

**Linguistic variation and ethnicity
in a super-diverse community:
The case of Vancouver English**

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Abstract

Today, people with British/European heritage comprise about half (49.3%) of the total population of Metro Vancouver, while the other half is represented by visible minorities, with Chinese (20.6%) and South Asians (11.9%) being the largest ones (Statistics Canada 2017). However, non-White populations are largely unrepresented in sociolinguistic research on the variety of English spoken locally. The objective of this study is to determine whether and to what extent young people with non-White ethnic backgrounds participate in some of the on-going sound changes in Vancouver English.

Data from 45 participants with British/Mixed European, Chinese and South Asian heritage, native speakers of English, were analyzed instrumentally to get the formant measurements of the vowels of each speaker. Interview data were subjected to thematic analysis that aimed to describe to which extent each participant affiliated with their heritage.

The results of the descriptive and inferential statistical analysis showed that, first, the vowel systems of these young people are similar and they all are undoubtedly speakers of modern Canadian English as described in previous research (Boberg 2010). Second, all three groups participate in the most important changes in Canadian English: the Canadian Shift, Canadian Raising, the fronting of back vowels, and allophonic variation of /æ/ in pre-nasal and pre-velar positions. Some differences along the ethnic lines that were discovered concern the degree of advancement of a given change, not its presence or absence. Socio-ethnic profiles of the participants created on the basis of the thematic analysis can be roughly put into two categories, mono- and bicultural identity orientation (Comănanu et al. 2018). Great variability is described both within and across groups, with language emerging as one of the most important factors in the participants' identity construction. Exploratory analysis showed some tendencies in vowel production by speakers with mono- and bicultural orientations, with differences both among and within two non-White groups.

The findings of the study call into question both our understanding of the mechanisms of language acquisition and our approach to delimiting and describing speech communities in super-diverse urban centers.

Keywords: sound change; immigrant; speech community; ethnicity; identity
orientation

I dedicate this dissertation to Dr. Bob (Hyo-Chang) Hong
who inspired my pursuit of linguistics

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Chapter 1.

Introduction

1.1. Overview of the project

Variationist sociolinguistics has always relied on the statistical analysis of quantitative data to show the systematicity of linguistic variation. Recent technological advancements have led to improvements of the methods of quantitative data collection, storage, processing and analysis; the application of big-data approaches seems to guarantee a bright future for this line of work (Smakman & Heinrich 2018). At the same time, parallel developments in the variationist field have been a move away from grouping speakers by some categories imposed by researchers (Mendoza-Denton 2008) and a push towards analyzing how individuals construct their multivalent identities in interaction (Eckert 2008b). This transition from essentialism to post-structuralism is reflected in the three waves of variationist research (Eckert 2008b). However, close attention to qualitative data and interpretation does not cancel out the necessity of quantitative data. Mendoza-Denton (2008:480) argues for “a multiplicity of approaches” that can together produce a more complete picture of modern communities.

The current study was conceived as a variationist project that attempts to apply both etic and emic approaches to grouping participants on the basis of their heritage group and ethnic identification and then correlate them with linguistic production, as has been done in some previous research (Hoffman & Walker 2010). The recruitment process relied on self-identification of participants by their family heritage (one of three: Anglo, Chinese, or South Asian), and their ethnic identification was discussed at length during the interviews with the intention to later quantify this information using the ethnic orientation score (Nagy et al. 2014).

While the quantitative part of the project has produced some solid results in showing that the variation and its constraints are systematic across all speakers regardless of heritage, the attempt to add quantified ethnic orientation into the model did not provide clear results because the interview data on heritage turned out to be so unexpectedly rich and complex that it was very challenging to quantify. Blommaert and

Rampton (2011:1) discuss how in super-diverse communities, “the predictability of the category of ‘migrant’ and of his/her sociocultural features has disappeared” and the data I collected is a confirmation of that observation. To add a qualitative dimension to the study, I could choose to analyze several case studies; however, the experiences shared with me by the participants were so diverse that giving voice to only few of the speakers in the sample would be to completely ignore the others. I decided to focus instead on summarizing and tabulating the experiences and reflections of children of immigrants in order to start a dialogue about the diversity of immigrants in Metro Vancouver. The bicultural identity framework developed by Comănaru et al. (2018) was chosen to assist in creating a more organized picture.

