# Sociophonetic History of Newfoundland English in Happy Valley-Goose Bay, Labrador

by



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## Abstract

In this paper, I report on the variety of English spoken in the relatively new community of Happy Valley-Goose Bay, Labrador. The effects of dialect contact and the process of dialect levelling (Trudgill 1986; Britain 1997, Kerswill and Williams 2000; Kerswill 2002) are observed by examining the development of several vowels in the Happy Valley-Goose Bay vowel system. In this community the migrant generation showed evidence of mixing. The first generation showed the most evidence of levelling along with the emergence of new distinctions. The second generation showed some evidence of levelling, the emergence of new distinctions, and in some cases a return to patterns present in the migrant generation. These results indicate that different vowels within a dialect can move through the stages of dialect contact at different rates due to the multitude of influences on the process of dialect contact.

## Acknowledgements

First, I would like to thank the many people in Happy Valley-Goose Bay who took the time to participate in this project and to share the many interesting and often entertaining stories of living in this community. It was a wonderful experience to be able to return to my hometown and learn more about its beginnings and growth.

I would also like to thank my thesis supervisor, Dr. Paul DeDecker for all of the support and direction he has provided me over the years. I would especially like to thank him for the encouragement to conduct my research in Happy Valley-Goose Bay, therefore furthering research in this part of the province. This was a valuable experience for me. I have learned so much through working with Dr. DeDecker and through his guidance and feedback he has provided during each stage of this project.

I would like to acknowledge the support of the Social Sciences and Humanities Research Council of Canada, the Northern Scientific Training Program, and the Institute of Social and Economic Research at Memorial University of Newfoundland. Without funding and support, this research would not have been possible.

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## Chapter 1: Introduction

This project, funded through grants from the Social Science and Humanities Research Council (#766-2013-0459), and the Northern Scientific Training Program (#20131270), examines an undocumented dialect of Newfoundland English (NLE) spoken in Happy Valley-Goose Bay (henceforth HVGB) that has been developing over the past 62 years, due to the relocation of island Newfoundlanders seeking to work on the air base (Rompkey 2003). In the early days of this period of migration, speakers of several dialects of NLE were placed in sustained contact, in addition to American, Mainland Canadian, Innu, Inuit, and southern Inuit dialects of English. This particularly complex linguistic scenario (i.e. the presence of multiple dialects) served as the linguistic input to subsequent generations of native-born Happy Valley-Goose Bayers (henceforth HVGBers). Over six decades later, the current population has grown to include the very first migrants to Happy Valley-Goose Bay (HVGB), and the first and second generations born in the community. This situation gives us the opportunity to address a question of critical importance to theories of sociolinguistic variation and dialect change: how does the process of dialect leveling (Trudgill 1986, Britain 1997, Kerswill and Williams 2000, Kerswill 2002) take multiple sources of linguistic input and effectively produce one localized dialect? I will answer this question by looking at the development of the HVGB vowel system, from its earliest substrate forms involving multiple dialect sources to its current state as spoken by native HVGBers. Further, I will look at gender differences in the dialect to obtain a more detailed picture of the HVGB dialect and how these patterns have changed through the generations.

# Chapter 2: Literature Review

## 2 .1 Theoretical Approach

To inform my investigation of how a speech community produces a unified linguistic system, I drew on four theoretical approaches. The first is one of the basic tenets of the variationist sociolinguistic approach to studying language, that changes can be studied as they occur, or, in progress (Labov 1972, Labov, Yaeger and Steiner 1972, Weinreich, Labov and Herzog 1968). Second, this study used an apparent-time construct (Bailey, Wikle, Tillery and Sand 1991), which enables inferences about the trajectory of linguistic change over the course of time by drawing on linguistic data from a wide age range of speakers at one period in time. In this construct the oldest speakers are representative of the linguistic system at an earlier time in the history of the community, the younger cohorts represent the newer innovations, and by tracking phonetic differences across the age spectrum, we can arrive at a representation of the change in the linguistic system of the speech community over time. This method provided us the opportunity to track generational developments across the vowel system. It showed the progress of sound change as well as the social agents driving phonetic change towards a unified system.

The third theoretical approach concerned what happens when mutually intelligible dialects of the same language come into contact with each other. In such cases, linguistic accommodation occurs (Giles and Smith 1979, Trudgill 1986). Accommodation often occurs when two speakers of mutually intelligible dialects of the same language come into contact and converse, features may be transferred from one

dialect to another. When a speaker of American English and British English converse, both may know that “sidewalk” in American English has the same meaning as “pavement” in British English, yet the speakers could adapt the other dialect form, even if they do not need to for communication. When this contact is long term, accommodation becomes widespread and permanent, and a new dialect emerges (Trudgill 1986). According to Trudgill (1986), a mixture of variants from several different sources can be found in the initial period of contact. As time passes, a process of focusing occurs, effectively reducing variation in the mixture. This reduction takes place as a result of accommodation and can also produce new forms not present in any of the original input dialects (Britain and Trudgill 1999). More details on the application of accommodation theory to new dialect formation will be addressed below in Section 2.3.

The final theoretical view, also a central premise in variationist sociolinguistics (Labov 1972, Eckert 2000) is that to explain patterns of linguistic variation and change one must consider factors concerning the social use of language (such as the speaker's age, gender, social class). This study is largely about the social and linguistic consequences of migration. In every case of migration, language or dialect contact occurs, except in the case of a homogenous speech community moving to an isolated location. Migration is also said to have sociolinguistic consequences on the in-migrants, the original residents, and on the migrants’ town of origin. Migrants are uprooted from a familiar speech community and then need to relate sociolinguistically to a new speech community (Kerswill 2006). The social aspects of accommodation and new dialect formation are also examined in my study and I return to a discussion of

them in section 3.4. In the next section, I review relevant background literature needed to support the predictions I present for the development of the English dialect in HVGB.

## 2 . 2 Happy Valley-Goose Bay

The community of Happy Valley-Goose Bay is located in central Labrador. The development of this community came in Spring of 1941, when Canada and the United States sent teams to look for a site to build a new air base to support the war effort of World War II. The area that is now Goose Bay was chosen as the location for the air base for its optimal weather and because of its level sandy plateau. While the base was being developed, the market for fur and fish was decreasing and this brought many Labrador people from the North and South Coast of Labrador to HVGB to work on the construction of the base. These workers brought along their wives and children and many went to the base working for Americans (Rompkey 2003). The Goose Bay Agreement signed in 1944 specified that the Canadian Government would employ Newfoundland labor as much as was practical, and recruitment centers were set up in Newfoundland and word spread to the isolated communities of Labrador. As migrants arrived they began to set up tents and small houses along the banks of the Hamilton River. This area became known as Happy Valley. Happy Valley was almost completely inhabited by Labradorians for the first 10 years of existence, but between 1951 and 1956, the population grew from 257 to 1145, mostly due to the in-migration of island Newfoundlanders. In 1949, Newfoundland joined confederation and the operation of the town was taken over by island Newfoundlanders (Zimmerly 1977). The present-day

community is composed of original residents - the immigrant generation - and their children and grandchildren, the first native-born generations in HVGB. Because the town includes original residents from multiple dialect areas within NL, and their descendants, it offers a prime opportunity to observe the effects of dialect contact among the original generations of the community down to the present-day youth. This situation will serve as a testing ground for the sociolinguistic theories of dialect contact and dialect evolution, which I turn to next.

## 2.3 Stages of Dialect Contact

Dialect contact is one of the main external causes of language change (Kerswill 2002). The study of dialect contact investigates how mutually intelligible linguistic varieties affect one another and the spread of linguistic forms from one dialect to another. These changes are not necessary for communication between the two dialect groups. Rather, Trudgill (1986) argues that changes occur because of sustained, or long term, accommodation. Accommodation is what speakers do when they modify their style of speech based on input from their interlocutors. As a result of long term social and linguistic accommodation, salient items often undergo changes across or between multiple linguistic systems according to three ordered stages.

In the first stage, the speakers of the immigrant generation produce what Trudgill (1986) calls mixing. At this stage multiple variations of a linguistic feature occur and are mixed in the speech community. An example of this stage can be seen in current varieties of Newfoundland English. Two clear sources of the English spoken in

Newfoundland are Irish English and English spoken in south-western England. While there are isolated settlements across the island, which reflect one dialect or another, a fair amount of mixing has occurred. This mixing has caused modern NLE to have features that come from Irish English, such as “to be after doing something” (Clarke 2010), and features that can be traced to south-western England, such as present tense marking on verbs “I loves it” (Clarke 2010, Trudgill 1986).

During the second stage, communication between native-born speakers results in a leveling process, which is the loss of marked or minority linguistic forms. In Norway, for example, features of the dialect restricted to the south-west, /me:/ and /dl/, have been lost in the new Odda koine, as they are used by only a small minority of Norwegian speakers (Kerswill 2002).

The final stage of new dialect formation arising from accommodation is characterized by a process of simplification (usually by the third generation (second generation, native-born)). As the speech community begins to obtain an independent identity, variations in the dialect are reduced and there is a decrease in irregularity in morphology, or in the number of phonemes of a dialect. An example of this can be seen in Høyanger, Norway (Trudgill 1986). Most Norwegian dialects have two different plural endings, one masculine, and one feminine. The contributing dialects of Høyanger are Bokmal, which has only one plural marker –er, and Nynorsk, which has two, -ar for most masculine nouns and -er for most feminine nouns. In the dialect of Høyanger the process of simplification has removed the irregularities of the plural marking system and now all masculine nouns get masculine form, -ar, and feminine nouns get feminine forms, -er (Trudgill 1986).

It is also possible for features of the original dialects to be maintained though with concomitant changes in the social meaning or function in the emerging dialect. This is referred to as reallocation (Mesthrie 2001). Reallocation can be seen in Belfast English where, generally, there is not a distinction between GOOSE and STRUT, both sets having the vowel /u/. However in a large but restricted lexical set Belfast English alternates between /u/ and /ʌ/. Due to dialect mixture, in this dialect /ʌ/ is now typical of informal styles and lower social class speakers, the standard /u/ is more formal, higher status form (Trudgill 1986).

Each of these stages in the development of a new dialect will be analyzed in this project. In order to present hypotheses concerning them, a brief discussion of new dialect formation in new town koine studies is presented: Høyanger, Norway (Trudgill 1986), Milton Keynes, England (Kerswill 2002, Kerswill and Williams 2000), Odda and Tyssedal, Norway (Kerswill 2002). My project is similar to these earlier studies in the sense that the situation in Labrador is an instance of a new dialect emerging in an entirely novel speech community. Major population movements in various locations around the world have presented the opportunity to study New Town koines; in the following section, some important conclusions from these studies will be discussed.

## 2.4 Koineization

Koineization is a process that creates a new variety of a language from situations of dialect contact in entirely new settlements. A koine is a stabilized variety that results from the mixing and then leveling of varieties that are mutually intelligible. It can

typically take two or three generations to complete, although it is possible within one (Kerswill 2002). Kerswill presents the idea of an immigrant koine, which is of interest to my proposed research in HVGB. The immigrant koine is a new dialect variety that arises as a result of the formation of a new settlement (Kerswill 2002).

Two known immigrant koines are found in two small towns in Norway: Odda and Tyssedal. Though the towns are close to each other, only five kilometers apart in south-western Norway, the dialects spoken in them are radically different. The difference in dialects is due to the distinct dialects spoken by the majority of the in-migrants, as the dialects have features that reflect the origin of the majority of in-migrants. The Odda koine closely resembles the dialect of the majority, rural dialects of western Norway. The infinitive suffix is /ɑ/, and the indefinite and definite suffixes of feminine nouns are /ɑ/ and /u/, for example, *girl* /jɛntɑ/ , and *the girl* /jɛntu/. However, Odda also has variants from eastern Norway such as /viː/ for '*we*', as well as the loss of the western cluster /dl/, replaced with /l/. These examples show how levelling can result in the removal of marked forms, those that are use in a minority of speakers or have limited regional currency. The dialect in Tyssedal closely resemble the eastern Norway dialect even though speakers of this dialect did not make up the majority of the in migrants. It is suggested that the many forms in the eastern dialect coincide with the standard variety in Norway, and that this town may have adopt these forms due to the highly diffuse linguistic system present. It is important to note that salient features can either be adopted or rejected based on social or geographical influences. Another important factor in the development of koines is the degree of difference between the input varieties, as this will affect the amount of accommodation that speakers will need to

engage in (Kerswill 2002). In another example, in Milton Keynes, cross-dialectal differences were only minor, allowing for an accelerated process toward the new dialect variety (Kerswill and Williams 2002).

Trudgill (1986) discusses the role of children in the formation of a new dialect of English in New Zealand. Trudgill (1986) argues that in situations where there is no single, stable adult model, children are able to select from a wider variety of adult models. Despite massive variability, even between speakers with identical backgrounds, first generation born children face the linguistic task of leveling (Kerswill 2002). In the study of Canadian Raising in the Fens of eastern England, the role of children is further discussed. Language change in this area follows the stages of new dialect formation, with the third generation showing the onset of koineization. It also demonstrates that children are the leaders of change as they sort through the unstable input of the variety of adult dialects (Britain 1997).

