order to create functional words. In this sense, inflectional morphemes are the same as grammatical endings, which convey important syntactic and semantic information, but do not change the grammatical class of the word. Affixes which completely alter the grammatical class of morphemes to which they are attached are known as derivational morphemes, and their role in the morphological integration of Estonian and Lithuanian words will be examined in the section which investigates lexical hybridization. Each example provided below is followed by a detailed

description. The subsequent analysis is saved for the end of each section, at which point a

comprehensive cross comparison of all examples will be conducted in order to determine any

specific correlations or emergent patterns. I shall begin the first portion of this investigation with

the non-integration of Estonian elements.

i. Non-Integration of Estonian Elements:

The following examples demonstrate several instances of morphological non- integration

of Estonian words and morphemes by Russian speakers living in Estonia. Similar to trends

shown in Verschik (2004, 2005, 2007), Estonian words and morphemes ending in vowel

phonemes, specifically the phoneme [ɑ], demonstrate a ubiquitous trend of complete non-

integration into the Russian morphological matrix.

8. **Russian:** " **в каубамая** есть детские отделы с игрушками там или с детской
   одеждой "   **Estonian:** kaubamaja ("department store")
   Gloss: in (prep) the department store there is (a) children's(adj.nom.plr.) section with
   toys(plr. inst.) or with children's (fem.sg.inst.) clothes(fem.sg.inst.)
   IPA:
   [vkɑ ub̥ ɑ mɑ jɑ jɛ stʲ dʲ ɛ tskʲ ɪ jəʌ tʲ dʲ ɛ lɩ sɩ gruʃ kəmɪ tamɪ lʲ isdʲ ɛ tskʲ ɔ jʌ
   dʲ ɛ ʒ dɔ j]
   Trans: "*In the department store there is a children's section with toys or children's
   clothes*"
   (http://forum.ee/pt99523/)

In example (8), the Russian speaker does not integrate the Estonian word *kaubamaja,*

(*department store*) into the Russian morphological matrix. The prepositional phrase in the

Estonian word is located requires the prepositional case of the following noun. Orthographically

kaubamaja, when transliterated into Russian, corresponds well with the Russian class of

substantiated adjectives (i.e., гостиная). However, the speaker does not decline the Estonian

word into feminine singular prepositional case. The Russian derivational morpheme *-oj* is

conspicuously missing from the end of the word. Instead, *kaubamaja* remains in its nominative

form, unchanged during this particular utterance.

9. **Russian:** У девушки не оказалось **хайгекасса**   **Estonian:** haigekassa
   Gloss: have (the) girl not(neg.) turned out medical insurance card.
   IPA: [ʊ dʲ ɛ vʊ ʃ kənʲ ɪ ʌ kəzaləsʲ xɑ igekɑ s ːɑ]
   Trans: *"It turns out the girl did not have her medical insurance card."*
   (http://www.newsru.com/world/25apr2003/tallinn.html)

In example (9), the Estonian word *haigekassa* (*medical insurance card*) remains uninflected. The

Russian verb *оказаться* requires the instrumental case for all components of the following

complement verb phrase. However, the speaker does not affix the Estonian word with the

appropriate inflectional morpheme. As in example (8) above, this Estonian noun terminates in

the vowel phoneme [ɑ], which from an orthographical standpoint outwardly corresponds to the

Russian feminine noun class. This particular class of nouns receives the nominal inflectional

morpheme *–oj* in instrumental singular.

10. **Russian:** С **киннисвара** он не обращался   **Estonian:** kinnisvara
    Gloss: with real-estate he (msc.sng.) not(neg) pays attention
    IPA: [skin ːisvɑ rɑ ɔ nnʲ ɪ ʌ braʃ ʲ ː əlʲ sʲ ə]
    Trans: *"He doesn't pay any attention to real-estate"*
    (http://rus.delfi.ee/daily/business/article.php?id=16836975&s=2&com=1&no=0)

Expounding the pattern further, (10) provides yet another example of non-integration of an

Estonian word ending in the vowel phoneme [ɑ]. The Estonian word *kinnisvara* (*real estate)* is

used in a prepositional phrase headed by the Russian preposition */s/* which requires instrumental

case. However, the Estonian word is not affixed with the appropriate Russian inflectional

morpheme and is not integrated into the Russian morphological paradigm for this class of words.

11. **Russian:** мы посидели на скамейке перед **кохвик**, но дождь пошёл...
    Estonian: kohvik
    Gloss: we(nom.) sat on(prep) the bench in front(prep) coffeehouse, but(conj.) rain started
    IPA: [mɨ pəsʲ ɪ dʲ ɛ lʲ ɪ nəskəmʲ ejkɪ pʲ ɪ rʲ ɛ dkoxvik/nʌ dɔ ʃ tʲ pəʃ ʲ ɔ l]
    Trans: "We sat for awhile on the bench in front of the coffeehouse, but it started to
    rain..."

In example (11) an Estonian word ending in a consonant phoneme is not successfully integrated into the Russian morphological matrix. As has been mentioned and will be discussed more comprehensively below, Russian speakers are generally successful in integrating Estonian words ending in consonant phonemes which are shared by the Russian sound system. In example (11), the speaker does not affix the Estonian word *kohvik* (*coffeehouse*) with the appropriate inflectional morpheme, as required by the preceding preposition *pered.* This preposition requires instrumental case, but the appropriate inflectional ending is noticeably absent from the end of the Estonian word. Since this word ends in the consonant phoneme [k], one would expect it to be affixed with the masculine singular instrumental ending *–om.* However, the word remains in its nominative form. Quite possibly, this could be an example of an indeclinable foreign borrowing in Russian, similar to the French word кафе (*café*). Alternative explanations for the non-integration of Estonian morphemes and words ending in consonants will be discussed further in the conclusion.