Thus, while the variationist data serve to prove that the speakers are similar in terms of their linguistic behaviour, the qualitative data aim to show that there are substantial differences both within and across the ethnic groups in terms of their beliefs, attitudes, practices and identities. The qualitative analysis in this case then does not directly explain the data, but then again Mendoza-Denton (2008) critiques the essentialism of “the analytic practice of using categories to divide up subjects and sort their linguistic behaviour, and then linking the quantitative differences in linguistic production to explanations based on those very same categories provided by the analyst” (477). So, instead of providing such explanations, I will try to paint a broad picture of how identity is constructed by a British/Mixed European Canadian, or a Chinese Canadian, or a South-Asian Canadian in Metro Vancouver.

1.2. Background

The development of ideas in sociolinguistics can be seen through the changes in the underlying frameworks that informed research (Carter 2013). The structuralist view of language (Saussure 1966) reflected in Chomsky's (1965) belief in the homogeneity of linguistic structure and the separation of competence and performance was contested by the early sociolinguistic work (Weinreich, Labov & Herzog 1968; Labov 1972). Later, the development of the field has been increasingly influenced by post-structuralist theories of language (Bourdieu 1977, Foucault 1980, Bakhtin 1981).

As a result of this shift, a clear distinction can be made between the first wave of sociolinguistics with its reliance on stable social categories and the third wave that treats

social categories as emerging in shared social practices (Eckert 2008a). This section will first describe the traditional approach taken in many urban sociolinguistic studies in North America, and then move on to the approach motivated by the third wave of sociolinguistics and new ideas emerging in other disciplines. In particular, the focus will be on the traditional and new views of speech communities and their membership, as well as on the transition from treating ethnicity as a fixed category to describing it as a social construct.

1.2.1. Approaches to describing speech communities and ethnic groups in the first wave of sociolinguistics

In the first decades of its existence as a separate field (1960-1970s), variationist sociolinguistics was concerned with finding correlations between linguistic structures and predetermined fixed social categories like class, ethnicity or gender. The concern with the social as opposed to only linguistic structures was what differentiated sociolinguistics from linguistics which was developing within the structuralist framework (Saussure 1966) and was concerned with *langue* (language), while dismissing *parole* (speech) on the grounds that it was unsystematic and random. Sociolinguists aimed to demonstrate the deep connections between the use of language and social organization, opposing the tendency of that time to “neglect ... the social and cultural in linguistics” (Rampton 2010:275) focusing solely on the linguistic structures of “an ideal speaker-listener” in “a completely homogeneous speech-community” (Chomsky 1965:3).

Variationist sociolinguists succeeded in showing the structured heterogeneity of variation and its correlation with sociological and demographic categories like age, social class, gender, and ethnicity (Labov et al. 1972). These categories, absolutely necessary heuristic tools, were imposed by the researchers and utilized to provide “broad coverage and statistical representativeness” of urban populations of that time (Mendoza-Denton 2008:480). Within this etic approach, ethnicity was understood as “an acquired rather than an achieved characteristic ... transmitted ... directly from one’s parents” (Labov 2001:245-6) that was found to be an important factor conditioning variation in a number of studies. For example, in his seminal study on New York City, Labov (1966) found that ethnicity was the main predictor of tensing of /æ/ in the local dialect of English. African Americans in NYC did not have short-a split typical of White speakers, and the White immigrant groups had different patterns compared to non-immigrants: Italians produced

more raised and fronted tokens of /æ/ than Jews (Labov 2006 [1966]:192-193). These and other similar early findings, coupled with the prevalent racial ideology of the time, led to a particular treatment of ethnic groups as separate, well-defined and often isolated entities in the context of monolingual speech communities in the sociolinguistic projects of the following decades.

Speech community and its membership

The major concern of sociolinguists with defining and delimiting the notion of speech community can be explained by its important role in describing linguistic variation. According to Labov (1989), “any description of language must take the speech community as its object if it is to do justice to the elegance and regularity of linguistic structure” (52). Within the first wave of sociolinguistics, the speech community was understood as a relatively stable formation, homogenous and consensual, though there was a wide range of opinions on what should serve as criteria for its membership: intelligibility (Bloomfield 1933), interaction and a shared “body of verbal signs” (Gumperz 1968:381), “knowledge of rules for the conduct and interpretation of speech” (Hymes 1974:54-55), a geographical area delimited “by non-linguistic criteria, such as demography or socio-political boundaries” (Kerswill 1994:23), shared ethnic background (Horvath 1998) or race (Rickford 1999). In variationist sociolinguistics, the most widely cited and probably the most influential definition of speech community has been the one formulated by Labov:

The speech community is not defined by any marked agreement in the use of language elements, so much as by participation in a set of shared norms; these norms may be observed in overt types of evaluative behavior, and by the uniformity of abstract patterns of variation which are invariant in respect to particular levels of usage (1972:120).