The Norwegian dialect in Høyanger showed a clear progression through the stages of koineization, the migrant generation representing stage one, the first native born generation representing stage two, and the features that developed and stabilized in these town koines representing stage three. In contrast with the first native born generation of Høyanger, the data from Milton Keynes (Kerswill 2002) shows the children are not influenced much by their parents' speech. In the study of Milton Keynes, almost all the children recorded were the offspring of adult migrants to the town. The caregivers came from many parts of Great Britain and would be expected to show a range of variations of the GOAT vowel. Only mothers were recorded for this study and it was found that the overall range of the children's realization of the GOAT vowel is much

smaller than that of the caregivers. The caregivers' vowel production reflects their place of origin, and the children's smaller range suggests focusing and that the children were not influenced much by their parents' speech. It was also found that it is the older children that were participating in the focusing, not the younger children. From this data we can also see which age group is the main agent of language change. It seems that adolescents and older children lead this change. Koines are generally found to be focused by the third generation, in the speech of the grandchildren of the migrants (Kerswill 2002). However, previous research on new dialect formation in Labrador found a high amount of dialect leveling within one generation of residents in the community of Sheshatshui. Additionally, of interest to the present study, the results of this research indicate that age and the territorial group that speakers belonged to prior to settling in Sheshatshui were the most important correlate of linguistic variation within this community (Clarke 1995).

It is also clear from the studies of dialect contact that for a koine to form, the speakers must abandon previous social divisions and show new solidarity. If this does not happen then the koineization process is slowed, or may not happen at all. For example, in Høyanger there was a delay of focusing because of local circumstances, such as the social segregation that existed in different parts of the town. The workers in the town mainly came from the same region as Høyanger, while the managers and other professionals came from the east of the country, creating a social divide between the groups until new loyalties could be made. However, koineization did occur in the following generation where a uniform spoken variety was found in people who were in

their 20s or younger (Kerswill 2002). In the present study, I look at social relationships in order to explain the patterns found in the results.

## 2.5 Social Relationships and Dialect Contact

Kerswill (2002) concludes from his study of the four koines that the kind and level of social integration of the new community can affect the speed of koineization. That is, if there exists a social divide in the community when it is settled, the process of koineization is likely to be slower than one without these divisions. This was discussed above in the example of Høyanger, where there was a social divide between the workers from one area, and the managers and professionals coming from another area. Until new social ties were made, koineization could not begin (Kerswill 2002).

Evidence from the study of new town koines shows that children's access to peer groups is of critical importance in creating a new koine. Children must be able to interact freely with other children and older children to establish a norm when there is no stable adult model to follow (Kerswill 2002). In the Fens of eastern England, the sporadic schooling and the remote settlements slowed the dialect leveling because communication was poor (Britain 1997). As evidence from the Fens of England (Britain 1997), and from Milton Keynes (Kerswill 2002) shows, the amount of interaction between children is important to the process of koineization.

Britain (1997) suggests that disruption in the life routines of the migrants has an effect on the linguistic features and how speakers accommodate their speech to their environment. When a person's routine is broken, they deal with the stress of being in a new place by attempting to make new social ties and are more likely to accommodate

to the speech patterns of others. The age limit constrictions on language acquisition give children an important role in koineization. While adults will be able to re-routinize their lives and make new social bonds, the ability to rationalize their sociolinguistic surroundings and create a new variety seems to be restricted to the early years (Britain 1997).

# Chapter 3: Interim Summary

## 3.1 Predictions

Working from Trudgill's model of new dialect formation I expect that the oldest generation will have retained most of their respective dialect forms and present the most variable part of the HVGB vowel system. This is due to the mixed input of the settlers, as a result of having moved from different regional locations in Newfoundland and Labrador. Older generations are not expected to share the same features with Newfoundlanders due to the geographical isolation of Labrador. Hence, we will find mixing of systems among the settlers. The first generation may show some of the mixing of the settler generation but with evidence of leveling. Finally the second generation will show the most dialect leveling, and movement toward a more stable, new dialect. The vowel classes used to examine these processes of mixing and leveling, were chosen for being unique in dialects of Newfoundland English (discussed in the next section).

It is also expected that new dialect formation in HVGB will pattern similarly to what was described in research on the Norwegian new towns. In HVGB where the majority of migrants to the area were from Newfoundland, the dialect should reflect the dialect of island Newfoundlanders. We should therefore find leveling towards the vowel patterns of Newfoundland island English.

It is also reasonable to think that as a result of contact with English spoken by Americans, Mainland Canadians, First Nations, Inuit, and southern Inuit, that there could be unique features present in the dialect spoken in HVGB as well. While an

examination of these forms from dialects other than Newfoundland English would present a more detailed picture of the diversity of features in HVGB, such an investigation at this point is beyond the scope of this thesis.

In examining the development of the HVGB vowel system, we need to consider the sociolinguistic landscape of HVGB when the first migrants arrived, and carry this investigation through to the first and second generation residents. The sociolinguistic patterns we will examine concern the influence of gender and cultural origin at each stage. Were there gender differences among the Newfoundland migrants? What about the Labrador migrants? Were there differences between Newfoundland males and Labrador males? What about Newfoundland females and Labrador females? Any differences would serve as the input to subsequent generations and may serve as significant social markers for younger, native born residents of HVGB. Another way to ask these research questions is: Could one tell the difference between:

a) males and females from Newfoundland?

b) males and females from Labrador?

c) males from Newfoundland and Labrador?

d) females from Newfoundland and Labrador?

The investigation presented here looks at these questions and seeks to determine if any differences existed and how long they lasted. Likewise, it will also seek to determine if any differences not found among the migrants emerged in subsequent generations. These questions serve to investigate the process of new dialect formation in HVGB, focusing on mixing, leveling and vocalic change.

## 3.2 Vowels Examined

I use lexical sets established by Wells (1982) to refer to categories of vowels instead of the phonemic symbols. The vowels that I looked at in this study are GOAT, FACE, TRAP, and LOT. Another linguistic feature that I looked at is the pronunciation of LOT and THOUGHT words, which are typically merged in NLE and sound more like the word "pam" (i.e. a fronted pronunciation). Each of these vocalic variables can be quantitatively measured using acoustic analysis, which is described in section 4.3 below.

The first vowels discussed are GOAT and FACE. In these tense, high and mid vowels, FACE and GOAT pattern similarly in NLE as they do in other Canadian English dialects in that they are typically upglided in this dialect. In some dialects of NLE there is a retraction of the TRAP vowel, however in most dialects of NLE, the vowel TRAP is tensed, fronted and raised (Clarke 2010). This is especially distinct from other Canadian dialects of English, as in most Canadian English dialects there is a shift involving the retracting of TRAP (Clarke et al. 1995). In NLE the fronting and raising of TRAP occurs in all phonetic environments, but may be most apparent before nasals. As with many varieties of standard English, in NLE LOT and THOUGHT are typically merged, so there is no distinction between words like *cot* and *caught*. However some speakers do maintain a distinction between LOT and THOUGHT vowels (Clarke 2010). In dialects of NLE, LOT/THOUGHT typically has a more fronted and rounded pronunciation than in other Canadian English dialects. Often speakers of NLE show a variety of LOT/THOUGHT that perceptually occupies a similar space to the TRAP vowel in

Canadian English dialects. For example, “*cot”* in NLE may sound similar to “*cat*” in Canadian English (Clarke 2010).

# Chapter 4: Methodology

## 4.1 Data collection

I conducted sociolinguistic interviews (Labov 1984) with residents of HVGB. Each participant was able to choose where they would feel most comfortable having the interview, as the participant's level of comfort was important in obtaining natural and spontaneous speech during the interviews. As a result, recordings were conducted in a variety of settings including the participant's homes, offices, workshops, or my own home. When possible, noise was minimized by finding a quiet space, and removing background noise from things such as radios, televisions, or air conditioners. All interviews were recorded to digital media using an Audio Technica AT831b condenser microphone and a Marantz PMD 670 solid state recorder and sampled at a frequency of 22kHz and a 16 bit depth to uncompressed WAV format.

## 4.2 Participants

48 participants: 4 males and 4 females each from Labrador descent and 4 males and 4 females of Newfoundland descent for each of the migrant and first generations. The aim for this study was to have equal numbers of speakers of Newfoundland and Labrador origins in the second generation as well, however this was complicated by participant availability. Table 1 below outlines the participants interviewed for this study. Variables considered for each participant were generation, origin, and gender. Ethnicity was not used as a variable in this study.

| | Migrant generation | First generation | Second generation |
|---|---|---|---|
| Newfoundland | 4 males, 4 females | 4 males, 4 females | 1 male, 2 females |
| Labrador | 4 males, 4 females | 4 males, 4 females | 1 male, 2 females |
| Mixed (NL+Lab) | --- | --- | 4 males, 1 female |
| Mixed / Other | --- | --- | 2 males |
| Unknown | --- | --- | 2 females |
| Lab/ Unknown | --- | --- | 1 female |

Table 1: Participants included in study, by generation and gender.

The migrant generation consisted of people that moved from Newfoundland or other areas of Labrador to HVGB to work on the base within the first 10-15 years of its opening. The next generation participants come from is the first-native born generation in HVGB. The last generation studied was the second native born HVGBers, those who have at least one parent that was born in HVGB. By using my previous knowledge of the community, I contacted potential participants to see if they fit into one of the three generational groups needed for the study. From this point, the snowball sampling method was used, whereby existing participants suggested or helped to recruit new participants (Kennedy and Grama 2012). Ethics approval was obtained from Memorial University's Research Ethics Board (ICEHR) in July 2013 (#20140298-AR.)

## 4.3 Analysis

Acoustic analysis of the vowel system was conducted using the software PRAAT (Boersma and Weenink 2012) to take the F1 and F2 measurements at the midpoint of each of the vowels. The vowels were then normalized to reduce differences due to the

size and shape of the vocal tract using the Lobanov method in the online vowel normalization suite NORM (Thomas and Kendall 2007). The data was examined for patterns consistent with Trudgill's stages of dialect formation, mixing and leveling (Trudgill 1986) as identified in section 2.3 above. Due to time considerations this study does not identify evidence of focusing and reallocation. I have analyzed the vowel system in HVGB and conducted an analysis on some of the vowels in the English dialect spoken in HVGB to see what area of the vowel space each vowel occupies. The acoustic measurements of these vowels determine the position of the vowel in the vowel space (Kennedy and Gramma 2012). Table 2 below shows the number of tokens for the vowels measured, for each generation, origin, and gender.

If mixing has occurred in the dialect spoken in HVGB, I expect to see a variety of phonetic targets for each vowel class used concurrently. Evidence of leveling will be found if marked phonetic features of the Newfoundland dialect have been lost, or if phonetic features of the minority dialects in HVGB are lost.

| Vowel | Origin | Gender | Migrant | First | Second |
|---|---|---|---|---|---|
| TRAP | Newfoundland | *Total* | *280* | *317* | *105* |
| | | Male | 140 | 143 | 35 |
| | | Female | 140 | 174 | 70 |
| | Labrador | *Total* | *279* | *298* | *130* |
| | | Male | 135 | 150 | 30 |
| | | Female | 144 | 148 | 100 |
| GOAT | Newfoundland | *Total* | *201* | *197* | *74* |
| | | Male | 97 | 102 | 48 |
| | | Female | 104 | 95 | 26 |
| | Labrador | *Total* | *192* | *224* | *76* |

| | | | | | |
|---|---|---|---|---|---|
| | | Male | 101 | 118 | 20 |
| | | Female | 91 | 106 | 56 |
| FACE | Newfoundland | *Total* | *273* | *285* | *101* |
| | | Male | 137 | 142 | 36 |
| | | Female | 136 | 143 | 65 |
| | Labrador | *Total* | *261* | *277* | *100* |
| | | Male | 132 | 148 | 34 |
| | | Female | 129 | 129 | 98 |
| LOT | Newfoundland | *Total* | *244* | *272* | *93* |
| | | Male | 121 | 156 | 30 |
| | | Female | 123 | 116 | 63 |
| | Labrador | *Total* | *244* | *239* | *90* |
| | | Male | 128 | 125 | 28 |
| | | Female | 116 | 114 | 62 |
| THOUGHT | Newfoundland/Labrador | Total | 107 | 67 | 87 |
| | | Male | 56 | 20 | 49 |
| | | Female | 51 | 47 | 38 |

Table 2: Number of tokens for each vowel category for each generation, origin, and gender.

## 4.4 Statistical Analysis

Data was analyzed in R (R Core Team 2013) using Welch Two Sample t-tests with gender and origin as independent variables, and F1 and F2 values as dependent variables. Lexical sets were considered separately, to control for differences in vowel quality. Each generation was considered separately to observe any changes in vowel realizations across the generations. Analysis of the data for evidence of the low-back vowel merger, compared lexical sets LOT and THOUGHT using t-tests, in each generation with gender as the independent variable, and F1 and F2 as the dependent variable.

## Chapter 5: Results

Figure 1 below shows the normalized vowel space containing variants from all speakers of the 5 vowel categories studied here.