12. **Russian:** Я гарнир из **калика** приготовила   **Estonian**: kaalikas
    Gloss: I garnish(msc.sg.) from(prep.)turnips prepared(perf.fem.past.)
    IPA: [jagʌ rʲ nʲ irɩ skɑ likɑ prʲ ɪ gʌ tɔ vʲ ɪ lə]
    Trans: "*I prepared a turnip garnish*"
    (http://ge-m.livejournal.com/238823.html)

Example (12) presents a particularly interesting phenomenon involving the non-integration of a specific class of Estonian words. The speaker phonologically modifies the word *kaalikas* (*turnips*) by removing the word final voiceless alveolar fricative [s]. The remaining "stem" ends in the vowel phoneme [ɑ] which remains uninflected. As is demonstrated in the section above, the vowel phoneme may be preventing the proper feminine singular genitive inflectional morpheme from being affixed. The treatment of this Estonian word parallels example (5)

provided by Verschik (2007). In that example, the Russian speaker similarly elided the word final [s] from the Estonian word *maasikas,* but as in (12) , the resulting nominal "stem" remained un-integrated. This presents a curious discrepancy in behaviors, where the speaker purposefully modifies the structure of the noun, yet does not affix it with the appropriate inflectional morpheme. One possible explanation may be revealed through the examination of a comparable class of Russian nouns. In Russian, there is a large class of feminine nouns describing fruits and vegetables, all of which end in the vowel [a]: свёкла (beet), клубника (strawberry), репа (turnip), капуста (cabbage), груша (pear), etc. In these examples the Estonian words *maasikas* and *kaalikas* are used, even though Russian has perfectly acceptable words for both of these vegetables. Although the speakers decided to use the Estonian words in these utterances, they may be still conscious to the fact that the phonological structure of the parallel class of Russian words for fruits and vegetables always end in [a]. As a result, the speakers modify the Estonian words to structurally conform to this Russian noun class at a superficial level. However, since the resulting nominal stem ends in a vowel phoneme not shared by the Russian sound system[2], the modified Estonian noun is not integrated into the Russian morphological matrix.

These examples unambiguously demonstrate that Russian speakers have an overwhelming propensity to not inflect Estonian words ending in vowel phonemes. This observation unifies the small number of examples provided by Verschik (2004, 2005, 2007) and provides a solid basis for establishing a putative and generalizable pattern of non-integration. One possible explanation of this phenomenon involves the overall phonological distance between the Estonian vowel phoneme [ɑ] and the vowel ending of Russian feminine singular nouns. In Russian, feminine singular nouns end in the vowel /a/. This vowel, however, is generally laxed and centralized due to the process of vowel reduction known as *akan'e.* Thus a

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[2] [ɑ] appears in Russian only as an allophone of [a] in the following environment: [a]➔[ɑ] /__[l]# (ex. дал [dɑ l])

word final [a] generally becomes [ə], due to stress falling on a preceding syllable. For example, in the Russian word *кошка*, the word final [a] becomes [ə] since the tonic syllable is the preceding syllable. The same vowel reduction also occurs in most masculine genitive -*a* endings. In contrast, Estonian vowel phonemes never undergo a qualitative reduction when they are unstressed. All Estonian vowels, whether stressed or unstressed retain their original phonemic qualities regardless of their position or distance from the tonic syllable.

I hypothesize that that Russian speakers simply do not recognize Estonian words ending in [ɑ] as corresponding to Russian feminine nouns, due to the fact that this phoneme differs significantly from the standard Russian [a], which is generally more central and raised than the corresponding Estonian phoneme. Furthermore, since most feminine singular Russian nouns ending in [a] undergo a form of reduction under *akan'e*, wherein the [a] becomes centralized and raised to [ə], there are increased acoustic differences between the Estonian phoneme and the Russian allophone of /a/. This significant distance between sounds could possibly be the agent of interference, causing Russian speakers to treat this particular class of Estonian words much like they treat many other foreign borrowings which terminate in vowel phonemes not shared by the Russian sound system (кафе, пальто, etc.). Another analysis of this phenomenon relates to the absence of grammatical gender of Estonian nouns and adjectives. Since Estonian does not have grammatical gender, Russian speakers may reflect this particular attribute of the Estonian word by not assigning it a grammatical role within a Russian sentence. However, considering that numerous examples exist where Russian speakers clearly assign the masculine gender to Estonian nouns ending in consonants and inflect them in accordance to both gender and case, we can dismiss this as a possible solution.

ii. Non-Integration of Estonian Words with Gradation

One particularly striking pattern in non-integration of Estonian words which emerged during the analysis of my data is a restriction in the morphological assimilation of a particular class of nouns. Specifically, Estonian words which undergo a morphophonemic transformation process called gradation, which is a series of stem alternations which occur when the noun is declined from one class to another (see Section IIb.ii above), are not inflected by Russian speakers. Regardless of their nominative phonological and morphological structure, Russian speakers ubiquitously do not decline or hybridize Estonian words belonging to this grammatical class of nouns. In the examples below, the Estonian nominative singular form and the genitive form of each noun in question is provided in order to show the qualitative changes in stem structure from one case to the next.

13. **Russian: "**надо заниматься в **тихом кохт**!"
    Gloss: (you) need to study in (prep) quite (msc.sing.inst.) place
    IPA: [nadəzən^j ɪ mat^j s^j əft^j ixəmkoxt]
    Trans: *"You need to study in a quiet place"*
    Estonian: Nom SING: koht
            Gen SING: kohe
    (RAHVUSRINGHÄÄLING, ETV Saadete Arhiiv 2009)

Example (13) demonstrates that the speaker did not decline Estonian word *koht* (*place*) according to the syntax of the sentence. The noun remains in its original nominative form and is not inflected with the prepositional singular nominal inflectional morpheme. Interestingly, the preceding adjective "*тихом*" is successfully declined as a masculine singular adjective. This indicates that the Russian speaker recognized that the Estonian noun is inherently similar to the Russian masculine noun class and assigned it a specific grammatical gender by declining the preceding attributive adjective in accordance to the masculine gender morphological paradigm. The noun, however, remains in its nominative form suggesting that some element of the noun is causing interference in completely successful morphological integration.

14. **Russian:** "а я не увидел **своего венд** на столнице"
    Gloss: and I not(neg) saw(perf.) my(reflex.) brother at(prep) station
    IPA: [ajanʲ ɪ ʊ vʲ idʲ ɪ lsvɔ jɪ vəvend̥ nʌ stɔ lnʲ ɪ t͡sɪ]
    Trans: "...but I did not see my **brother** at the station"
    Estonian: NOM SING: vend   IPA: [vend̥]
            GEN SING: venna
    (RAHVUSRINGHÄÄLING, ETV Saadete Arhiiv 2009)

Example (14) shows a case of non-integration similar to example (6). Here, the Russian speaker

uses Estonian word *vend* ("*brother*"), but does not decline it into genitive singular as required for

animate direct objects of a transitive verb. However, the preceding reflexive pronoun *своего* is

fully declined as if it were modifying a masculine singular noun in the genitive case. As was

demonstrated in example (13), the Russian speaker apparently recognizes that the Estonian word

vend corresponds well with the Russian masculine class of animate nouns and declines the

modifying pronoun appropriately. While case assignment evidently occurred, the Estonian noun

remains in its nominative form and is not integrated into the Russian morphological matrix.