This definition, born out of Labov’s studies of Martha’s Vineyard island (1963) and New York City (1966), was remarkable in its innovative combination of production and social evaluation as crucial for defining a speech community. The common interpretation of this definition is that in order to be considered members of the same speech community, using language in the same way (sharing the set of “linguistic elements” and having the same constraints on their use) is not enough; speakers also need to agree on both the social and stylistic evaluation of the use of language, that is, to share the same evaluative norms.

Who comprised the speech communities of urban centers in North America in the last decades of the 20th century? Findings varied across studies, and there was no general agreement on whether people with ethnic backgrounds (which at the time were understood to be immigrants and their descendants), should be considered a part of the majority speech community. Boberg (2004:539-540), based on his Montreal study, argues that ethnicity can “divide a political or regional community into two or more speech communities, each with a structurally distinct grammar.” Some studies have shown that ethnic boundaries help maintain the linguistic boundaries between communities (Rickford 1985; Poplack & Tagliamonte 2000), while others have demonstrated that different ethnic groups seem to be legitimate members of the majority speech community as they participate in the language changes, albeit at their own rate (Horvath 1998).

Focusing specifically on second-generation immigrants, previous research findings show different degrees of participation in the on-going language changes, from aligning with the majority community (Hoffman & Walker 2010, Riebold 2015, Newlin-Łukowicz 2015) to having their own, different from the majority group, constraints on variation, both linguistic and non-linguistic (Mougeon & Nadashi 1998), to non-participation in the on-going changes (Gordon 2000). In some cases, groups with ethnic backgrounds were found to spearhead the incipient change (Horvath 1998) or even introduce new variables into the speech community (Holmes 1997). Once again, no clear answer about the inclusion of such speakers in a speech community is given.

While a number of sociolinguistic studies did include non-White groups and looked at their speech production, still, most often the mainstream community in North American sociolinguistic studies was depicted to include only people of Anglo-Celtic descent who spoke English as their native language, while immigrants, particularly non-White ones, were either completely disregarded or treated as isolated ethnic groups which existed outside of the majority speech community and did not share its norms. Smakman and Heinrich (2018:3) talk about “a double bias” in the research, “a ‘Western’ one and a ‘monolingual national’ one in which minorities and migrants ‘disturb’ the dominant language-ethnicity-identity ideology.” There are several factors that lead to such a status quo in the research at that time.

First, some of the deepest roots of sociolinguistics lie in dialectological studies that aimed to determine the outlines of the regional dialect areas according to the original patterns of settlement. Following dialectological methodology, sociolinguists were recruiting participants among the native speakers who were supposed to truthfully represent the speech community of a given area. To satisfy the selection criteria, such informants needed to be born and raised in the area, preferably with parents and even grandparents born and raised there, as well (Atwood 1963). Such speakers also had to be Caucasian of British descent because in North America, the status of the “founder population” (Mufwene 2001, Trudgill 2006) was given to the descendants of the first British settlers who displaced and decimated the indigenous population of the continent in the 18th and 19th centuries. British and European immigrants indeed comprised the majority of the U.S. immigrants up to 1970s-1980s, but later there was quite a dramatic shift in source countries to Asia and Latin America (Abramitzky & Boustani 2017:34) that remained, however, unrepresented in the sociolinguistic research until much later.

Second, this approach reflected the ideas of linguists at that time on the correct unmarked speech of native speakers as opposed to the irregular speech of non-native speakers and their descendants whose speech was believed to have ethnic markers (Giles 1979), be accented or “ethnolectal” (Clyne 2000). Horvath (1998) explains that such speakers were “not considered to be members of the speech community because they do not speak the language as native speakers” (91).

Finally, another reason why speech communities in North American urban centers were often depicted as monolingual and monoethnic was because in many large cities, the recent immigrants often settled in enclaves creating an overall impression that ethnic groups were self-contained and isolated from each other and from the mainstream community and maintained distinct ethnic identities, as, for example, did Portuguese and Gay Head Indians in Martha’s Vineyard described by Labov (1963).