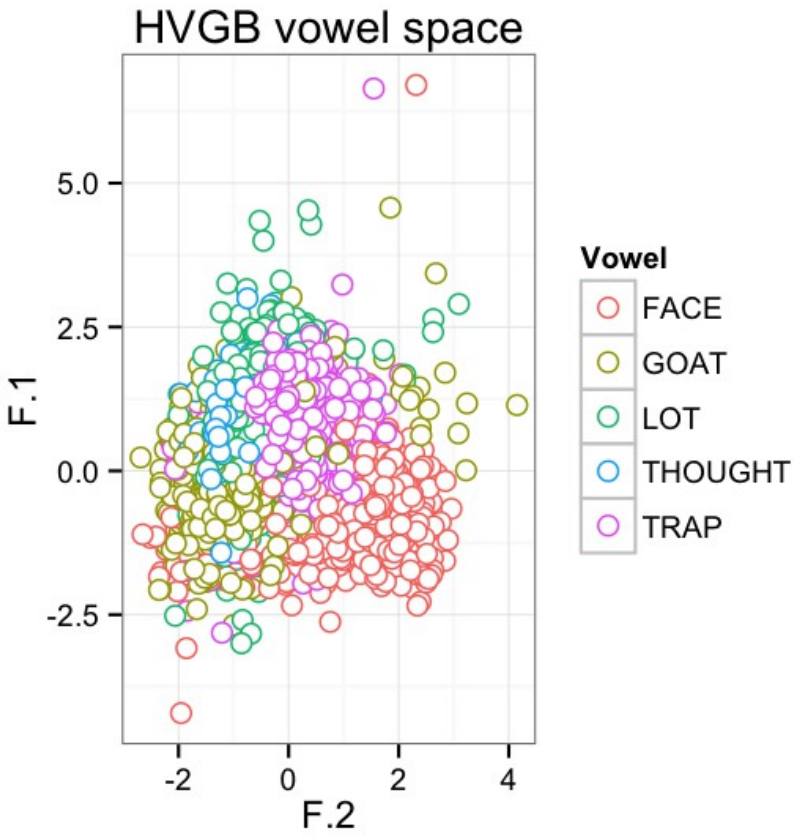


Figure 1: The vowel space in HVGB.

In order to look at the process of new dialect formation, we analyze each of the individual vowel classes, focusing on the position of each vowel in the vowel space and the influence of social properties of speaker age, gender, and geographic origin. We look at the effect of age to understand how the historical trajectory of this vowel has evolved in contemporary HVGB English. But first, let's look at the major social divisions typically examined in sociolinguistic studies of speech communities.

Figure 2 shows the mean f1 and f2 values of the 5 vowels examined here, the vowel space is divided by generation and gender.

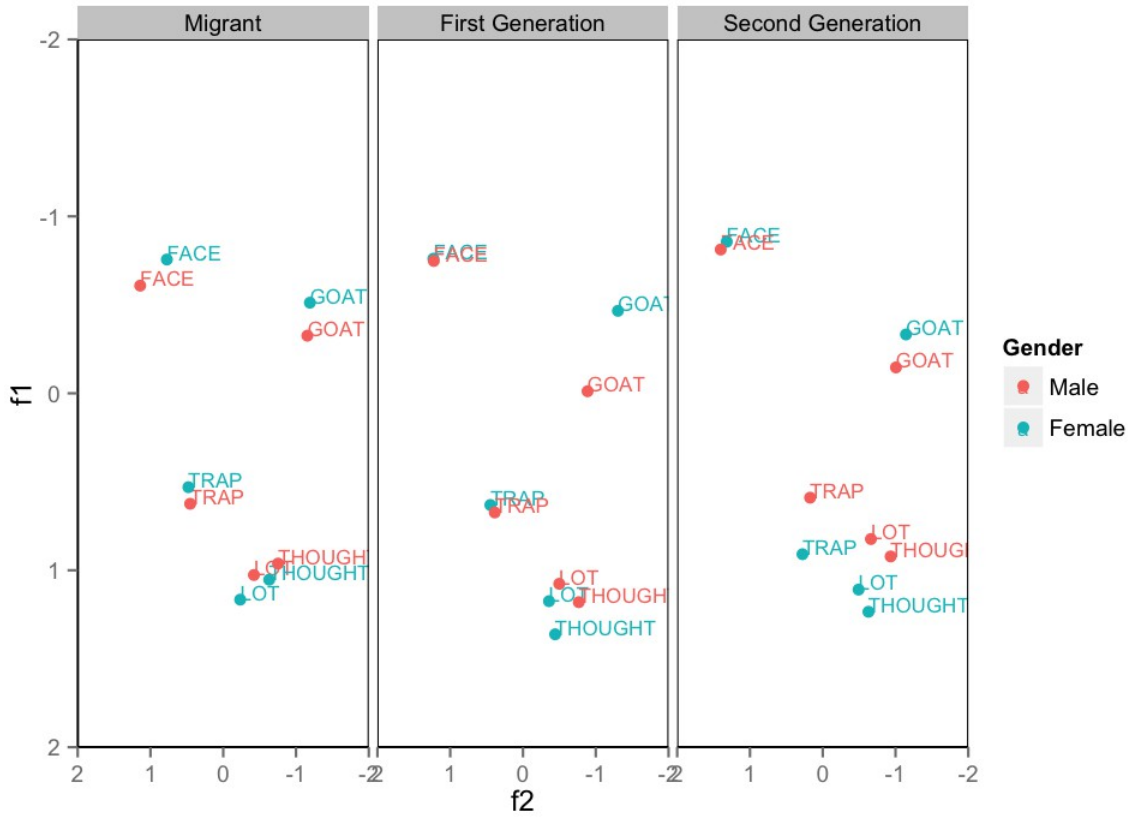


Figure 2: Vowel space showing generational and gender differences in HVGB speakers.

In order to look at the process of new dialect formation, we analyze each of the individual vowel classes, focussing on the position of each vowel in the vowel space and the influence of social properties of speaker age, gender and geographic origin.

## 5.1 TRAP

If we focus on just TRAP we see both signs of relative uniformity and differences across gender and generation. As shown below in Figure 3, in the migrant and first generations, male speakers show lower and more retracted variants of TRAP than the female speakers. In the second generation, it is the female speakers who show lower variants of TRAP, while males in this generation still show more retracted variants.

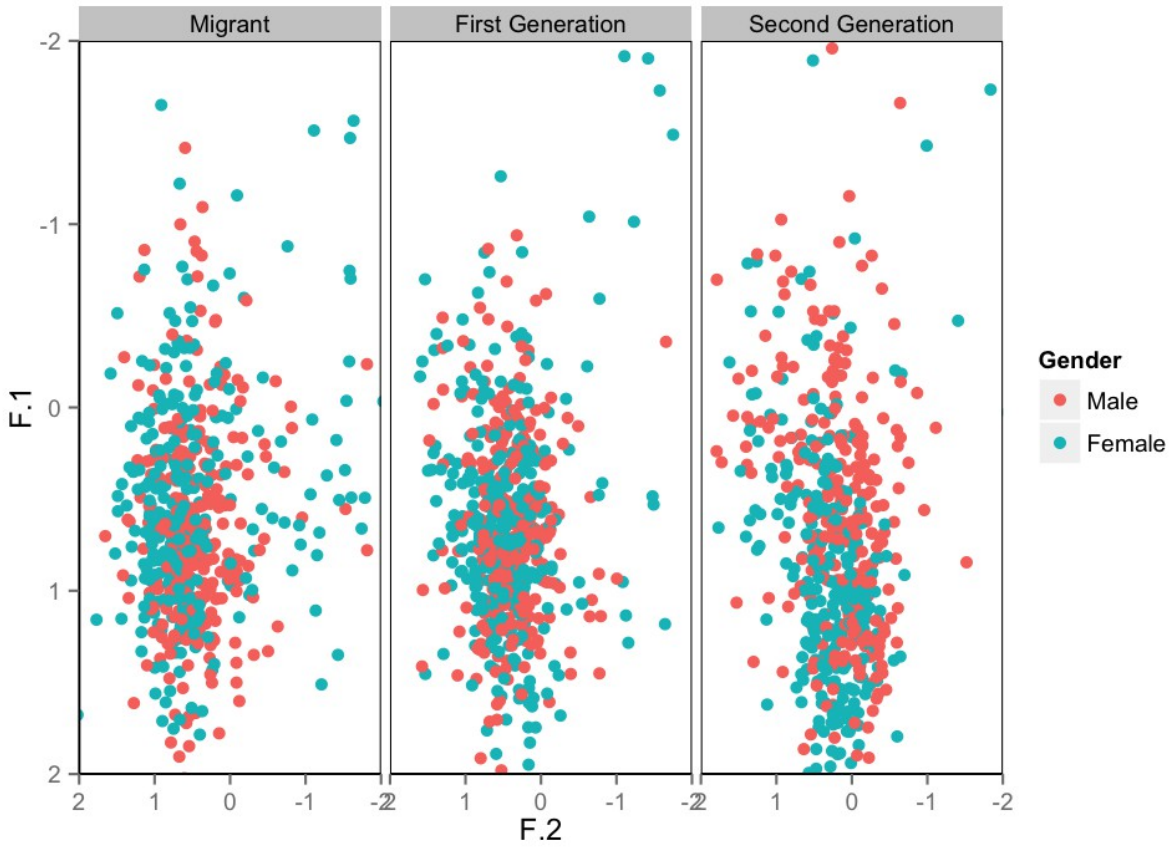


Figure 3: TRAP vowel in HVGB showing generational and gender differences

Having established the overall position of TRAP within the vowel space and the effects of gender and generation, let's look at the historical trajectory of the TRAP lexical set in HVGB in more detail, focusing on patterns related to mixing and leveling. We look within cultural groups to see if there are any region specific patterns that were

brought to HVGB from different regions (Newfoundland and Labrador) and see if they persisted (i.e. How far through the 3 generations mixing is maintained). Then we will look across cultural groups to see if any distinct patterns are leveled out through the generations.

### 5.1.1 Analysis of gender and generation within cultural groups

We started our analysis of TRAP looking at gender distinctions within cultural groups. Below, I have described details for F1 and F2 separately (Table 3 and Table 4, respectively). The first point to note in the realization of TRAP in HVGB is the development of a gender distinction in the younger age groups. The original migrants to the town, both males and females, show similar F1 values for TRAP. However, a gendered difference begins to emerge among younger speakers. For F2, older male and female speakers do not show significantly different F2 values in TRAP. The younger speakers also do not show a gender distinction.

| **TRAP F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | 0.48 | 0.47 | 0.62 | 0.66 | 0.78 | 0.95 |
| | LAB | **0.7** | **0.59** | **0.73** | **0.6** | 0.74 | 0.75 |

Table 3: Gender within cultural groups for F1 of TRAP lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| TRAP F2 (z score) | | Migrant | | First | | Second | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | **0.42** | **0.6** | 0.38 | 0.36 | 0.19 | 0.12 |
| | LAB | 0.49 | 0.36 | **0.39** | **0.55** | **0.12** | **0.42** |

Table 4: Gender within cultural groups for F2 of TRAP lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences

We examined these overall patterns in apparent time by looking at the historical trajectory starting with the migrant generation and on into the first and second native born. Looking just at vowel height, migrants from Newfoundland do not show a gender distinction in F1 values of TRAP. However, there is a gender distinction (males (M=0.76) and females (M=0.59)) in the F1 values of TRAP present in the Labrador migrant generation; $t(276.59) = 2.49$, $p = 0.01$, 95% CI [0.04, 0.31]. So, the presence of the gendered difference in height found in the overall data actually originated in the speech of Labradorian migrants to HVGB. In other words, the source of the height difference in the younger generation seems to have originated from the varieties of English spoken by those from Labrador.

We turn now to examine the position of TRAP along the F2 axis. Male(M=0.42) and female (M=0.6) groups from NL (NL migrants) show a statistically significant gender distinction in F2 of TRAP; $t(277.85) = 2.63$, $p = 0.008$, 95% CI [-0.32, -0.05]. The migrant males of Newfoundland origin show a more fronted variant than the migrant females.

At this point in the investigation of the development of the HVGB dialect, we want to look further at the first and second generation of native-born HVGBers to determine whether these gendered patterns have a cultural origin and if they follow along the same lines as those found in the migrant generation: do native born HVGBers of Labradorian descent maintain differences found for F1, or has it broken across to those of NL descent? Likewise, is the gender difference, originally found in the NL migrants and lost over time (F2 frontness), also found among native born HVGBers of NL descent, or has this spread across social division in the community? We will look at those of Labradorian descent first and then discuss those of NL origins.

There is a gender distinction present in the F1 values of TRAP in the first generation of Labrador origins. There is a significant difference between F1 values in the first generation with Labrador origins between male (M=0.72) and female (M=0.6) groups; t(295.83) = 1.94, p = 0.053, 95% CI [-0.002, 0.27]. Similar to the males in the migrant generation from Labrador, the first generation males with Labrador origins show a lower variant of TRAP than the first generation females of Labrador origins. In the first generation Labradorians there is also a gender distinction in F2 values. There is a significant difference between F2 values for Labrador first generation male (M=0.39) and female (M=0.55) groups; t(266.83) = 2.54, p = 0.01, 95% CI [-0.28, -0.04].