15. **Russian:** "Ну, с **вашего луба** мы хотим обсуждать другую тему"
    Gloss: well with(prep) your(msc/neut.gen.) permission(nom.) we want to discuss different(fem.sng.)topic(fm.sng.)
    IPA: [nu/svaʃ ɪ vəlub̥ ɑ mɨ xʌ tʲ imʌ bsʊ ʒ datʲ drugʊ jʊ tʲ ɛ mʊ]
    Trans: "Well, with your **permission** we want to discuss a different topic..."
    Estonian: NOM SING: luba ("permission")
            GEN SING: loa [loɑ]
    (RAHVUSRINGHÄÄLING, ETV Saadete Arhiiv 2009)

The final example of non-integration of Estonian words with gradation presents a challenge for

accurate analysis. First, the Estonian word *luba* ("*permission*") ends in the vowel phoneme [ɑ]

and the Russian speaker did not affix this word with the appropriate inflectional morpheme. This

particular word also undergoes a stem change alternation as a result of gradation, in which the

voiceless obstruent is elided from the stem in the genitive case. Second, the fully-declined

preceding possessive pronoun *вашего* presents a grammatical dilemma. The assignment of case

indicates that this pronoun is modifying a masculine or neuter noun in the genitive case.

However, the justification for the case assignment is difficult to discern, as the following Estonian noun does not outwardly correspond well with either the Russian masculine or neuter cases.

Examples (13), (14) and (15) illustrate a pattern in non-integration which has not been mentioned in previous studies conducted by Verschik (2004,2005, 2007). In the first two examples, the Russian speakers successfully assign a gender to the Estonian words. Evidence for appropriate gender assignment is reflected in the declension of the preceding adjectives and pronouns. Clearly these speakers recognize that the structures of the Estonian words *koht* and *vend* correspond well to Russian masculine nouns. However, while the preceding attributive lexical elements undergo successful declension, the nouns do not. Perhaps the most plausible explanation for the discrepancy between successful gender assignment and unsuccessful morphological integration is the internal structure of the Estonian noun itself. Both of these nouns' stem structures alter significantly during declension from nominative case to genitive case in Estonian. For example, the Estonian word *koht* becomes *kohe* in the genitive case. The stem final voiceless alveolar plosive is elided and replaced by the vowel phoneme [e]. From the perspective of the Russian language, the phonological alternation of the stem in this manner may be indicative of two distinct stem formations, one ending in an obstruent and the other in a vowel. The choice of which to select for declension may be confounding the Russian speakers and therefore interfering with successful morphological integration.

Similarly, the Estonian word *vend* becomes *venna* in the genitive case. Once again the sudden loss of the stem final obstruent and the appearance of the vowel phoneme [ɑ] may be interfering in correct morphological assimilation, especially if the speaker is acutely aware of the shifting stem structure of the Estonian word in question. The process of integration becomes

significantly more difficult when successful incorporation of the Estonian word rests on the decision of which stem form of the Estonian noun is to be used. However, as is demonstrated in example (15), the process of integrating Estonian words with gradation is further complicated when the nominative stem of the Estonian word ends in a vowel phoneme. In example (15) the presence of [ɑ] appears to be causing significant interference. The Estonian noun remains uninflected, while the preceding pronoun appears to be declined in a manner which defies direct explanation. One possible explanation of the masculine gender and the genitive case assignment for the pronoun "*вашего*" may derive from a parallel and corresponding construction in Standard Russian. In Russian, the standard phrase for saying "*with your permission*" is "*с вашего разрешения.*" It is possible that the Russian speaker in (8) simply code-switched, replacing the Russian word "*разрешения*" with the nominative form of the Estonian word *luba.*   Moreover, the fact that this word ends in [ɑ] as well as undergoes a stem change alternation further complicates the assignment of case and gender by the Russian speaker, increasing the probability that the speaker will retain the nominative form of the Estonian word.

iii. Successful Inflectional Integration of Estonian of Words:

Successful morphological integration of Estonian lexical items into Russian speech is limited to a specific class of words and morphemes. The general trend shows that Estonian words or morphemes ending in consonants which have phonemic parallels to the Russian sound system are more likely to be integrated into the Russian morphological matrix than Estonian words ending in vowel phonemes. Provided below are two examples of successful morphological integration of this class of Estonian words.

16. **Russian:** Все дело в **кеелеоскусе**   **Estonian:** keeleoskus ("language ability")
    Gloss: Everything(all) business in(prep) language ability
    IPA: [fsʲ ɔ dʲ ɛ ləfke ːleoskus]

Trans: *"It has everything to do with language ability"*
(forum.k-jarve.ee/lofiversion/index.php/t5446.html)

In example (16), the fully integrated Estonian word *keeleoskus ("language ability")* is affixed with the prepositional singular inflectional morpheme as required by the preceding preposition. This Estonian word functions as successfully as any standard Russian word, conveying both the semantic lexical attributes and the correct syntactic information.

17. **Russian:** Просто я видел пустые бланки с этим **арутлусом**...   **Estonian:** artulus
    Gloss: Simply I saw (past.msc.sing.) empty(adj.plr.) holes (plr.) with this argument..."
    IPA: [prɔ stəjavʲ idʲ ɪ lpustɪ jəblankɪ sɛ tʲ ɪ mɑ rtulus]
    Trans: *"I simply saw holes in this argument."*
    (forum.k-jarve.ee/lofiversion/index.php/t5446.html)

(17) provides an example of successful morphological integration very similar to (16). Here the Estonian word *artlus (argument)* receives the appropriate masculine singular instrumental inflectional morpheme as required by the preceding Russian preposition *s*. Moreover, the modifying attributive pronoun *этим* is correctly declined, indicating that it modifies either masculine or neuter singular noun in the instrumental case. The Estonian word functions perfectly within the sentence, conveying all of the important syntactic information, as well as conforming to the appropriate Russian morphological paradigms.

 Examples (16) and (17) provide a preliminarily look at successful morphological integration of Estonian words ending in obstruents. However, these examples only show the complete morphological integration of a particular set of Estonian words, which end in a voiceless alveolar fricative. This obstruent is highly similar to the voiceless dental fricative present in Russian. As will be demonstrated in subsequent sections of this paper, there exists a highly prevalent and generalizable trend regarding the successful integration of Estonian words ending in a wide range of consonants phonemes.

iv. Successful Inflectional Integration of Lithuanian Words:

Contrasting with Estonian, the morphological adaptation and integration of Lithuanian words is a comprehensive and graceful process. In the following section, I will attempt to demonstrate both the breadth and fluidity to which successful integration of Lithuanian words and morphemes occurs. Parts of this data set expand upon the general trends established in Avina (2006) by showing that Lithuanian words ending in a wide variety of phonemes, both vowels and consonants, are treated with equal success by Russian speakers. I have decided to use further examples provided by Avina (2006) which suitably exemplify the characteristics of Lithuanian-Russian morphological integration in order to supplement my own data set. Many of the examples provided here show a direct contrast with the Estonian sentences listed above. The comparison of Estonian and Lithuanian data sets will be conducted at the end of the present section.