As a result of all of the above, many sociolinguistic studies of urban speech communities only included White speakers (Philadelphia in Labov 2001; Norwich in Trudgill 1986; Toronto in D’Arcy and Tagliamonte 2010; Vancouver in Sadler-Brown 2012), and if non-White speakers were included, their linguistic production was compared to that of the White speakers, the norm-establishing group. Similarities in

speech production of the ethnic groups were seen as their assimilation to the White majority, while differences were understood as dissimulation or maintaining the ethnolect.

A large number of North American studies of the following decades followed the same lead of grouping speakers based on externally imposed ethnic category and comparing “ethnic” groups with the White mainstream community. The criteria for grouping people under the same ethnic label range from race (e.g., African American in Rickford 1999), language (e.g., Spanish in Fought 2006), family background/heritage (Polish migrants in Drummond 2012 and Meyerhoff & Schlee 2012; Asian immigrants in Adamson & Regan 1991), to religion (Orthodox Jews in Benor 2001; Irish Roman Catholics and non-Irish Protestants in Clarke 2012; Mormons in Rosen & Skriver 2015). All members of the ethnic groups, however they were defined, were assumed to share their ethnicity equally and show it through language similarly.

While rarely included in the studies of the majority community, the speech of different ethnic groups was well-described in its own right. In particular, there exists a large body of knowledge on African Americans (Wolfram 1969, Fasold & Wolfram 1970, Labov 1972, Bailey & Thomas 1998; Rickford 1999, Gordon 2000; Anderson 2002; Fridland 2003; Eberhardt 2008, to name a few) and LatinX (Godinez & Maddieson 1985; Santa Ana 1992; Mendoza-Denton 1997; Fought 2003; Eckert 2008; Roeder 2009). Many important notions emerged out of those studies, such as ethnic markers (Giles 1979), code-switching (Gumperz 1985, Poplack 1980), ethnolects (Clyne 2000), and so on. The speakers whose speech was characterized by any of the above were not considered to be members of the majority speech community as they (presumably) neither spoke the language like White speakers, nor shared the evaluative norms with them.

In the last decade of the 20th century, the increase of immigration to the U.S. from non-European parts of the world, especially from Asia, as well as the recognition of the absence of data on first and subsequent generation of immigrants, gave rise to more studies of different minority groups, including visible minorities, as well as a new focus on 2nd generation immigrants (Laotian Americans in Bucholtz 2004; Chinese Americans in Wong 2007 and Hall-Lew 2009; West Indian Americans in Blake & Shousterman 2010, Arab Americans in Samant 2010; Polish Americans in Newlin-Lukowicz 2015). In Canada, researchers are also finally addressing this gap in knowledge: Boberg (2004)

looked at Italians and Jews in Montreal, Hoffman and Walker (2010) studied Chinese and Italians in Toronto, Umbal (2016, 2019) looked at Filipinos in Vancouver and Toronto, and Rosen and colleagues (2015) studied Filipinos in Winnipeg.

Alternative treatment of speech communities and ethnic groups in research

Despite the dominating ideology of the time, there has always been critique around the main concepts of the first wave of sociolinguistic research, such as the conditions for the existence of a speech community and its membership. Romaine (1982:23) challenges the “uniform usage” as a necessary condition for the existence of a speech community. She states that it is possible “to share the norms and rules of a language without using the language in the *same way*” and suggests that it is necessary to recognize *kinds of language* and *uses of language* that do not always coincide for different members of the community. Mougeon and Nadashi (1998) similarly argue that not all speakers necessarily share the same linguistic rules and constraints, that is, there may be “*discontinuities* in variable usage within the same speech community” (40). The authors argue for relaxing the principle of uniformity of variable linguistic usage postulated by Labov (1972) as a condition for a membership in speech community. Their study of the teenage speakers of French in Francophone communities in Ontario show that, while undoubtedly being members of the local minority speech community, such speakers vary in their use of several variables and in social/stylistic constraints on them (Mougeon & Nadashi 1998).

While the majority of North American studies were still conducted within the traditional approach described above, the nation-state ideology that really defined the research agenda in North America seemed to be less important elsewhere. A number of sociolinguistic studies conducted in Europe, Australia, and Central America described speech communities consisting of people who used markedly different variants of a variable and/or had different constraints on their use (Santa Ana & Parodi 1998, Horvath 1998, Kotsinas 1992, Quist 2008, Cheshire et al. 2011, among others).