The second generation of Labrador origins also show the spread of gender distinction for F2 values of TRAP. In the second generation those with Labrador origins showed a significant difference in F2 values between male (M=0.12) and female (M=0.55) groups; t(74.03) = 2.56, p = 0.01, 95% CI [-0.58, -0.27], indicating a more

retracted variant in males than in females of this group. The second generation of Labrador origins did not show a gender distinction in F1 values, and the second generation of Newfoundland origins did not show a gender distinction in F1 or F2 values.

Now we turn to the descendants of NL migrants. In the first generation, there is no gender distinctions for either F1 or F2 values. In the second generation, the males of Newfoundland origins pattern similarly to the males of Labrador origins, having no significant difference in F1 or F2 values of TRAP. However, the females in the second generation are showing a significant difference in F2, like in the previous generation. There is a significant difference in F2 values of TRAP between females of Newfoundland (M=0.12) and Labrador (M=0.55) origins; t(125.89) = -4.77, p = 5.1e-06, 95% CI [-0.61, -0.25]. This shows the second generation patterning similar to the first generation, with the Newfoundland second generation showing the more retracted variant. However, there is also a significant difference in F1 that was not present in the first generation. There is a significant difference in F1 values of TRAP in the second generation females between the Newfoundland (M=0.95) and Labrador (M=0.66) origins, t(133.04) = 2.56, p = 0.012, 95% CI [0.07, 0.52]. The indicates that females in the second generation of Newfoundland origins show a lower and more retracted variant of TRAP then the females of Labrador origin in this generation.

Before finishing with the historical development of TRAP in HVGB, we need to consider those who do not fall neatly into having Newfoundland vs. Labrador origins. In the second generation there is a mixed group who have parents or grandparents from

both Newfoundland and Labrador. Among these speakers there is a gender distinction in F1 and F2 values of TRAP for those of mixed origins. There is a significant difference between the F1 values for the male (M=0.54) and female (M=0.95) groups of the mixed generation; t(68.39) = 2.61, p = 0.01, 95% CI [-0.61, -0.08]. The females of mixed origins in the second generation show a lower variant of TRAP than the males of mixed origins in the second generation. There is a significant difference between the F2 values of the male (M=0.18) and female (M=0.32) groups of mixed origins in the second generation; t(74.03) = 2.56, p = 0.01, 95% CI [-0.38, -0.05]. The females of mixed origins show a lower and more retracted variant of TRAP than the males of mixed origins in the second generation.

### 5.1.2 Analysis of gender and generation across cultural groups

We now look at gender across cultural groups starting with the migrant generation. As above, F1 and F2 values are described separately (Table 5 and Table 6, respectively). A significant difference was found in the F1 values of TRAP between Newfoundland male (M=0.48) and Labrador male groups (M=0.769): t(272.37) = -4.05, p = 6.813e-05, 95% CI [-0.42, -0.15]. No significant difference is reported for F2 values between the males of Newfoundland origin and the males of Labrador origin. This indicates that male Labrador migrants show a lower variant of the TRAP vowel than male Newfoundland migrants.

| **TRAP F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | **0.48** | **0.77** | 0.62 | 0.72 | 0.78 | 0.74 |
| | F ~ F | 0.47 | 0.59 | 0.67 | 0.6 | **0.95** | **0.68** |

Table 5: Gender across cultural groups for F1 of TRAP lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| **TRAP F2 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | 0.42 | 0.49 | 0.38 | 0.39 | 0.19 | 0.12 |
| | F ~ F | **0.59** | **0.36** | **0.35** | **0.55** | **0.12** | **0.55** |

Table 6: Gender across cultural groups for F2 of TRAP lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences.

Concerning females, no significant difference in F1 values was found in the migrant generation. However, there is a significant difference in the F2 values of TRAP for the Newfoundland (M = 0.59) and Labrador (M =0.36) females; $t(252.28) = 2.76$, $p = 0.006$, 95% CI [0.07, 0.41]. This indicates that females of Labrador origin show a more retracted TRAP variant than their Newfoundland counterparts.

Moving on to the first generation, the males do not show any significant difference in F1 or F2 values between Newfoundland and Labrador origins. There is also no

significant difference in F1 values for Newfoundland females and Labrador females. However, a significant difference was found in F2 values of TRAP between Newfoundland (M = 0.35) and Labrador (0.55) females; t(289.47) = -2.99, p = 0.003, 95% CI [-0.32, -0.07]. In contrast to the migrant generation, this shows in the first generation it is now the Newfoundland females who show a more retracted TRAP variant than the first generation females.

The second generation, the males of Newfoundland origins pattern similarly to the males of Labrador origins, having no significant difference in F1 or F2 values of TRAP. However, the females in the second generation are showing a significant difference in F2, like in the previous generation. There is a significant difference in F2 values of TRAP between females of Newfoundland (M=0.12) and Labrador (M=0.55) origins; t(125.89) = -4.77, p = 5.1e-06, 95% CI [-0.61, -0.25]. This shows the second generation patterning similar to the first generation, with the Newfoundland second generation showing a more retracted variant. However, there is also a significant difference in F1 that was not present in the first generation. There is a significant difference in F1 values of TRAP in the second generation females between the Newfoundland (M=0.95) and Labrador (M=0.66) origins, t(133.04) = 2.56, p = 0.012, 95% CI [0.07, 0.52]. This indicates that females in the second generation of Newfoundland origins show a lower and more retracted variant of TRAP then the females of Labrador origin in this generation.

## 5.2 GOAT

The next vowel we focus on is GOAT. In this vowel we also see evidence of relative uniformity and differences across gender and generations. As shown below in Figure 4,

in all three generations analyzed, the males show a lower and more fronted variant of GOAT than females.

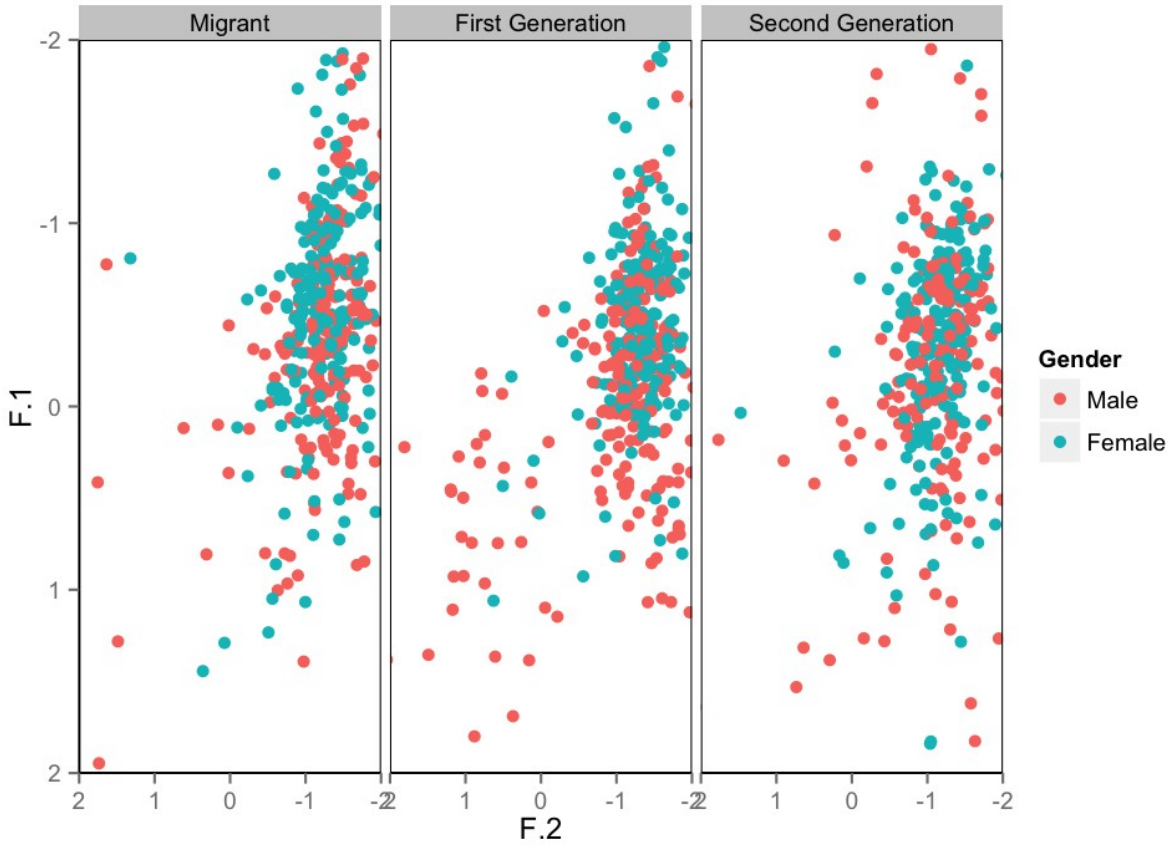


Figure 4: GOAT vowel in HVGB showing generational and gender differences

Having established the overall position of GOAT within the vowel space and the effects of gender and generation, we now turn to look at the historical trajectory of GOAT in more detail, focusing on patterns related to mixing and leveling. We begin by looking within cultural groups to see if there are any region specific patterns that were brought to HVGB from different regions (Newfoundland and Labrador) and see if they persisted through the generations. Next we look across cultural groups to see if any distinct patterns are leveled out through the generations.

### 5.2.1 Analysis of gender and generation within cultural groups

We begin the analysis of GOAT by looking at gender distinctions within cultural groups. Below, I describe details for F1 and F2 separately (Table 7 and Table 8, respectively). The first point to note in the realization of GOAT in HVGB is the male and female speakers show similar variants in the oldest speakers and that a gender distinction developed in F1 and slightly in F2. This gender distinction seems to be disappearing as we move toward the youngest speakers in both F1 and F2 values. The gender distinction in the GOAT vowel shows a lower variant for the males than the females.

| **GOAT F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | -0.34 | -0.4 | **-0.004** | **-0.44** | -0.68 | -0.51 |
| | LAB | **-0.31** | **-0.64** | **-0.02** | **-0.49** | **0.27** | **-0.22** |

Table 7: Gender within cultural groups for F1 of GOAT lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| **GOAT F2 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | -1.22 | -1.17 | **-0.97** | **-1.33** | -1.06 | -1.18 |
| | LAB | -1.09 | -1.21 | **-0.82** | **-1.29** | -1.03 | -1.15 |

Table 8: Gender within cultural groups for F2 of GOAT lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences.

We now observe these patterns in apparent time, looking at the historical trajectory beginning with the migrant generation and on into the first and second native born generations. Looking just at vowel height, migrants from Newfoundland do not show a gender distinction in F1 values of GOAT. However, there is a gender distinction between males (M= -0.31) and females (M= -0.64)) in the F1 values of GOAT present in the Labrador migrant generation ($t(188.44) = 3.72$, $p = 0.0003$, 95% CI [0.15, 0.5]). So, the presence of the gendered difference in height found in the first generation data actually originated in the speech of Labradorian migrants to HVGB. In other words, the source of the height difference in the first generation seems to have originated from the varieties of English spoken by those from Labrador.

Next, we examine the position of GOAT along the F2 axis. Male and female groups from Newfoundland or from Labrador origins do not show a statistically significant gender distinction, males and females show similar variants in terms of vowel frontness.

At this point in our investigation of the HVGB dialect, we want to look further at the first and second generation of native born HVGBers to determine whether the gendered patterns observed have cultural origins and if they follow patterns found in the migrant generation: do native born HVGB of Labradorian descent maintain difference found for F1, or has it broken across to those of Newfoundland descent? Likewise, is the lack of gender difference present in the migrants of Newfoundland and Labrador origin maintained (F2 frontness), or changed in the next generation of the community? We start by looking at those of Labrador origins and then discuss those of Newfoundland origins.

There is a gender distinction present in the F1 values of GOAT in the first generation of Labrador origins. There is a significant difference between F1 values in the first generation with Labrador origins between male (M= -0.01) and female (M= -0.49) groups; t(198.54) = -5.49, p = 1.215e-07, 95% CI [0.3, 0.63]. Similar to the males in the migrant generation from Labrador, the first generation males with Labrador origins show a lower variant of GOAT than the first generation females of Labrador origins. In the first generation of Labradorians there is also a gender distinction in F2 values for male (M= -0.82) and female (M= -1.29) groups; t(148.47) = -4.34, p = 2.586e-05, 95% CI [0.25, 0.68]. The first generation females of Labrador origins show a more retracted variant of GOAT than the first generation males of Labrador origins.

The second generation of Labrador origins show a loss of gender distinction for F2 values of GOAT. In the second generation males and females in of Newfoundland and Labrador origins show similar variants of GOAT.

We now look at the descendants of Newfoundland migrants. In the first generation there is a gender distinction in F1 and F2 values. There is a significant difference in first generation in those of Newfoundland origin in the male (M= -0.004) and female (M= -0.44) groups; t(177.93) = -5.04, p = 1.164e-06, 95% CI [0.27, 0.61]. There is also a significant difference in the F2 values in this generation between the male (M= -0.97) and female(M= -1.33) groups; t(140.87) = -3.4, p = 0.002, 95% CI [0.13, 0.59]. Similar to the first generation with Labrador origins, the data indicates that first generation males with Newfoundland origins show a lower variant of GOAT than the females, and first generation females with Newfoundland origins show a more retracted variant than the males.