18. **Russian:** "вчера что-то интересное произошло на **дарбасе"** **Lithuanian:** darbas
    Gloss: yesterday something interesting(adj.neut.sg.) occurred(perf.) at(prep.) work(msc.sng.prep.)
    IPA: [ft͡ʃ ʲ ɪ raʃ tɔ təɪ ntʲ ɪ rʲ ɛ snəjəprəjɪ zʌ ʃ lɔ nədarbas]
    Trans: *"Yesterday something interesting happened at **work**."*
    (Petis 2008)

(18) demonstrates the complete and successful morphological integration of the Lithuanian word *darbas* (*work*) into standard Russian morphology. The speaker successfully affixes the Lithuanian word with the appropriate masculine prepositional singular inflectional morpheme as required by the preceding Russian preposition *na.* Here, the Lithuanian word *darbas* ends in a voiceless dental fricative which is highly similar to the voiceless dental fricative of Russian. The Russian speaker evidently recognizes the structure of the Lithuanian word as directly corresponding to the Russian masculine noun class and successfully assigns this noun the appropriate case as dictated by the syntax of the sentence.

19. **Russian:** "Я уже закрыл свою **саскайт-у**"   **Lithuanian**: sąskaita
   Gloss: I already closed(perf.msc.sng.) my(pro.reflx.) account
   IPA: [jaʊ ʒ ɛ zʌ krɨ lsvɔ jʊ sɑ skaita
   Trans: *"I already have closed my **account**"*
   (Petis 2008)

Example (19) reveals that successful integration of Lithuanian lexical elements extends to words

ending in vowel phonemes. Here, the speaker affixes the Lithuanian word *sąskaita* (*account*)

with the Russian inflectional morpheme -*u*, demonstrating that it is the direct object of a

transitive verb. The preceding reflexive possessive pronoun is also successfully declined,

indicating its role as a modifier of a feminine singular noun in the accusative case. This

demonstrates that case and gender assignment for the Lithuanian noun is successful and that the

Lithuanian word is functioning well within the Russian morphological paradigm.

20. **Russian:** "**...пашалп-у** тебе дали"   **Lithuanian**: pašalpa
   Gloss: welfare allows (to) you (2nd.sng.dat.) (they)gave
   IPA: [paʃ alput^j ɪ bɛ dalɪ]
   Trans: "They gave you the welfare allowance"
   (Avina 2006)

Example (20) is similar to (19), wherein the speaker declines and affixes the Lithuanian word

pašalpa (*welfare allowance*) with the appropriate feminine accusative case inflectional

morpheme. This action conveys that this noun is serving as the direct object of the Russian verb

дать. The word final vowel [a] does not interfere with complete declension, which occurs

fluidly and accurately.

21. **Russian:** "Ей **струм-у** лечить надо"   **Lithuanian**: struma
   Gloss: (to)her goiter to treat need
   IPA: [jɛ jstrumul^j ɪ tʃit^j nadə]
   Trans: "She needs to treat her goiter"
    (Avina 2007)

(21) provides another example of successful integration of a Lithuanian word ending in a vowel

phoneme. The Lithuanian word *struma* (*goiter*) ends in a low central unrounded vowel. The

speaker removed this ending and affixed the nominal stem with the appropriate feminine singular accusative case inflectional morpheme as required by the syntax of the sentence. This word functions as a direct object of a transitive verb and conveys its correct syntactic function.

In these examples a clear pattern can be established: Lithuanian lexical items are successfully and fluidly integrated into the Russian morphological matrix, regardless of their phonological structure. Words and morphemes terminating in vowel phonemes as well as consonant phonemes demonstrate accurate morphological assimilation. Examples (19), (20) and (21) show that Lithuanian words ending the vowel phoneme [a] are classified by Russian-Lithuanian speakers as belonging to the Russian feminine noun class and are affixed with the appropriate inflectional morphology, depending on the context of the sentence. The fluid treatment of this class of Lithuanian words contrasts significantly with Estonian, as Estonian words ending in vowel phonemes are never successfully integrated in the given examples. One possible explanation of this discrepancy is the acoustic difference between the shared Russian and Lithuanian vowel phoneme [a] and the Estonian vowel phoneme [ɑ]. The Russia and Lithuanian /a/ is low central unrounded vowel, while the Estonian vowel is produced significantly farther back in the mouth and is significantly lower. Like Russian, Lithuanian undergoes a form of vowel reduction similar to Russian *akan'e*. Many word final [a]'s are centralized and raised slightly when unstressed. The shared aspects of acoustic structures of Russian and Lithuanian [a] may allow Russian speakers to recognize the Lithuanian vowel as being inherently similar to that of Russian, thus allowing them to classify Lithuanian words ending in [a] as feminine singular nouns.

Thus far the main focus of my analysis concentrated on the examination of nominal inflectional morphology. Specifically, I examined how Estonian and Lithuanian nouns are

treated by bilingual Russian speakers and whether these foreign elements are successfully

integrated in to Russian nominal declensional patterns. The analysis of inflectional morphology

generally concerns morphological integration at a superficial level. In the following sections, we

will turn to hybridization of Estonian and Lithuanian words and morphemes with Russian

derivational affixes. This process is both complex and sophisticated and requires an in depth

examination of deep morphological and phonological structure of the foreign words in question.

v. Hybridization of Estonian Words with Russian Derivational Morphemes

We will now examine the more complicated morphological integration process called

hybridization. This process involves the affixation of a morpheme or stem from one language

with derivational and inflectional morphemes from another. In Estonian this process occurs only

with a restricted set of stems and morphemes. Typically, the Estonian word hybridized with

Russian derivational elements ends in a consonant phoneme and does not belong to the class of

Estonian nouns which undergo stem alternations during declension. Below are several examples

which elucidate the main features of Estonian-Russian hybrid words used by Russian-speakers

within Estonia.