Dorian (1982), focusing on the Highland district in Scotland, identifies several groups of speakers based on Gumperz’s (1968) definition of a speech community: Gaelic- and English-speaking bilinguals and monolingual English speakers. She then asks how to accommodate a third group – near-passive bilinguals and low-proficiency semi-speakers. Dorian demonstrates that this group challenges the prevailing definitions

of a speech community because while having very low speaking proficiency, they have an excellent control over perception, as well as a developed knowledge of the local sociolinguistic norms. Dorian (1982:30) raises the question about the “minimum requirements for membership in a speech community” and concludes that mastering the receptive skills and acquiring sociolinguistic norms are the two key features of such a membership, while the productive skills are not.

Kerswill (1993) in his study of a heterogeneous speech community that includes rural migrants and urban residents of Bergen (Norway) tries to design “a model of the speech community that can accommodate explicitly the range of ethnic and social groups in an area” (52). He proposes a multitiered characterization of the Bergen speech community where at the lower tier, there exist two varieties associated with two ethnic groups that comprise two speech communities in the Labovian sense. At the higher tier, however, both groups of speakers share the social evaluation of the varieties and thus comprise a single speech community. Kerswill suggests that not only linguistic knowledge, but also an “agreement on the social meaning of various linguistic parameters” is what defines a speech community (1994:24).

Horvath (1998) in her Sydney study questions the definition of the speech community by exploring how immigrants and their children “enter into the English speech community, that is, how they begin to fit into the sociolinguistic patterns that are already well-established in the community” (91). The author concludes that despite different degrees of integration, the Greek and Italian immigrants and their descendants are the driving force of the linguistic change in Sydney speech community.

Finally, Santa Ana and Parodi (1998) find the traditional Labovian model to be too restrictive and suggest an inclusive model of a speech community that would comprise all speakers, regardless of differences in their speech. The authors show that a number of older and less-educated speakers in the city of Zamora in Central West Mexico do not share all the evaluative norms with the majority of speakers in the community, and neither do they adhere to all the language norms, which can be explained by their lack of access to a wider standard. Instead of representing different groups of speakers as belonging to different, though adjacent, speech communities, Santa Ana and Parodi propose a hierarchical model of a speech community comprised of four nesting circles, or fields: speech locale (restricted and close-knit social networks;

the speakers are not aware of stigmatized variables), speech vicinity (the speakers demonstrate some awareness of stigmatized variables and are insecure about their speech), speech district (the speakers recognize the set of stigmatized variables, as well as regional variants, but may still use them unconsciously), national speech (the speakers have full awareness of the stigmatized and regional variants, and opt not to use them) (1998:33-34).

These studies, among several others, question the established definitions and offer some alternatives. Moreover, the latest developments in many large urban centers in Europe pose even more questions that the traditional definitions cannot answer. Researchers all over Europe attested the emerging multiethnolects spoken by immigrant youth from different ethnic backgrounds and adopted by L1 speakers, natives of the area. Such heterogeneous communities are said to speak *multiethnolects*, varieties that develop as a result of language contact and potentially have influence on long-term linguistic change (Clyne 2000; Kern 2011:2). In contrast with ethnolects which distinguish the speech of ethnic minorities from the norm-establishing majority, multiethnolects are hardly just “markers of ethnic identity in contrast to a majority identity,” but are “integrated in the local linguistic and social landscape” (Quist 2008:46). Multiethnolects are inherently “less homogenous” than dialects (Cheshire et al. 2011:152), but variation in them is structured and linguistically and socially defined which allows the authors to state that their speakers “are part of a speech community” (ibid.190).

Multiethnolects are attested and described in many Western European cities, such as London (Cheshire et al. 2011), Copenhagen (Quist 2008), Oslo (Svendsen & Røyneland 2008), Stockholm (Kotsinas 2001), Berlin (Wiese 2009), among others. Cheshire and colleagues (2011:153) hypothesize, based on their study of London neighborhoods, that there are some particular conditions that need to be met for the emergence of multiethnolects: large scale immigration from developing countries, settling in underprivileged neighbourhoods, economic deprivation and maintenance of close kin ties, limited access to L1 models, rapid shift to the majority language by children, and group second language acquisition of the host community language. Different patterns of immigration and settlement in North America may explain why no multiethnolects have emerged here so far (or at least have not been documented), though more recently, a group of authors from Toronto proposed the emergence of

Multicultural Toronto English based on phonological and lexical data (Bigelow et al. 2019).