In our examination of the historical development of GOAT in HVGB, we also consider those who do not fall neatly into having Newfoundland vs Labrador origins. In the second generation, the mixed group have parents or grandparents from both Newfoundland and Labrador. Among speakers of mixed origins there is not a gender distinction in F1 and F2 values of GOAT.

### 5.2.2 Analysis of gender and generation across cultural groups

Next, we look at gender across cultural groups starting with the migrant generation. As above, F1 and F2 values are described separately (Table 9 and Table 10, respectively). Migrant male speakers do not show a significant difference between those of Newfoundland and Labrador origins.

| **GOAT F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | -0.34 | -0.31 | -0.004 | -0.02 | **-0.68** | **0.27** |
| | F ~ F | **-0.4** | **-0.64** | -0.44 | -0.49 | **-0.51** | **-0.22** |

Table 9: Gender across cultural groups for F1 of GOAT lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| **GOAT F2 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | -1.22 | -1.09 | -0.97 | -0.82 | -1.06 | -1.03 |
| | F ~ F | -1.17 | -1.21 | -1.33 | -1.29 | -1.18 | -1.15 |

Table 10: Gender across cultural groups for F2 of GOAT lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences.

Concerning females, there was a significant difference in the F1 values of GOAT between Newfoundland (M= -0.4) or Labrador (M= -0.64) origins; $t(183.82) = 2.5$, $p = 0.01$, 95% CI [0.05, 0.43]. There is not a significant difference in F2 values between the females of Newfoundland origin and the females of Labrador origin. This indicates that the female Newfoundland migrants show a lower variant of the GOAT vowel than female Labrador migrants.

Moving on to the first generation, the males do not show any significant difference in F1 or F2 values between Newfoundland and Labrador origins. This indicates that in the first generation, those of Newfoundland origins and of Labrador origins show similar variants of the GOAT vowel.

However, in the second generation male speakers are showing a significant difference in F1 values that was not present in the previous generation. There is a significant difference in F1 values of GOAT between males of Newfoundland (M= -0.68) or Labrador (M= 0.27) origins; t(29.41) = -3.78, p = 0.0007, 95% CI [-1.47, -0.44]. This shows that the second generation males from the Labrador generation show lower variants than the Newfoundland males of this generation. There was not a significant difference in F2 values when comparing the males of Newfoundland or Labrador origins.

## 5.3 FACE

Now we focus just on the lexical set FACE. Similar to the vowels discussed above, we see evidence of relative uniformity and differences across gender and generations. As shown below in Figure 5, females in the migrant, first, and second generation show a lower and more retracted variant of FACE than the males of these generations.

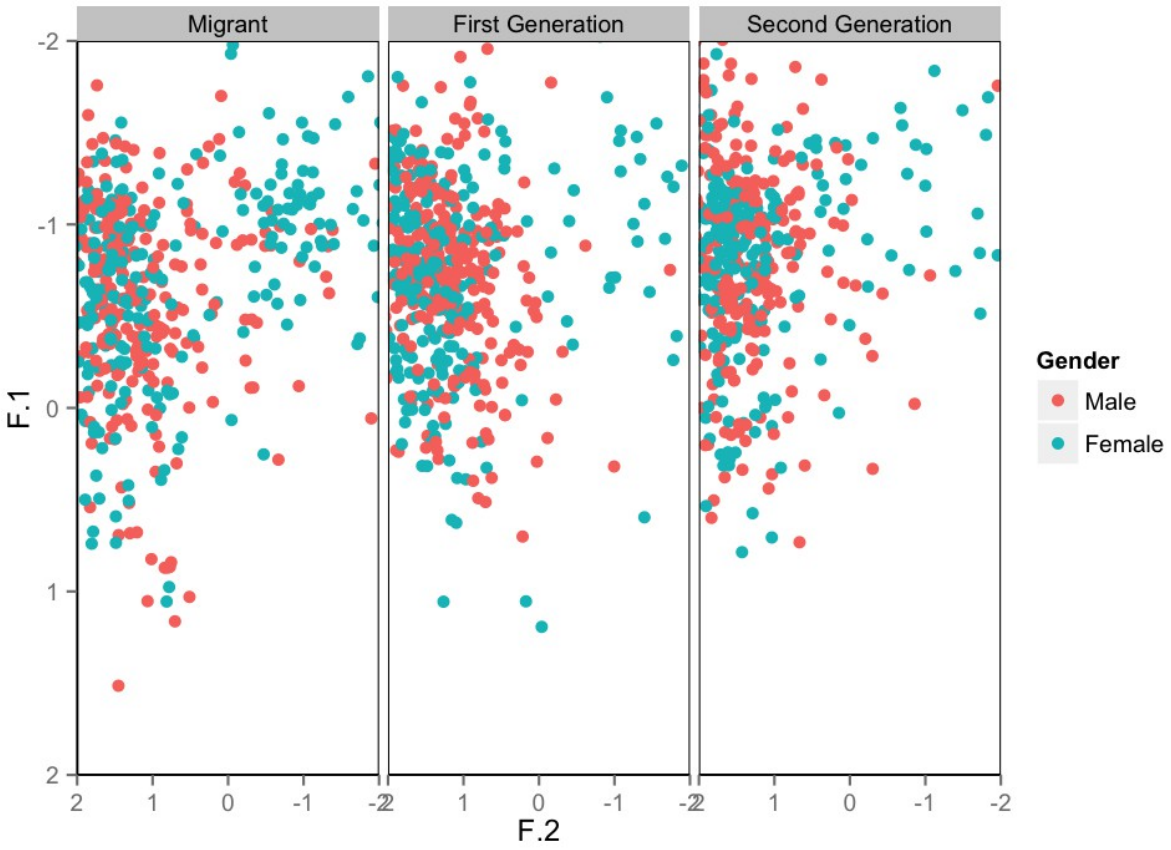


Figure 5: FACE vowel in HVGB showing generational and gender differences

Now that we have established the overall position of FACE within the vowel space and the effects of gender and generation, we look at the historical trajectory of the FACE lexical set in HVGB in more detail, focusing on patterns related to mixing and leveling. We first look within cultural groups to see if there are any patterns that were brought to HVGB from different regions (Newfoundland and Labrador) and if they persisted through the generations. We will then look across cultural groups to see if any distinct patterns leveled out through the generations.

### 5.3.1 Analysis of gender and generation within cultural groups

We first look at gender distinctions within cultural groups to begin our analysis of FACE. As above, I describe details for F1 and F2 separately (Table 11 and Table 12, respectively). In the realization of FACE in HVGB there is a gendered distinction present in the migrant generation that seems to disappear in the later generations in both F1 and F2 values. In the original migrants to the town, males and females are showing differences in F1 and F2, however, the gendered difference begins to fade among younger speakers, as younger males and females show similar variants of FACE in both height and frontness.

| **FACE F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | **-0.48** | **-0.76** | -0.85 | -0.87 | **-0.57** | **-0.95** |
| | LAB | -0.73 | -0.75 | -0.65 | -0.64 | -0.98 | -0.74 |

Table 11: Gender within cultural groups for F1 of FACE lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| FACE F2 (z score) | | Migrant | | First | | Second | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | **1.18** | **0.94** | 1.44 | 1.34 | 1.41 | 1.41 |
| | LAB | **1.09** | **0.6** | 1.02 | 1.11 | 1.28 | 1.29 |

Table 12: Gender within cultural groups for F2 of FACE lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences

To look at these overall patterns in apparent time we examine the historical trajectory starting with the migrant generation, followed by the first and second native born generations. Looking just at vowel height, migrants from Newfoundland do show a gender distinction in F1 values of FACE. There is a significant difference in F1 values between male (M= -0.6) and female (M= -0.76) groups; t(263.82) = -3.8, p = 0.0002, 95% CI [0.13, 0.41]. This indicates that females of Newfoundland origins show a lower variant of FACE than males of Newfoundland origins. Migrants from Labrador do not show a gender distinction in F1 values of FACE. So the presence of the gendered difference in height found in the overall data actually originated in the speech of Newfoundland migrants to HVGB. In other words, the height difference that is not carried over into the younger generations seems to have been a Newfoundland feature that was has undergone leveling in subsequent generations.

We now look at the position of FACE along the F2 axis. The migrants of Newfoundland origins show a gender distinction between male (M=1.18) and female (M=0.94) groups; t(243.11) = -2.23 , p = 0.02, 95% CI [0.03, 0.49]. The migrant females

show a more retracted variant of FACE than the migrant males. Similarly, there is a gender distinction in F2 values of FACE in the migrant of Labrador origins. In the Labrador migrants there is a significant difference between the F2 values between the male (M= 1.09) and female (M= 0.6) groups; t(222.34) = -3.29, p = 0.001, 95% CI [0.19, 0.77]. The migrant females of Labrador origins show a more retracted variant of FACE than the migrant males of Labrador origins.

At this point we look further at the first and second generations of native born HVGBers to determine whether these gendered patterns have a cultural origin and if they follow the patterns found in the migrant generation: do native born HVGBers of Newfoundland descent maintain the difference found for F1, or has it broken across to those of Labrador descent? Likewise, is the gender difference, originally found in both Newfoundland and Labrador migrants lost over time, or carried on into the following generations? We discuss those of Labrador descent first, and then discuss those of Newfoundland origins.

In the first generation all gender distinctions that were present in the migrant generation have been lost and male and female speakers of Newfoundland and Labrador origins show similar variants of FACE.

The second generation of Labrador origins do not show a gender distinction in F1 or F2 values of FACE. Both genders show similar variants for this vowel.

Looking at descendants of Newfoundland migrants, the second generation Newfoundland speakers show the re-emergence of gender distinction for F1 values of FACE. In the second generation those with Labrador origins showed a significant difference in F1 values between male(M= -0.57) and female(M= -0.95) groups; t(79.44)

= -4.41, p = 3.228e-05, 95% CI [0.21, 0.56]. The F1 values of FACE in second generation females of Newfoundland origin show a lower variant of FACE than the second generation males of Newfoundland origins.

Next, we consider those who do fall neatly into having Newfoundland vs. Labrador origins. In the second generation the mixed group have parents or grandparents from both Newfoundland and Labrador. Among these speakers there is not a gender distinction in F1 or F2 values of FACE.

### 5.3.2 Analysis of gender and generation across cultural groups

We continue our analysis of FACE by looking at gender across cultural groups starting with the migrant generation. As above, F1 and F2 values are described separately (Table 13 and Table 14, respectively). There is a significant difference in F1 values of FACE, between males of Newfoundland (M= -0.49) and Labrador (M= -0.73) origins; t(251.53) = 3.55, p= 0.0005, 95% CI [0.11, 0.37]. There is not a significant difference in F2 values between males of Newfoundland or Labrador origins. This indicates migrant males of Newfoundland origins show a lower variant of the FACE vowel than migrant males form Labrador origins.

| FACE F1 (z score) | | Migrant | | First | | Second | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | **-0.49** | **-0.73** | **-0.85** | **-0.65** | **-0.57** | **-0.98** |
| | F ~ F | **-0.49** | **-0.75** | **-0.87** | **-0.64** | **-0.95** | **-0.67** |

Table 13: Gender across cultural groups for F1 of FACE lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| FACE F2 (z score) | | Migrant | | First | | Second | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | 1.19 | 1.09 | **1.44** | **1.01** | 1.41 | 1.28 |
| | F ~ F | **1.19** | **0.6** | **1.34** | **1.11** | 1.43 | 1.32 |

Table 14: Gender across cultural groups for F2 of FACE lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences.

Concerning females, there is a significant difference in F1 values of FACE between Newfoundland (M= -0.49) or Labrador (M= -0.73) origins; t(262.19) = 3.41, p = 0.0008, 95% CI [0.11, 0.42]. There is also a distinction that was not present in the male migrants, the females in this generation show a significant difference in F2 values between Newfoundland (M= 1.19) or Labrador (M=0.6) origins; t(197.63) = 4.23, p = 3.591e-05, 95% CI [0.31, 0.87]. Similar to the males of this generation, this indicates that the females of Newfoundland origins show a lower variant of FACE than the

females of Labrador origins, and that the females of Labrador origins show a more retracted variant of FACE than the females of Newfoundland origins.

In the first generation, the males show a significant difference in F1 and F2 values between Newfoundland and Labrador origins. There is a significant difference between F1 values of FACE between first generation males of Newfoundland (M= -0.85) or Labrador (M= -0.65) origins; t(285.06) = -3.61, p = 0.0004, 95% CI [-0.32, -0.09]. There is also a significant difference in comparing F2 values, between males of Newfoundland (M= 1.44) or Labrador (M= 1.02) origins; t(259.29) = 6.42, p = 6.434e-10, 95% CI [0.29, 0.55]. This indicates males of Labrador origins showing a lower and more retracted variant than the males of Newfoundland origins. Unlike the migrant generation, the females in this generation do not show significant differences in F1 or F2 values of FACE between those of Newfoundland or Labrador origins.