22. **Russian:**...решил что сложно кредит **максовать**   **Estonian:** maks
    Gloss: (he) decided/that difficult credit to pay
    IPA: [rʲ ɛ ʃ ɩ l/ʃ tɔ slɔ ʒ nəkrʲ ɛ dʲ ɪ tmɑ ksʌ vatʲ]
    Trans: *"(He) decided that it is difficult to pay the credit"*
    Russian Derivational Morpheme: -ова- (-ova-)
    Russian Inflectional Morpheme: -ть- (-t'-)
    (http://forum.ee/pt114974/)

Example (22) shows the hybridization of the Estonian noun *maks* (*payment)* with the Russian

derivational morpheme *-ova-* in order to create a functional Russian verb. In (22) this newly

formed verb is used as an infinitive compliment to the Russian verb *решить*. Therefore, the

Russian speaker adds the inflectional infinitive morpheme *–t'* to the verbal stem in order to

create an infinitive verb. This new verb functions flawlessly according to the syntax of (22). Phonologically, the Estonian word *maks* ends in a voiceless alveolar fricative [s] and does not undergo any stem mutations in its declension and is successfully hybridized with a Russian verbal derivational morpheme.

23. **Russian: Кюльм-оват-о** как-то на улице...   **Estonian:** külm
    Gloss: (It is) coldish some-how on (prep) the street
    IPA: [kylʲ məvatə kak-tənʌ ulʲ ɪ ʧɪ]
    Trans: *"It is kind of cold outside..."*
    Russian Derivational Morpheme: -оват- (-ovat-)
    Russian Derivational Morpheme: -о-
    (http://forum.k-jarve.ee/lofiversion/index.php/t643-550.html)

In example (23) the speaker hybridizes the Estonian word *külm* by affixing two derivational morphemes. The first derivational morpheme affixed is the adjectival derivational morpheme -*ovat-* . This particular morpheme conveys the meaning of the root to an attenuated degree (ex. coolish, kind of cold). The second derivational morpheme affixed to the stem is the adverbial derivational morpheme -*o-* which turns the adjectival stem into an adverb (ex. coolly). The newly constructed word which formed from the Estonian word *külm* is used in an impersonal adverbial construction. This process of hybridization is somewhat more complex than example (22), since two derivational affixes are used to create a multi-layered hybrid. However, much like example (22) the Estonian root used for the creation of the hybrid ends in a consonant phoneme which is shared by the Russian sound system: [m]. Moreover, this Estonian word does not undergo any stem alternations due to gradation.

24. **Russian:** "А я сказал ему, дай мне свою **сяястукарту**"   **Estonian:** säästukaart
    Gloss: and I said to him (msc.dat.), give(Imper.) me(dat.sng.) your(fem.sng.acc.)
    (fem.sng.nom.)
    IPA: [ʌ jaskʌ zaljı mu/dajmnʲ ɛ svʌ jusæ ːstukɑ rtʊ]
    Trans: *"And I said to him, give me your savings card."*
    (http://rus.postimees.ee/140307/)   sääst =savings, economy

Example (24) presents a highly interesting form of hybridization involving the modification and hybridization of the compound Estonian noun *säästukaart*. In Estonian, compound nouns are usually formed by declining the first component into the genitive case and then attaching the second word which remains in the nominative. S*äästukaart* can be broken down into two root morphemes, s*äästu* (Nom: s*ääst*) and *kaart.* In the example above, the speaker removes the second root morpheme *kaart* and replaces it with the Russian equivalent, *карта*. The first Estonian root morpheme is retained in its genitive form and the Russian morpheme is simply affixed to this nominal stem. We are able to determine that it is indeed the Russian word *карта* being used, rather than the Estonian equivalent, by examining the declension of the word. The hybrid and the preceding attributive pronoun are declined into feminine singular accusative case, indicating the speaker assigned the hybrid word to the feminine Russian noun class. If the speaker had kept both Estonian morphemes, one would expect the declension of the hybrid to follow the masculine singular accusative case which requires a zero ending, since the Estonian word *kaart* ends in a voiceless alveolar plosive. However, this evidently is not the case, allowing us to assume that the second component of the compound hybrid is indeed the Russian word *карта.*

25. **Russian: S1:** -Да? и что же именно тебе **хувитав**?   **Estonian**: huvitav
         S2: - то, что это просто очень **хувитавный** вопрос
    Gloss: S1: -yes(ques.) and what (is) so(particle.) namely (to) you interesting
         S2:-that that it (is) simply (a) very interesting question
    IPA: S1:[da/ɪ ʃ tɔ ʒ ɛ imʲ ɪ nətʲ ɪ bɛ xuvitɑ v]
         S2: [tɔ ˌʃ tɔ ɛ təprɔ stəɔ ʧ ɪ nʲ xuvitɑ vnʲ ɩ jvʌ prɔ s]
    Trans: -*"Oh yeah? And what exactly is so interesting to you?"*
         -*"It's simply a very interesting question"*
    Russian Derivational Morpheme: -(е)н
    Russian Inflectional Morpheme: -ый-
    (From an interview on *Aktuellne Kamera* 8.13.2008)

Example (25) provides two uses of an Estonian word and one excellent example of productive hybridization. In the dialog above the first speaker uses the Estonian word *huvitav* (*interesting*) without modifying it. The impersonal construction which this particular question employs requires the dative of person as well as an adverb. However, the Estonian word remains un-affixed by any Russian derivational or inflectional morphemes, preventing it from functioning like a Russian word within the sentence. In Estonian, *huvitav* is both an adjective and an adverb, which may be the reason that no productive hybridization has occurred with this word. The second speaker hybridizes *huvitav* with the Russian adjectival derivational morpheme *-(e)n-* in order to create a functional Russian adjective. This adjectival stem is then affixed with the appropriate adjectival inflectional morpheme which corresponds to the following noun. Like example (23), this process of hybridization involves affixing two morphemes, one derivational morpheme and one flectional morpheme, to a foreign root morpheme in order to create a word capable of functioning successfully in Russian speech. Furthermore, like all of the other examples, the Estonian word in question ends in a consonant phoneme and one that is shared by the Russian sound system.