One of the better-described multiethnolects in Europe is Multicultural London English that emerged in the poor working-class neighborhood of Inner London in the last decade of the 20th century. The results of several studies show that the variation in Multicultural London English is not associated with any particular ethnic group and is adopted by monolingual English speakers (Kerswill et al. 2008, Cheshire & Fox 2009, Cheshire et al. 2011, Fox et al. 2011, Torgersen & Szakay 2012, among others). The phonological and morphosyntactic variation in MLE is structured and systematic, and Cheshire and colleagues (2011) argue that the large urban centers where multiethnolects emerge “can be considered ‘speech communities’, in Labov’s sense” (154).

1.2.2. Changing world, changing concepts

The contribution of the studies conducted within the traditional (first wave) approach is remarkable: not only have they added tremendously to the theory and our understanding of society, but they have also had a huge public impact, from influencing public policy to enriching debates on education (Mendoza-Denton 2008:482). Traditional variationist studies remain a very important source of knowledge today; however, the development of social theory and the changing demographics of the world in recent years have led to the reconsideration of some of the foundational concepts of sociolinguistics. While earlier sociolinguistic research was essentialist in its analytic practice (Mendoza-Denton 2008) and structuralist in its orientation to social categories (Carter 2013), in the late 20th century, there was a move towards constructivism (Fischer 1999) and post-structuralism informed by the work of such philosophers as Bourdieu (1977), Derrida (1974), Foucault (1980), and Bakhtin (1981). Carter (2013) calls post-structuralism “a movement in philosophy and theory toward an analysis of sociality and subjectivity that is rooted in language” (583). Many foundational notions established in previous sociolinguistic studies have been reconsidered and reformulated; new ideas and new concepts emerged in the changing societies. This section will provide an overview of those particularly relevant to the current study.

Diversification of diversity

Developments in the social theory have been accompanying drastic and rapid changes in world demographics that can be described as “diversification of diversity” (Vertovec 2007:1025). Today, “the city is more diverse than mainstream sociolinguistic theories have portrayed it to be” (Smakman & Heinrich 2018:1). Migration and urbanization, according to the United Nations (2019:iii), are two of the demographic “megatrends” of our time. In Europe and North America, international migration is the key driver of population change, and urban centers are virtually the sole recipients of all international migrants in these two regions (United Nations, 2018). As a result, modern urban centers are increasingly diverse in terms of the ethnic background of their residents and the languages spoken. Multilingualism is the norm in most of the world’s speech communities (Nagy & Meyerhoff 2008, Mesthrie 2010), and the urban centers are not an exception, as shown by the census reports from Copenhagen, Berlin, Paris, London, Singapore, Delhi, Mexico City, New York City, San Francisco, Toronto, and Montreal, to name just a few.

But it is not just ethnicity and languages that contribute to a “diversification of diversity.” Vertovec (2007) introduces the notion of “super-diversity” to describe the complex dynamics of modern urban centers where immigrants differ in their channels of migration, immigration status, legal status and rights, and employment patterns; moreover, many of these factors are confounded by very different gendered patterns of different ethnic groups. Even “country of origin” that is often thought to be a good measure of diversity conceals a lot of differentiation because ethnicity, religion, cultural practices, dialects or languages, and local identities of immigrants from different regions of the same country may vary drastically. Vertovec explains that all these factors often define immigrants’ social networks which condition their access to work, housing, and services in their new motherland (2007:1031). In addition, a unique feature of modern migrants is their active engagement in transnational practices made possible by the development of technology and reduced travel costs over the last decades. Once again, the extent to which different immigrant groups maintain links to their home country varies greatly (1043).

Equally important are the changes in the host populations of the countries that attract a lot of migrants. Creese and Blackledge (2010) discuss non-migrant

diversification in terms of geographical and social mobility, residential patterns, occupation, and so on. One of the peculiar developments that has not really attracted the attention of sociolinguists so far is the increasing number of mixed-race individuals and their use of the host community language. In Canada overall, mixed unions are more and more prominent, in particular in large urban centers (Statistics Canada 2014), and in Metro Vancouver, where 38.7% of population report multiple ethnic origin (Statistics Canada 2018). Several studies that looked at the linguistic production of multiracial individuals found that they may differ in some respects from both the majority community and from the ethnic group one of their parents belongs to (Bucholtz 1995, Gordon 2000, Fought 2010). Future research will definitely need to address this emerging group to explore their linguistic behaviour and participation in language change.