Finally, in the second generation the male and female speakers of Newfoundland origin pattern similarly to males of Labrador origins, having no significant difference in F2 values of FACE. However there is a significant difference when comparing F1 values of FACE, in males of Newfoundland (M= -0.57) or Labrador (M= -0.98) origins; t(65.96) = 3.98, p = 0.0002, 95% CI [0.21, 0.62]. This indicates that the Newfoundland males in this generation show a lower variant of FACE than the Labrador males in this generation. There is also a significant difference when comparing F1 values of FACE, between females of Newfoundland (M= -0.95) or Labrador (M= -0.67) origins; t(124.96) = -3.21, p = 0.002, 95% CI [-0.46, -0.11]. However, in contrast to the males of this generation, this shows that the females of Labrador origins show a lower variant than the females of Newfoundland origins. Similar to the males of this generation, there is

also no significant difference in F2 values of FACE between females of Newfoundland or Labrador origins.

## 5.4 LOT

Next we focus just on the lexical set LOT. Across gender and generation we see signs of both relative uniformity and differences. As shown below in Figure 6, The females in the migrant, first and second generation show a lower variant of LOT than the males in these generations, and the males show a more retracted variant of LOT. than the

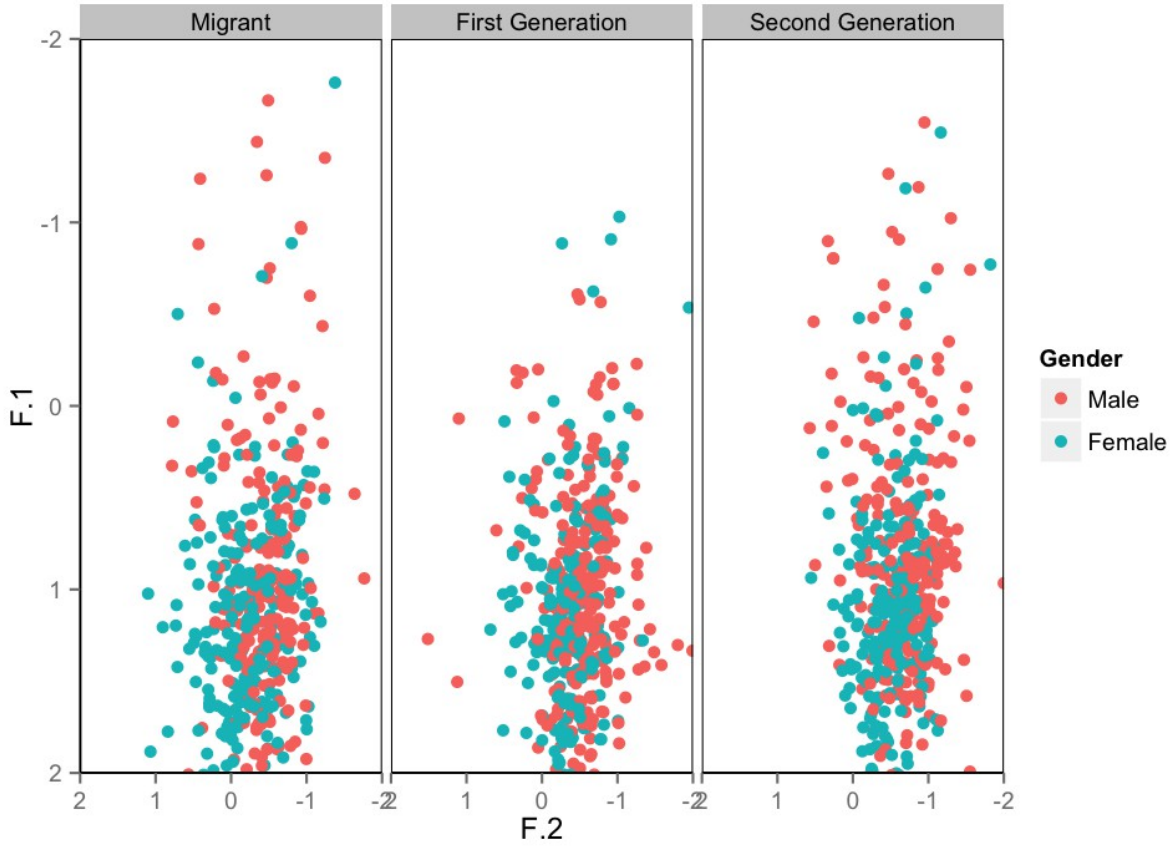


Figure 6: LOT vowel in HVGB showing generational and gender differences females in these generations.

With the overall position of LOT within the vowel space and the effects of gender and generation established, let's look at the historical trajectory of the LOT lexical set in HVGB in more detail, examining patterns related to mixing and leveling. We start by looking within cultural groups to see if there are any region specific patterns that were brought to HVGB from different regions (Newfoundland and Labrador) and see if these patterns persisted through the generations. Finally, we will look across cultural groups to see if any distinct patterns have leveled out through the generations.

### 5.4.1 Analysis of gender and generation within cultural groups

We start our analysis of LOT looking at gender distinctions within cultural groups. As above, I describe details for F1 and F2 separately (Table 15 and Table 16, respectively). In the realization of LOT in HVGB there is the development of a gender distinction in the younger age groups. The older speakers in the town, both males and females, show similar F1 values for LOT. However, in the younger generation it appears that males and females show distinct F1 and F2 values. For F2, the opposite pattern was observed, as the migrant generation appear to have a more prominent gender distinction than the younger speakers in HVGB. Throughout the generations of speakers it seems that females show a more retracted variant of LOT than the males.

| **LOT F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | 1 | 1.07 | 1.07 | 1.16 | 0.84 | 1 |
| | LAB | **1.05** | **1.27** | 1.08 | 1.19 | 1.32 | 1.24 |

Table 15: Gender within cultural groups for F1 of LOT lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| **LOT F2 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Origin | M | F | M | F | M | F |
| | NL | -0.32 | -0.32 | -0.45 | -0.42 | **-0.61** | **-0.91** |
| | LAB | **-0.52** | **-0.14** | **-0.56** | **-0.29** | **-0.66** | **-0.33** |

Table 16: Gender within cultural groups for F2 of LOT lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences.

To look at these overall patterns in apparent-time, we need to examine the historical trajectory starting with the migrant generation and moving into the first and second native born generations. Looking just at vowel height, migrants from Newfoundland do not show a gender distinction in F1 values of LOT. However, there is a gender distinction between male(M=1.05) and female(M=1.27) groups; $t(238.44) = 2.18$ , $p = 0.031$, 95% CI [-0.41, -0.02]. This indicates that Labrador migrant females show a lower variant of LOT than the Labrador migrant males.

Now we examine the position of LOT along the F2 axis. Migrants from Newfoundland do not show a gender distinction in F2 values of LOT. However, migrants from Labrador do show a gender distinction between he male (M= -0.51) and female (M= -0.14) groups; t(237.09) = 7.52, p = 1.107e-12, 95% CI [-0.48, -0.28]. Migrant females of Labrador origins show a more retracted variant of LOT than migrant males of Labrador origin.

To continue the investigation of the development of the HVGB dialect, we want to look further at the first and second generation of native born HVGBers to determine whether these gendered patterns have a cultural origin and if these patterns follow along the same lines as those found in the migrant generation: do native born HVGBers of Labrador descent maintain differences found for F1 and F2 values, or has it broken across to those of Labrador descent, or has this distinction been lost. We first discuss those of Labradorian descent, and then discuss those of Newfoundland origins.

In the first generation there are no gender distinctions present in the F1 values of LOT in those of Labrador descent. This shows the loss of the F1 distinction in the Labrador migrants. However, there is a significant difference in F2 values of LOT, between male (M= -0.56) and female (M= -0.29) groups; t(194.73) = 3.6, p = 0.0004, 95% CI [ -0.56, -0.29 ]. This indicates that the first generation females with Labrador origins show a more retracted LOT than the first generation males with Labrador origins. This is the same pattern that was found in the migrant generation, suggesting this difference in vowel backness originated in the migrant generation and spread into the following generation. In other words, the source of the difference in backness found

in the younger generation seems to have originated in the varieties of English spoken by those from Labrador.

The second generation of Labrador origins also show the spread of gender distinction for F2 values of LOT. In the second generation those with Labrador origins showed a significant difference in F2 values between the male(-0.66) and female(-0.33) groups; t(48.98) = 5.14, p = 4.861e-06, 95% CI [-0.46, -0.2]. This indicates that the females of Labrador descent are showing a more retracted variant of LOT than the males of Labrador descent, a pattern that originated in the migrant generation and has been maintained throughout the following generations. The second generation of Labrador origins did not show a distinction in F1 values of LOT.

We now examine the descendants of Newfoundland migrants, similar to the migrant generation, the first generation of Newfoundland descent show no gender distinction in F1 or F2 values of LOT. In the second generation, there is still no significant difference in F1 values of LOT. However, there is a significant difference in F2 values of LOT, for the second generation of Newfoundland descent between the male (M= -0.61) and female (M= -0.91) groups; t(53.23) = 4.01, p = 0.0002, 95% CI [-0.44, -0.14]. This distinction is in contrast to the pattern observed in the speakers of Labrador descent, as it shows males of Newfoundland origins show a more retracted variant of LOT than the females of Newfoundland origins.

Before finishing with the historical development of LOT in HVGB, we consider those who do not fit neatly into having Newfoundland vs. Labrador origins. In the

second generation those of mixed origins do not show a gender distinction in F1 or F2 values of LOT.

### 5.4.2 Analysis of gender and generation across cultural groups

We now look at gender across cultural groups starting with the migrant generation. As above, F1 and F2 values are described separately (Table 17 and Table 18, respectively). There was no significant difference found in the F1 values of LOT between Newfoundland male and Labrador male groups. However, there was a significant difference found in the F2 values of LOT between Newfoundland male (M= -0.32) and Labrador male((M= -0.52) groups; t(237.09) = 3.79, p = 0.0002, 95% CI [0.1, 0.3].

| **LOT F1 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | 1.0 | 1.05 | 1.07 | 1.08 | **0.84** | **1.31** |
| | F ~ F | **1.07** | **1.27** | 1.16 | 1.19 | **1** | **1.24** |

Table 17: Gender across cultural groups for F1 of LOT lexical set. Note: lower values refer to higher vowel positions. Values in bold denote statistically significant differences.

| **LOT F2 (z score)** | | **Migrant** | | **First** | | **Second** | |
|---|---|---|---|---|---|---|---|
| | Gender | NL | LAB | NL | LAB | NL | LAB |
| | M ~ M | **-0.31** | **-0.51** | -0.45 | -0.56 | **-0.91** | **-0.66** |
| | F ~ F | **-0.32** | **-0.14** | **-0.42** | **-0.29** | **-0.61** | **-0.33** |

Table 18: Gender across cultural groups for F2 of LOT lexical set. Note: lower values refer to more retracted vowel positions. Values in bold denote statistically significant differences.

Concerning females, there was a significant difference in F1 values found in the migrant generation. There is a significant difference in the F1 values of LOT, between Newfoundland (M= 1.07) and Labrador (M= 1.27) origins; t(235.8)= -2.08, p = 0.039, 95% CI [-0.38, -0.01]. There was also a significant difference in F2 values for migrant females, between those of Newfoundland (M= -0.32) and Labrador (M= -0.14) origins; t(226.6)= -2.98, p = 0.003, 95% CI [-0.3, 0.06]. This shows that the female migrants of Labrador origins show a lower variant than the Newfoundland origins, and the Newfoundland migrants overall show a more retracted variant than the Labrador migrants.

In the first generation, the males do not show any significant difference in F1 or F2 between Newfoundland and Labrador origins. There is also no significant difference in F1 values of LOT for females. However a significant difference was found in F2 values of LOT between Newfoundland (M=-0.42) and Labrador (M=-0.29) females; t(218.7) = -2.67, p = 0.008, 95% CI [-0.22, -0.03]. This shows that females from Newfoundland show a more retracted variant than females from Labrador origins.

In the second generation, there are also significant differences across cultural groups. There is a significant difference in F1 values of LOT between males from Newfoundland (M= 0.84) or Labrador (M=1.32) origins; t(48.59) = -3.2, p = 0.002, 95% CI [-0.77, -0.17]. There is also a significant difference in F1 values of LOT between females of Newfoundland (M= 1.00) or Labrador (M= 1.24) origins; t(104.36) = -2.07, p= 0.04, 95% CI [-0.47, -0.01]. This shows that the males and females of Labrador descent show a lower variant of LOT than the males and females of Newfoundland descent.

Now looking at F2 values of LOT across cultural groups; there is a significant difference in F2 values, between males of Newfoundland (M= -0.91) or Labrador (M= -0.66) origins; t(55.62) = -2.93, p = 0.005, 95% CI [-0.41, -0.08]. There was also a significant difference in F2 values of LOT between females of Newfoundland (M= -0.61) or Labrador (M= -0.33) origins; t(121.02) = -5.37, p = 3.894e-07, 95% CI [-0.38, -0.18]. This indicates that males and females of Newfoundland descent show a more retracted variant of LOT than males and females of Labrador descent.