26. **Russian:** А вот **канелька**, берите **канельки**   **Estonian:** kaneel
    Gloss: and here (is a) cinnamon roll, take (2[nd]plr.imper.) (a) cinnamon role
    IPA: [avɔ tkɑ nelʲ kə/bʲ ɪ rʲ itɪ kɑ nelʲ kɪ]
    Trans: "*And here is a cinnamon roll, take some cinnamon rolls*"
    Russian Derivational Morpheme: *-(o)k-*
    (Verschik 2005)

Example (26) is taken from one of the few instances of hybridization provided by Verschik. While she does not identify this process as hybridization and refers to it specifically as a form of convergence, a very interesting hybridization process is occurring here. The speaker hybridizes the Estonian word *kaneel* (*cinnamon*) with the Russian nominal derivational morpheme *-(o)k-*. This class of derivational morphemes creates all-purpose feminine nouns requiring the ending –

a, which the speaker successfully adds to the newly formed hybrid in the first clause. The speaker further declines the newly formed Estonian-Russian hybrid in the second clause by affixing it with the accusative plural morpheme. Perhaps the most interesting aspect of this instance of hybridization is the fact that the Russian speaker also applies a standard rule of Russian morphophonemics. In the Russian language, the voiced lateral approximant [l] is always soft at a morpheme boundary before derivational morphemes such as *-(o)k-*. In (26) the lateral approximant belonging to the Estonian word is softened by the Russian speaker in accordance to the rule (at least, that is, in orthography). This indicates that not only is this speaker successfully applying the rules of Russian word-formation to create a functional Russian-Estonian nominal hybrid, but the natural morphophonemic processes of the Russian language are also occurring during the process of hybridization.

Examples (22), (23), (24), (25) and (26) provide an informative sample of hybridization processes of Estonian roots and stems with Russian affixes and reveal a few significant and unique characteristics. First, Russian speakers are able to create Estonian-Russian hybrids corresponding to a wide range of parts of speech: that is, adjectives, verbs, nouns as well as adverbs are formed during the hybridization processes. Second, Estonian-Russian hybrids are only created from Estonian words ending in consonant phonemes. The examples above demonstrate that hybrid words can be formed from Estonian words ending in plosives, nasals, fricatives and laterals. This contrasts significantly with the evidence presented in the section IV.B.iii where successful inflectional integration of Estonian lexical items has been shown to occur only with Estonian words terminating in a voiceless alveolar fricative. In (22) - (26), no instance of hybridization occurs with an Estonian word which ends in a vowel phoneme.

Perhaps the most interesting, if not the most important, observation which can be drawn from these data is that only entire Estonian words can be actively hybridized. In all of the examples provided, the full nominative form of each Estonian word serves as the lexical stem for hybridization. These words are not segmented or decomposed into their composite roots.[3] Rather, the nominative form of the word is used, onto which Russian derivational and inflectional affixes are added to create the Estonian-Russian hybrids. For example, the Estonian word *huvitav* can be broken down into several morphological components. The root of this word is the noun *huvi* (interest) on to which derivational and inflectional morphemes are formed in order to create different parts of speech: huvi-ta-ma (*to be interested*), huvi-ta-tus (*concern)*, etc.

In example (25), the Russian adjectival derivational morpheme is affixed to the entire word, rather to the root, or even the stem (*huvita-*). Either the Russian speaker does not recognize the internal morphological structure of the Estonian word and therefore is unable to decompose it into its constituent parts, or some aspect of the stem or the root morpheme itself prevents its successful assimilation and hybridization. Since booth the root (*huvi-)* and the adjectival stem (*huvita-*) end in vowel phonemes, we may assume that the general trend of non-assimilation of Estonian lexical items ending in vowel phonemes applies in this instance as well. As will be shown in the following section, this pattern of assimilation, where only the entire nominative form of the Estonian word is used to create linguistics hybrids, differs significantly from the treatment of Lithuanian words. In contrast, Lithuanian words are often first divided up

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[3] In (24) a Russian speaker segments a compound Estonian noun into its two component parts and then affixes a Russian morpheme to the nominal stem. I consider compound nouns to be in this case exceptional, in that no derivational affixation occurs when compound nouns are formed. The Russian speaker has broken the compound noun into its two underlying noun, yet does not modify either of the component parts during the hybridization process. It seems that the focus here is on simple words and morphemes rather than complex words, which present a serious challenge for analysis. While it could be argued that (24) nevertheless demonstrates the modification and decomposition of an Estonian noun for the purposes of hybridization, but I maintain my skeptical point of view.

into their internal roots and stems by removing Lithuanian morphemes and then replacing them with Russian morphemes in order to create functional lexical hybrids.

vi. Hybridization of Lithuanian Words with Russian Derivational Morphemes:

The final section of the analytical portion of my thesis concerns the manner in which Russian speakers form Lithuanian-Russian hybrid words. My initial analysis of Avina's data set suggested that the process in which Lithuanian-Russian hybridization occurs is highly dynamic and highly complex, resulting in many creative and functional lexical outputs. In her monograph, Avina provides a wealth of hybridization examples which clearly demonstrate complexities and fluidity with which this process occurs among Russian-Lithuanian speakers. However, Avina offers little in the way of a comprehensive analysis of exactly what is occurring and why. In order to elucidate her examples, I chose to comprehensively examine a selection of the most interesting hybrids provided by Avina. Through this analysis I aim to show the incredible flexibility and comprehensiveness with which the hybridization process occurs among Russian-Lithuanian bilingual speakers.

27. **Russian:** Завтра устроим **вакарушку**?   **Lithuanian**: vakaras
    Gloss: Tomorrow (we) setting up (2ndplr.perf.fut.) (a) party?
    IPA: [zavtrəʊ strɔ jı mvakaruʃ kʊ]
    Trans: "*Are we setting up a little shindig tomorrow?*"
    Russian Derivational Morpheme(s): **-** уш – , **-**(о)к
    Russian Inflectional Morpheme: **-** у **-**
    (Avina 2006, 151)

Example (27) demonstrates the complexity and intricacy with which Russian-Lithuanian hybrid words are formed. In (27) the Lithuanian word *vakaras* (*party*) undergoes several changes during the hybridization process. First, the speaker removes the Lithuanian masculine nominal

ending –*as*, exposing the Lithuanian nominal stem *vakar-*. This stem is affixed with the Russian

nominal diminutive derivational morpheme **-** *yu* – to create a diminutive stem. Onto this stem

another diminutive derivational morpheme, -*k-,* is affixed.[4] Finally, the speaker adds the

feminine singular accusative inflectional morpheme to convey the syntactic role of the newly

formed hybrid. This multistep process of hybridization is highly sophisticated and indicates a

strong level of familiarity with the morphological and phonological structures of the Lithuanian

word.

28. **Russian:** В **пигушках** сейчас люди часто покупают   **Lithuanian**: pigus
    Gloss: in(prep.)budget stores(prep.plr.) right now people often buy/shop(3rd.plr.)
    IPA: [fp^j iguʃ kaxs^j ɪ jʧ asl^j yd^j ɪ ʧ astəpəkʊ pajʊ t]
    Trans: *"Right now people are often shopping at budget stores"*
    Russian Derivational Morpheme(s): -уш- ,-к-
    Russian Inflectional Morpheme: -ах-
    (Avina 2006, 151)

Example (28) closely parallels example (27) in that a complex diminutive noun hybrid is formed.