The speech community in super-diverse cities

What does a modern speech community look like in a super-diverse city where the non-immigrant population is often a minority, and immigrants vary along all the axes described above? Can we even talk about speech community in such a place? Blommaert and Rampton (2011:4) reject the idea of a speech community as an objective entity “that can be empirically identified.” The authors claim that in the post-modern world, we need to instead look at “communities of practice, institutions and networks as the often mobile and flexible sites and links in which representations of group emerge, move and circulate” (4). Smakman and Heinrich (2018:1-2) similarly reject the concept on the grounds that the researchers need to be concerned not with descriptions of some group, but with “the language choices that individuals make from one speech setting to the next.” Other researchers join in describing them as “heterogeneous arenas characterized by conflicting claims to truth and power” (Norton & Morgan 2013:2) and as “complex, hybrid, unstable and changing” (Budach & de Saint-Georges 2017:64).

In direct contrast with previous definitions that stressed the importance of shared norms, Smakman and Heinrich (2018:5) argue that researchers should focus less “on linguistic agreement amongst speakers who happen to speak the same language at moments in their daily lives” and suggest to avoid the “essentialist labels” like age, gender, ethnicity and so on to categorize speakers. The authors talk about large urban centers as “sociolinguistic systems in their own right” (2).

Who is the native speaker?

In a rapidly globalizing world, more and more researchers agree that the selective treatment of a speech community where some groups are excluded can harm its objective description. This idea is not new, of course; Sankoff and Horvath (1987) stated that in such a selective approach, “important varieties may be left undescribed and possible sources of language change in progress may go undetected” (202). However, it is only more recently that the researchers started including diverse populations in their sample. This has to do of course with the idea of a native speaker as a carrier of a true variety; Meyerhoff and Stanford (2015:8) note that it is important to recognize that “sociolinguistics in the latter half of the twentieth century was arguably as obsessed with the idea of capturing native speaker knowledge as formal linguistic studies were.”

The whole idea of a native language and a native speaker, has little to do with linguistics and everything to do with politics. The development of European nation-building ideology of the 19th century with its focus on creating a homogenous nation led to the assertion that speech communities consisted of people who shared culture, ethnicity and identity (Smakman & Heinrich 2018:2). Delimiting a community as a bound entity was done by establishing a common language its members spoke natively (Blommaert & Rampton 2011:4). The outsiders, like migrants or ethnic minorities, were either excluded from or assimilated into the mainstream society. This ideology was transplanted from Europe into the colonized North America where English became the language of the mainstream community, as described in Hackert’s (2012) monograph on the emergence of the English native speaker as a category in the 19th century.

In modern urban centers, even finding such “ideal native speakers” often presents a challenge; Smakman and Heinrich (2018:5) in their discussion of urban centers note that people who continue living in the same locations throughout their lives are “increasingly atypical cases in an ever-growing number of cities.” The authors go on to say that it is not even necessary to spend effort in searching for them as they are becoming “increasingly less relevant and representative for sociolinguistic accounts of the language life in these cities” (2018:5).

The concept of a native speaker has been under scrutiny from other angles, as well: Davies (2013) talks about lifespan changes in the status of a native speaker, the

status that can be gained and lost, while Jørgensen et al. (2011) deconstruct the term completely within the post-modernist framework.

Similar to the shift of thinking about a native speaker, another assumption is being reconsidered: the one that suggests that the descendants of the European settlers of British descent in North America are the norm-establishing majority. A number of authors talk about the shift in norms, where the monolingual norm gives way to the bi- and multilingual norm (Birdsong 2012, Cook 1999, Grosjean 1992). Smakman and Heinrich (2018:5) argue that instead of treating the language of native speakers as representative of the speech community, we need to focus on “finding agreement amongst the functionalities of individuals’ language in a constantly changing urban setting.”

Is White ethnic?