## 5.5 Low-back vowel merger (LOT/THOUGHT)

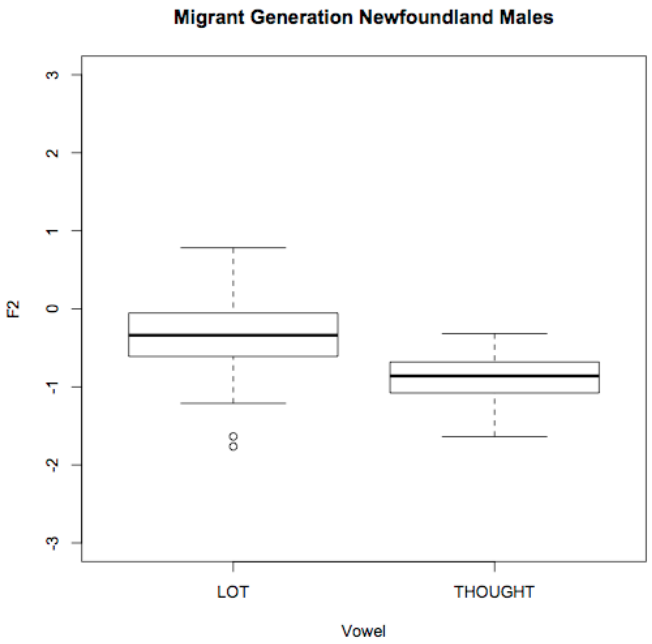


Figure 7: F2 values of LOT and THOUGHT for migrant generation Newfoundland male speakers.

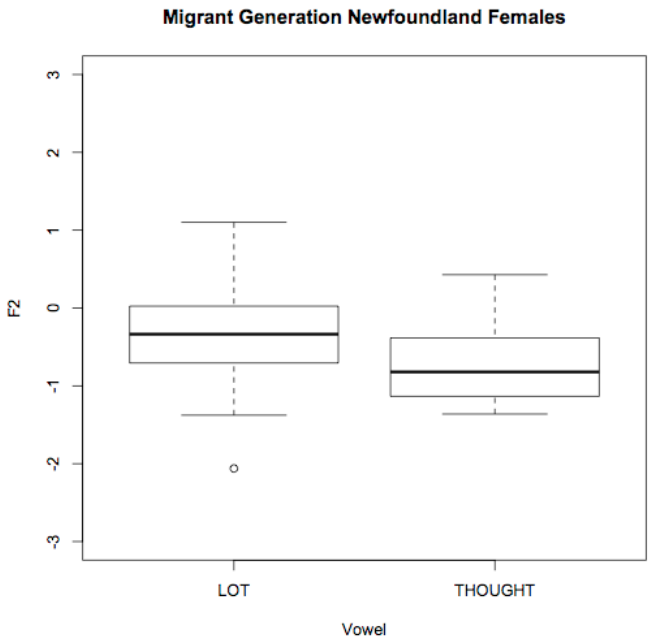


Figure 8: F2 values of LOT and THOUGHT for migrant generation Newfoundland female speakers.

In the migrant generation, both males and females from Newfoundland and from Labrador origins showed no significant difference in F1 values of the LOT and THOUGHT vowels. However, as shown in figure 7, males of Newfoundland origins did show significant differences in F2 values of LOT (M= -0.32) and THOUGHT (M= -0.87) vowels; t(84.48) = 8.51, p = 5.589e-13, 95% CI [0.42, 0.68]. Females of Newfoundland origins also showed a significant difference in F2 values, as shown in figure 8, in LOT (M= -0.32) and THOUGHT (M=-0.87) vowels; t(43.51) = 4.11, p = 0.0001, 95% CI [0.21, 0.62]. Migrant males and females of Newfoundland origin are showing a more retracted variant of THOUGHT than LOT.

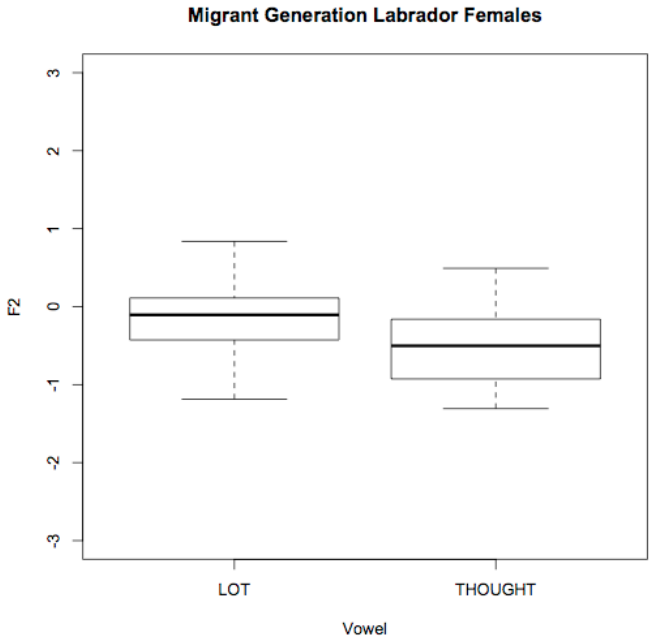


Figure 9: F2 values of LOT and THOUGHT for migrant generation Labrador female speakers.

Migrant males of Labrador origins did not show a significant difference in LOT and THOUGHT vowels. Although, as shown in Figure 9, migrant females of Labrador origin did show a significant difference in F2 values for LOT (M= -0.14) and THOUGHT (M= -0.5) vowels; t(27.67) = 3.2, p = 0.003, 95% CI [0.13, 0.59]. Similar to the males and females of Newfoundland origins, this data shows that for females of Labrador origins there is not a complete merger of LOT and THOUGHT. In these groups the THOUGHT variant is more retracted than the LOT variant for these speakers. In contrast, the migrant males of Labrador origins show F1 and F2 values that are merged.

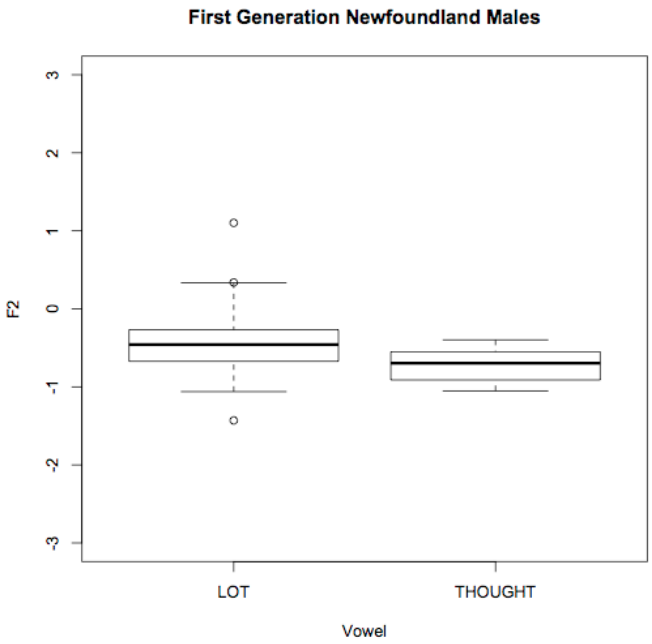


Figure 10: F2 values of LOT and THOUGHT for first generation Newfoundland male speakers.

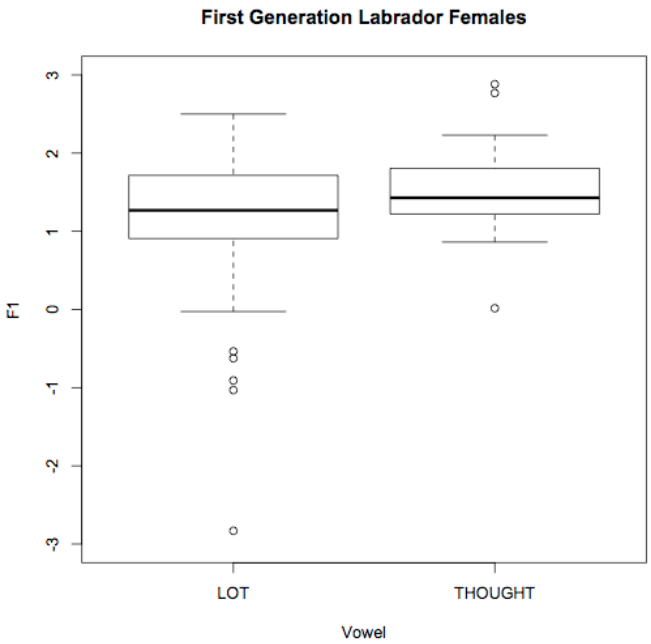


Figure 11: F1 values of LOT and THOUGHT for first generation Labrador female speakers.

In the first generation, many of the F2 distinctions that were present in the migrant generation are no longer present. First generation females of both Newfoundland and Labrador origins, whose LOT/THOUGHT productions were not merged in the migrant generation, are merged in the first generation. As shown in Figure 10, first generation males of Newfoundland origins have maintained the distinction in F2 values between LOT (M= -0.45) and THOUGHT (M= -0.72) F2 values; $t(11.34) = 3.59$, $p = 0.0041$, 95% CI [0.11, 0.44]. The males of Newfoundland origins in this generation have a more retracted THOUGHT vowel than LOT vowel, the same pattern that was seen in the migrant males from Newfoundland. Additionally in this generation there is a new distinction that was not present in the migrant generation. As shown in Figure 11, first generation females of Labrador origins show a significant difference in F1 values in LOT

(M= 1.19) and THOUGHT (M= 1.52) values; t(55.46) = 2.51, p = 0.015. 95% CI [-0.59, -0.07]. This shows first generation females of Labrador origin have a mean F1 of THOUGHT that is higher than the LOT vowel.

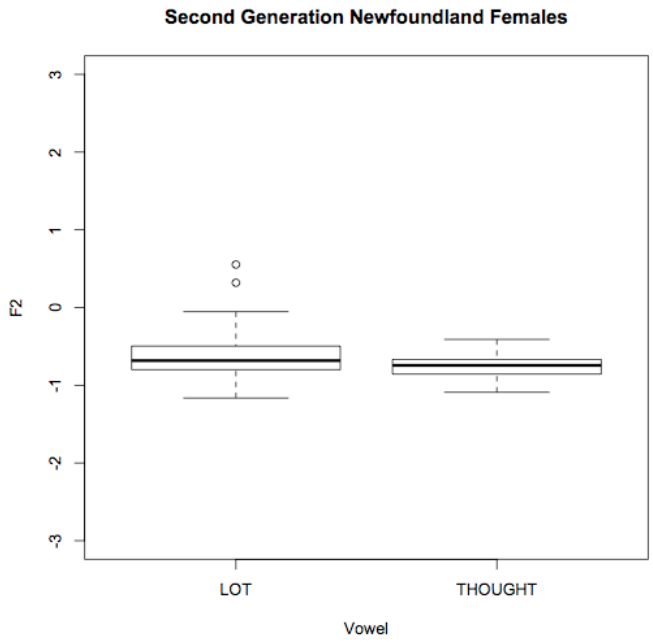


Figure 12: F2 values of LOT and THOUGHT for second generation Newfoundland female speakers.

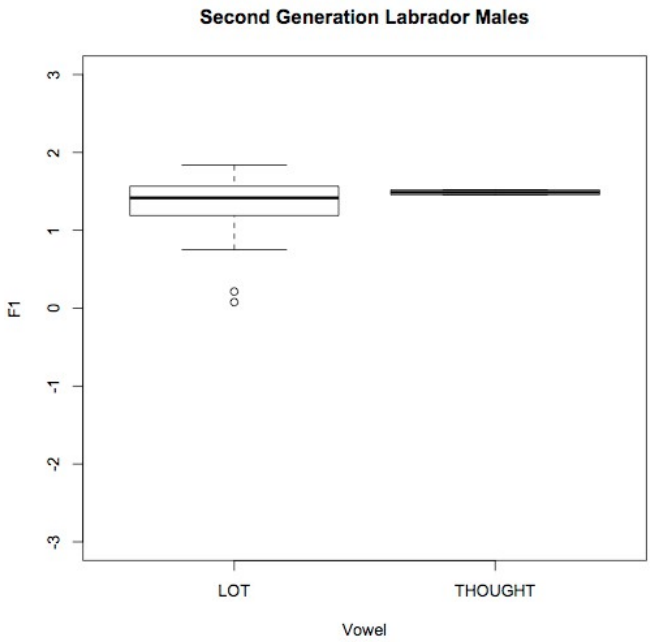


Figure 13: F1 values of LOT and THOUGHT for second generation Labrador male speakers.

In the second generation, interestingly it is not the Newfoundland males showing the distinction in F2 values as it was in the first generation; rather, as shown in Figure 12, the second generation females of Newfoundland origin are showing the distinction between F2 values of LOT (M= -0.61) and THOUGHT (M= -0.76) vowels; t(44.94) = 2.48, p = 0.017, 95% CI [0.03, 0.26]. The second generation females of Newfoundland origins have a THOUGHT vowel that is more retracted than the LOT vowel, indicating that these vowels are not merged in this group. The second generation males of Labrador origins are showing a distinction, shown in Figure 13, in F1 values between LOT (M=

1.32) and THOUGHT (M= 1.49) vowels; t(21.88) = 2.04, p = 0.053, 95% CI [-0.35, 0.003]. The second generation males of Labrador origin have a lower THOUGHT F1 value than LOT, although it is important to note that the data only included two THOUGHT measurements in this group.

## Chapter 6 : Summary

This investigation aimed to find out how a new dialect forms when two migrant groups come together. The findings presented here indicate that the vowels analyzed in this speech community have different sociolinguistic histories and did not proceed in changing at the same time. Described below are the overall patterns noted in each vowel analyzed in this speech community. By looking at the social factors gender and origins as social factors that motivate change, we have observed the effects of dialect contact among the original migrants down to the second generation.