The derivational process involved is nearly identical to the process in (27) except that the

speaker in this instance affixes the hybrid with a prepositional plural inflectional morpheme as

required by the preceding preposition. Once again a Lithuanian masculine nominal ending, in

this case –*us*, is removed by the speaker and a Russian derivational diminutive derivational

morpheme has been affixed to the nominal stem.

29. **Russian:** Когда **дирбать** начнём?   **Lithuanian:** dirbti
    Gloss: When to work(inf.) (we) start(2nd.plr.)
    IPA: [kʌ gdadirbət^j nʌ ʧ n^j ɔ m]
    Trans: "When will we start working?
    Russian Derivational Morpheme: -ай-
    Russian Inflectional Morpheme: -ть
    (Avina 2006, 151)

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[4] The system of Russian diminutives and their formation is highly complex. Often this process involves the combination of several diminutive derivational morphemes: сестр-**ён-к**-а (sweetie sister), комнат-**уш-еч-к**-а (an affectionately large room). Translation of Russian diminutives is exceedingly difficult as the addition of another diminutive suffix may alter the semantic quality of the word. For example, комнат-**иш-к**-а is an obscenely large and disgusting room, whereas комнат-**уш-еч-к**-а is less abrasive and playful.

In example (29) the speaker hybridizes a Lithuanian verb, transforming it into a functional

Russian verb. The verb *dirbti* consists of the verbal stem *dirb-* and the infinitive marker *–ti.* In

this instance, the Russian speaker removes the Lithuanian infinitive marker and affixes the

Russian verbal derivational morpheme *-aj-* to the Lithuanian verbal stem. The newly formed

Russian-Lithuanian hybrid is then inflected with the appropriate infinitive ending.

> 30. **Russian**: **жинутьку** получил..   **Lithuanian:** žinutė
> **Gloss:** message (fem.acc.) received (past.sng.masc.)
> **IPA:** [ʒ inutʲ kʊ pəlʊ ʧ il]
> **Trans:** "I received a message (text message/SMS)
> (N. Avina 2004, 138)

Example (30) demonstrates the successful hybridization of a Lithuanian word ending in a vowel

other than [a]. The Lithuanian vowel *ė* is represented by the IPA symbol [e ː], which is a mid

front tense unrounded vowel. Like the Russian word *весточка* (message, text message), the

hybridized Lithuanian word is a diminutive noun. In (30) the Russian speaker affixed the

Lithuanian nominal stem *žinut-* with the Russian diminutive suffix *–k-* and appropriately

inflected the newly formed diminutive in order to convey its syntactic role as a direct object of a

transitive verb.

(27), (28), (29) and (30) are excellent examples of the hybridization process in Russian-

Lithuanian bilinguals. These sentences show how this process contrasts with the hybridization of

Estonian words by Russian-Estonian speakers. Importantly, these examples reveal several

noteworthy characteristics of Russian-Lithuanian hybridization. First, Russian speakers of

Lithuanian apparently recognize the deep morphological structure of the Lithuanian words being

hybridized. In all three examples, the nominative forms or, in the case of (29), the infinitive

forms of the Lithuanian words are decomposed into their root or stem structures before the

hybridization process begins. In (27) the Lithuanian word *vakaras* is segmented into the root

morpheme *vakar-* to which the Russian derivational morphemes are then attached. Similarly, in (28) the Lithuanian word *pigus* is segmented into the nominal root morpheme before the affixation of Russian derivational morphemes.

In (29) the Lithuanian infinitive *dirbti* is segmented by removing the Lithuanian infinitive marker and replacing it with a Russian verbal derivational morpheme and the inflectional Russian infinitive marker. This process shows that each speaker recognizes that the Lithuanian words can be decomposed into smaller, meaningful parts, as can Russian words. This allows for a much more creative and dynamic hybridization process. Finally, example (30) shows the lone instance in which a Lithuanian word ending in a vowel phoneme other than [a] has been hybridized to create a functional diminutive. What is most interesting about this instance of hybridization is that the Lithuanian vowel *ė* (IPA symbol [eː]) does not correspond to a full phoneme in the Russian language. In Russian, the vowel [e] is an allophone of the vowel [ɛ] which only occurs in between or before palatalized or palatal consonants and never occurs in word final position. This particular example corresponds well with Estonian words ending in the vowel [ɑ]. In Russian, [ɑ] is an allophone of the vowel phoneme [a] which occurs in a very specific phonological environment and never in word final position. However, unlike the Estonian examples where Estonian words ending in [ɑ] are never inflected, the Russian speaker in (30) successfully modifies, hybridizes and inflects the Lithuanian word *žinutė*.

One possible means of analyzing and explaining the interesting disparity exhibited in (30) has much to do with the inherent morphological similarities between Russian and Lithuanian nouns. The Lithuanian word itself is a diminutive, which can be decomposed into the following parts: **žin** *(ROOT)-* **ut** *(diminutive affix)-* **ė** *(inflectional morpheme)*. This structure closely parallels Russian morphological patterns for diminutives, where the Russian word *весточка* can

be segmented into: **вест** *(ROOT)-* **оч** *(diminutive affix)* –**к** *(diminutive affix)-* **a** *(inflectional morpheme).* In this example, the considerable similarity and correspondence between Russian and Lithuanian morphological structures may override any phonological differences between Lithuanian and Russian vowels, allowing the Russian speaker to successfully segment and hybridize the Lithuanian word. Russian-Estonian speakers are, on the other hand, confronted by both unfamiliar phonological and morphological structures, which increase the probability of unsuccessful morphological integration.

The readiness and ease with which Russian speakers segment Lithuanian words into roots and stems in order to hybridize them contrasts directly with the evidence provided for Estonian hybridization. In all of the Estonian examples, the Estonian words remain in their nominative form to which Russian derivational affixes are added, rather than their morphological roots or stems. This perhaps indicates that Russian speakers of Lithuanian more easily recognize the inherent similarities between Russian and Lithuanian morphological structures, allowing them to use Lithuanian and Russian roots, morphemes and stems interchangeably in a highly fluid and dynamic manner. This process, however, is conspicuously absent among instances of lexical hybridization completed by Russian speakers of Estonian.

V. Conclusion

One of the main objectives of my thesis is to explore how an evolving linguistic and social environment resulting from increased language contact and the development of bilingual speech communities triggers language convergence. Current sociolinguistic developments in the Baltic States provide researchers with an excellent opportunity to examine language contact in a culturally vibrant region. Intense language contact which developed following the collapse of the

Soviet Union appears to have accelerated the rate of language convergence among the Russian

minority. My research focused on several prominent language convergence outcomes relating to

the morphological integration of foreign lexical items into Russian speech. I aim to summarize

my findings and provide a brief discussion of other possible means of analyzing the data which I

have presented. Following this, I will address some of the limitations of this method of research

and suggest alternative methods for comprehensively examining these intriguing and important

linguistic phenomena.

The comparison of Russian speakers in Estonia and Lithuania has demonstrated a clear

disparity in the way Estonian and Lithuanian lexical items are integrated into Russian speech.

This disparity can be very generally summarized: the successful integration of Estonian lexical

items is restricted to a specific class of words, whereas Lithuanian words, regardless of

phonological or morphological structure, demonstrate comprehensive and fluid integration. My

analysis has revealed that this general trend can be decomposed into several composite

tendencies. The primary restriction is that both the phonological and morphological structure of

Estonian words and morphemes appear to be a significant obstacle for foreign speakers and

ultimately prevent the successful and comprehensive integration of these Estonian elements into

the Russian morphological paradigm.

Examples provided above show that Estonian words ending in the vowel [ɑ] as well as

words undergoing a morphophonemic stem alternation due to gradation are not morphologically

assimilated by Russian speakers. Neither successful case assignment nor lexical hybridization

occurs. These words are not productive elements for Russian speakers and as a consequence are

not integrated into the Russian lexicon as functional lexical items. I posited that the reason for

this lack of integration stems from the phonological and morphological distance between

Estonian and Russian sounds, words and morphemes. While the evidence shows that this analysis may be accurate, it may also be advantageous to discuss the difference between code-switching and lexical borrowing. In this sense, we may be able to reason that Estonian words are not successfully integrated into a Russian morphological paradigm due to the fact that they are simply spontaneous single code-switches, rather than complete lexical borrowings. According to Myers-Scotton, words that are simply single word code-switches generally occur in "bare" forms: "That is, they do not receive any inflections that would make them well-formed in the language that supplies the morphosyntactic frame" (Myers-Scotton 2007, 255).

In the current situation, Russian functions as the "Matrix Language" where Estonian functions as the "Embedded Language." In the examples above, Russian speakers use a single Estonian word in a stream of Russian without the appropriate inflection. If we assume that these are simply single code-switches and not established borrowings, then how do we determine whether a word has or will become an "official" borrowing? In response to this question, Myers-Scotton suggests that "lack of congruence between languages regarding abstract grammatical features is behind the occurrence of bare forms from one language in the frame set by another... (Myers-Scotton 2007, 258)" That is, differences between languages, such as morphological and phonological distance, may prevent words from one language from becoming fully established borrowings. This thus brings us full circle, where Estonian words may not be integrated for the reason that they do not morphologically or phonologically correspond to Russian and that they are not established borrowings due to their contrastive structure.

The tendency to use words from a foreign language is a natural and pervasive behavior exhibited by individuals across the entire world. Through the process of lexical adaptation and borrowing, we are able to successfully enrich our native language's lexicon and achieve the

ability to discuss new concepts and ideas. Even predominantly monolingual speakers

incorporate foreign words or phrases in to their speech, most of which were acquired passively

during brief exposures to other languages or from their community. The process of lexical

adaptation and use is one of the primary forces driving language convergence and evolution and

is an important subject for empirical study. Among the Russian communities of Estonia and

Lithuania, the inclusion of foreign words is a prolific and ubiquitous process. While this study

has demonstrated what tendencies exist within this lexical borrowing, a more comprehensive and

thorough study must be conducted in order to fully understand exactly why there is such a clear

disparity in morphological integration and to provide a comprehensive and empirical analysis of

the disparity to confirm the original hypotheses.

There are several inherent limitations to the research which I have conducted. First,

online sources, whether in print or in an audio/visual formant, are a poor substitute for data

collected in the field. In order to accurately examine the manner in which members of the

Russian speech communities within the Baltic States are using foreign words within their

Russian speech, it is necessary to collect data directly from the source. One of the inherent

problems with using blogs, television shows, and other third person sources is that no empirical

controls can be established which limit the influence of external confounding factors. For

example, instances of Estonian and Lithuanian words being used in online forum responses

cannot be accurately assessed for the following variables: native language of the speaker,

language proficiency of the interlocutor, age, social background, etc. All of these variables can

significantly affect language use and must be controlled for, or at the very least considered,

during an examination looking at language use habits.

Methodologically, this research fails to address this phenomenon from an empirical and scientific perspective. It represents an *ad hoc* method of investigation, where conclusions are drawn from the initial observations, though no true experimentation is conducted. While I have attempted to expand my data sets in order to confidently establish the ubiquity and prevalence of the putative patterns discovered during my cursory examination, no direct hypothesis was tested in order to prove my observations. This by no means invalidates what I have attempted to accomplish here. Rather, the very fact that the expansion of the data set supports my initial observations presents an excellent opportunity for further research.

One possible means of examining the manner in which Russian speakers integrate Estonian and Lithuanian elements is to conduct a comprehensive acoustic analysis of Russian speech which contains these foreign words. Myers-Scotton states that "established borrowings tend to be well integrated into the recipient language in regard to pronunciation (Myers-Scotton 2007, 259)." In contrast, foreign words that are used as singly occurring code-switches generally are pronounced as they would be in the original language. Here, at the border between acoustics, phonology and morphology, a promising study emerges. In order to assess why some Estonian words are integrated into the morphological matrix and why others remain in their "bare" nominative form, I suggest that an acoustic study be conducted which focuses on the actual pronunciation of the Estonian words by Russian speakers. By assessing how Estonian words and Lithuanian words are pronounced by Russian speakers, one may be able to draw valuable comparisons and insights that can confirm my original hypothesis that the phonological distance between Estonian and Russian sounds inhibits complete integration.

Ultimately this thesis has provided an examination of a complex and evolving multilingual environment. I have shown that drastic changes in demographics and language

competencies over time can instigate language convergence. For Russians living in the Baltic States, language convergence is best exemplified by the manner in which elements from the Baltic languages have inundated the Russian language and have altered its lexicon and speech. In general, the Russian language spoken in this area is rapidly adapting and evolving under the social and linguistic pressures exerted by a highly dynamic and fluctuating linguistic environment.   Consequently, this area promises to be a continual source of valuable and innovative linguistic research studying language contact and change.

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