## 6.1 TRAP

In the migrant generation, speakers of both Newfoundland and Labrador origins show gender distinctions, with Newfoundland migrant males showing a more retracted variant than Newfoundland migrant females, and Labrador migrant males showing a lower variant of TRAP than Labrador migrant females. In this same generation there was also a distinction between the origins of migrants, with migrant males of Labrador origin showing a lower variant than migrant males of Newfoundland origins. Likewise, migrant females of Labrador origins show a more retracted variant of TRAP than migrant females of Newfoundland origin. The migrant generation demonstrates the mixing stage of new dialect formation as there are multiple socially significant divisions in TRAP productions.

In the following generation, the gender distinction in the migrants of Newfoundland origins was leveled and males and females of this group show similar

variants. The gender distinction in F1 values of Labrador migrants has been maintained in first generation speakers of Labrador origins, with males still showing a lower variant of TRAP than females. Additionally, the first generation of Labrador origins are also showing a new distinction, as males of Labrador origins additionally show a more retracted TRAP variant than females. Further, within the first generation distinctions present in the migrant generation have been lost, while others have been maintained, such as the distinction between females of Newfoundland and Labrador origins, with females in both generations of Newfoundland origins showing a more retracted variant of TRAP than those of Labrador origins. This generation has maintained some of the distinctions from the previous generation, and other distinctions have undergone leveling and were not passed to this generation. Interestingly, this generation is also showing new distinctions as it moves toward a new dialect.

In the second generation the males and females show a similar TRAP variant in terms of height, the distinction present in previous generations having undergone leveling in the second generation. The females of this generation have maintained the distinction in previous generations with those of Newfoundland origins showing a more retracted variant than those of Labrador origins. Additionally, in this generation females are moving towards a new dialect with a new distinction, the Newfoundland females show a lower variant of TRAP than females of Labrador origins. Speakers of mixed origins in the second generation show a lower variant of TRAP for female speakers, and males speakers show the more retracted variant of TRAP.

## 6.2 GOAT

In the migrant generation males and females used GOAT vowels that were similar in backness in both Newfoundland and Labrador origins. The migrant males of Newfoundland origins show a lower variant of GOAT than migrant females of Newfoundland origins. Similarly the migrant males of Labrador origins show a lower variant of GOAT than the migrant females of Labrador origins. In the migrant males there was not a distinction between either Newfoundland or Labrador origins. The migrant females of Newfoundland origins show a lower variant of GOAT than the migrant females of Labrador origins, while both origins show similar variants of GOAT in terms of backness.

In the first generation there are no distinctions carried over from the migrant generation. It is now the Newfoundland females who show the lower variant of GOAT, and in addition to this they are also showing a more fronted variant of GOAT than the Newfoundland males in this generation. Similarly, the Labrador females show a lower variant of GOAT and a more fronted variant than the Labrador males of this generation. When comparing the first generation by origin, any distinction present in the previous generation is no longer present, showing evidence of leveling and females of Newfoundland and Labrador origins moving toward a more similar vowel production.

In the second generation most of these distinctions have undergone leveling, males and females of Newfoundland origins show similar GOAT variants. The only distinction that spread from the first generation is that second generation Labrador females are still showing a lower variant of GOAT than the males of Labrador origins, as

was seen in previous generations. In this generation males and females of Labrador origins show lower variants of GOAT than males and females of Newfoundland origins. This represents a new distinction that was not present in previous generations providing evidence of the second generation moving towards a new dialect.

## 6.3 FACE

The migrant generations had distinctions in both gender and origin of speakers. Migrants of Newfoundland origins show a lower and more fronted variant of FACE for the males than the females of Newfoundland origins. The migrant females of Labrador origins were showing a more retracted variant of FACE than the males. The comparison of origin of migrants indicated that migrant males of Newfoundland origins were showing a lower variant of FACE than males of Labrador origins. Migrant females of Newfoundland origins were also showing lower and more fronted variants of FACE than those of Labrador origins.

In the first generation, the gender distinctions that were present in the previous generation were no longer present, indicating leveling as males and females of Newfoundland origins were showing similar variants, as were males and females of Labrador origins. However when compared by origins of speakers, both male and female groups showed significant differences in terms of vowel height and backness. The first generation Labrador males show a lower and more retracted variant of FACE than the males of Newfoundland origins. In the same pattern it is the Labrador females who show a lower and more retracted variant than the females of Newfoundland

origins. So while all the gender distinctions were leveled out from the migrant to the first generation, when compared by origins the first generation maintained the distinctions of the migrant generation as well as added a new one.

In the second generation, a distinction from the migrant generation has reemerged in that males of Newfoundland origins show a lower variant of FACE than females. Other than this distinction males and females of Labrador origins and of mixed origins show similar forms. Also in the second generation comparison between origins shows that the previous variations in vowel backness have undergone leveling and only the distinction in vowel height has been maintained in the second generation. The Labrador males and females of this generation are still showing a lower variant than the Newfoundland males and females.

## 6.4 LOT

In the migrant generation males and females of Newfoundland origins did not show a distinction in height or backness of LOT. While male and female migrants of Labrador origins did have distinctions with females showing a lower and more fronted variant of LOT than the migrant males of Labrador origins. When compared by origin, the Labrador migrant males show a more retracted variant of LOT than Newfoundland migrant males. The migrant females pattern differently, with those of Labrador origins showing a lower and more retracted variant of LOT than those of Newfoundland origins.

In the subsequent generation the distinction in vowel height has been lost, showing evidence of leveling in the first generation. However, the distinction in

backness has been maintained with first generation Labrador females still showing a more fronted variant than the Labrador males. When compared by origin, the distinction between the males present in the migrant generation has disappeared showing evidence of leveling in the males of Newfoundland and Labrador origins. The females of this generation also no longer show a distinction in vowel height, and a new distinction is present in vowel backness as it is now the Newfoundland origin females who show a more retracted variant of LOT. This generation provides evidence of leveling between genders and between origins, as well as evidence of new distinctions and the beginning of a new dialect.

In the following generation, the second generation, the gender distinction has spread and the Labrador females are still showing a more fronted variant of LOT than the Labrador males in this generation. In contrast, the Newfoundland males in this generation show a more fronted variant of LOT, while the females show a more retracted variant. This shows the females of Newfoundland origins forming their own dialect, different from both previous generations and from the females of Labrador origins. Still within the second generation, when compared by origin, more new distinctions emerge, the Labrador males of this generation show a lower and more fronted LOT vowel than Newfoundland males. Similarly, Labrador females in this generation show a lower and more fronted variant than Newfoundland females. The second generation is actually showing more distinction between origins than there were in the previous generations.

## 6.5 The low back vowel merger

The productions of LOT/THOUGHT in the migrant generation were similar in height but significantly different in backness in both males and females of this generation. Specifically, male and female migrants of Newfoundland origins had a distinction where both were showing a more retracted THOUGHT than LOT. The Labrador female migrants as well were producing a more retracted THOUGHT than LOT, however Labrador migrant males had a merged LOT/THOUGHT vowel.

In the following generation the Newfoundland male first generation were still distinguishing between LOT and THOUGHT, showing a more retracted position for the THOUGHT vowel. In the females of Newfoundland or Labrador origins the distinction between LOT and THOUGHT was lost. However, a new distinction is present in Labrador first generation females who show a THOUGHT vowel that is lower than the LOT vowel. In the second generation the Labrador origin females have lost this distinction: LOT and THOUGHT vowels are merged in this group. The second generation Newfoundland females made a distinction between LOT and THOUGHT, producing a more retracted THOUGHT than LOT. As well the second generation Labrador males show a THOUGHT that is lower than LOT. In the second generation then, the Newfoundland females have started showing a distinction that was present in the migrant generation but absent in the first generation. Also the males of Labrador second generation show a new distinction between LOT and THOUGHT that was not previously present in the dialect.

## 6.6 Discussion

Returning to the hypotheses of this study, I expected the oldest generation to have retained most of their original dialect, the middle generation still having some of the original dialect features but with evidence of leveling, and the youngest generation showing the most dialect leveling, and change toward a new dialect. The results indicate that it is the first generation that is showing the most evidence of leveling, while also maintaining significant divisions present in the migrant generation. The second generation is showing the most change toward a new dialect, and also the re-emergence of features that were present in the migrant generation though not present in the first generation.

These findings indicate that different vowels within a dialect can move through the stages of new dialect formation at different rates due to the multitude of influences arising from dialects in contact. In the three generations the vowels analyzed were in various stages of new dialect formation; however, some general patterns can be observed. The migrant generation did show evidence of mixing in each vowel, the first generation shows the most evidence of leveling as well as evidence of maintaining some of the distinctions present in the migrant generation. The first generation in some cases also showed the emergence of new distinctions and a move toward a new dialect. This is consistent with the hypothesis that the first generation would show evidence of leveling as well as retain features from the migrant generation. However the hypothesis did not predict that there would be new distinctions present in this generation. The first generation speakers from HVGB show patterns that are consistent

with the idea that it is the responsibility of the first generation to level between the various inputs (Kerswill & Williams 2002). The second generation speakers showed some evidence of leveling, as well as the emergence of new distinctions, and in some cases a return to the distinctions present in the migrant generation. The second generation is showing the most changes toward a new dialect and this finding is consistent with the previous studies on the Fens of eastern England, where the second generation is showing what could be considered the onset of koineization (Britain 1997). This is in contrast to previous research on dialect contact in Labrador, as dialect leveling in Sheshatshui occurred within one generation (Clarke 1995).

As mentioned above, previous studies have described a koine as a stabilized variety that results from mixing and leveling of mutually intelligible dialects, and while it is possible for this process to be completed in one generation, it can typically take two or three generations (Kerswill 2002). In the dialect of HVGB, there is evidence of the leveling out of distinctions, and of many new distinctions still emerging in this community, particularly in the second generation. Relevant to the findings in HVGB, a variety of social factors may have slowed the process of koineization in this area and may explain the second generation showing what could be the beginning stages of koineization. From the sociolinguistic interviews, speakers reported that many families that moved to HVGB settled and built houses where other people from their origin area were living. One speaker described being able to tell where people came from based on the street they lived on, and went on to say that it seemed like people came in pods from different areas and settled and built their homes in their own area. This speaker also described playing mainly with his neighbours as a child, and the denominational

school system in HVGB at the time. These factors meant that there was very little interaction with children in the other schools, and children of other origins, until people entered high school. As discussed by Kerswill (2002), it is children's access to peer groups that is critical to creating a koine, so lack of socialization between children of various origins in the first generation could have a part in slowing the process of koineization.

Another reason that the process of koineization may be slowed in this community is that Labradorians feel a distinct identity from Newfoundlanders, contributed to by differences in their geographic location, climate and ethnic composition (MacDonald 2014). In order for a new koine to form, speakers must abandon previous social divisions and show new solidarity (Kerswill 2002). This social divide between those of Labrador origin, and those of Newfoundland origin could have slowed the forming of new solidarity within the community and slowed the koineization process. It may be necessary to move to the next generation in the community to find a uniform spoken variety.

Another prediction made in this study was that the dialect of HVGB would show leveling towards vowel patterns of Newfoundland island English. In TRAP and GOAT the gendered difference in height present in the overall data seems to have originated in the speech of those from Labrador origins. Additionally, the FACE vowel showed a gender distinction in height, which originated in speakers of Newfoundland origins, that has undergone levelling in subsequent generations. LOT showed a gender distinction in backness in the younger generation that appears to have originated in the English dialects of people from Labrador. These results suggest that the dialect in HVGB is

patterning similarly to Labrador English dialects, rather than Newfoundland island English, as we had initially predicted. Salient features can either be adopted or rejected based on social and geographical influences (Kerswill 2002), and it appears that the dialect of HVGB has adopted features of Labrador dialects of English. Both geographical location and the feeling of Labradorians a having a distinct identity from Newfoundlanders could have contributed to the adoption of these patterns in the HVGB dialect.

One of the limitations of this study is that in the second generation many of the participants interviewed were of mixed origins. This created a smaller number of participants in the second generation from Labrador or Newfoundland origins for comparison. Another limitation of this study was that the variety of origins from which the participants came to HVGB from made it difficult to compare the HVGB dialect to the original dialect spoken by migrants. There is little research that exists about the dialect of English spoken in Labrador, while there is more research on the dialect of English spoken in Newfoundland, the participants in this study originated from various parts of the island, and as research has shown there are many different dialects spoken in Newfoundland. This made it difficult to determine what dialect of NLE the HVGB dialect could be compared to.

Future research in this speech community could look at the dialect of speakers based on the area of town they settled in when they moved to HVGB, or more specifically which street. Another aspect to consider within this community is the denominational school system in the area at the time. This is another potential area for future research as the interaction between children is critical to the formation of a new

town koine, and depending on what denominational school they were attending impacted who was in the children's peer groups. Another possibility for future research would be including ethnicity as a variable, if speakers in HVGB identify with one of the aboriginal groups in the area and if or how the dialect varies between these groups. Further research could also be done on the following generation of HVGB native-born to see how the dialect is continuing to evolve, and if it stabilizes as a new town koine.

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