One more concept that came to the foreground surprisingly recently is the idea that all people are “ethnic,” even White. Rosa and Trivedi (2017) ponder over the fact that despite the history of being a language of migrants, “English language use is not typically interpreted as a sign of diaspora in the United States” (330). Many authors have started to discuss and question the “invisibility” of the White race (Fought 2006, Trechter & Bucholtz 2001, Bell 1999) and its repercussions for research. In many contexts, White people are seen as “invisibly normal,” while other groups are both visible and marginal (Hill 1998), and the studies of “ethnic” language is the best illustration of this ideology. Stereotypes of minority groups and their language are readily available, while similar stereotypes of White people are hard to come by, though Fought (2006) looked at the non-White stand-up comedians that represent White people in their performances.

The following ideas emerge from the research on White speakers viewed as “ethnic” in a sense of using language to construct some particular ethnic identity. In the modern English-speaking communities, whiteness is associated with education and/or intellectual orientation, which finds its reflection in the use of standard (Ogbu 1999) and super-standard forms (Bucholtz 2001, Wolfram & Schilling 2016). Whiteness also seems to be associated with femininity or lack of masculinity in the US racial ideology, where masculinity is more closely associated with “blackness” (Bucholtz 1999, Chun 2008). In the U.S., there are several “sociolects” that are first and foremost associated with White ethnicity, like “Valley Girl talk” (Bucholtz et al. 2007, D’Onofrio 2015). There are several

phonological features that were found to be correlated with White ethnicity (/ow/-fronting, /æN/ raising); however, they are often also tied to local changes in the dialects and influenced by other social factors like social class and gender (Baranowski 2008, Eckert 2008).

1.2.3. From inherited ethnicity to socially constructed ethnic identity

The third wave of sociolinguistics: from an etic to an emic perspective

In sociolinguistics, the third wave studies signified a move away from looking at social structure for explanations of differences in linguistic production towards looking at the indexical meaning of variables that emerges in shared social practices (Eckert 2008a). Treating gender, social class and ethnicity as directly accounting for linguistic variation has been called an oversimplification (Smakman & Heinrich 2018:2). Eckert (2008a) elaborates on the deficiency of such a model, proposing instead to talk about indexical values of variables in her study of Chicano and White teenagers in California where the features that could be termed “ethnic” or “ethnolectal” were actually used by young people of either ethnic background, and what influenced their use were the local social practices, in particular, the membership in the “crowd” that served as a legitimizing institution of a peer-based social order (30). Eckert argued that “the indexical value of “ethnic” variables is constructed among, rather than within, ethnic groups” (25) and referred to their use as “stylistic practices,” while Benor (2010) introduced the notion of “ethnolinguistic repertoire” to describe a set of resources available to members of an ethnic group for indexing their ethnic identities.

Following this lead, in many recent sociolinguistic studies, the approach to defining ethnicity and ethnic identity changed from etic (based on analysts’ categories) to emic (based on participants’ categories) (Mendoza-Denton 2008:477). Within the emic approach, ethnicity is treated as a constructed characteristic, not an inherited one. The necessity for this shift in focus was in the recognition of the heterogeneity of ethnic groups and disparity between the imposed categories and self-identification of the group members.

In sociolinguistics, explorations of the finer meanings related to ethnicity of the participants have been traditionally associated with ethnographic approach where a few case studies are selected and examined in close detail, as was done by Pappas (2008),

Becker (2014), and Fix (2014), among others, who turned their attention to individuals to explore their overt or covert attitudes to the variety they spoke or even to particular linguistic features. Of course, in this approach one does not quantify the data for use in a statistical model.

More recently, the idea of quantifying such qualitative information made its way into sociolinguistics from other disciplines. Social psychologists (Giles & Coupland 1991, Cameron 2004), developmental and counselling psychologists (Erikson 1950, Marcia 1966, Phinney & Ong 2007), and cultural psychologists (Berry 2005, Bourhis et al. 1997) developed questionnaires and surveys to collect data about ethnic identity from a relatively large number of participants. The central idea of studies exploring ethnicity is that meanings related to it may be examined through *ethnic orientation*: “a loosely connected cluster of thoughts, feelings and behaviours pertaining to a person’s orientation towards their ancestral ethnic group and/or any other relevant ethnic group” Noels (2014:89). An ethnic orientation score can be calculated on the basis of questionnaire responses and correlated with linguistic production. The general expectation is that informants with higher degrees of ethnic orientation will exhibit differences in their linguistic choices from those with lower degrees of ethnic orientation. Ethnic orientation has been shown in several studies to influence the participation of different immigrant groups in the ongoing linguistic change (Hoffman & Walker 2010, Nagy et al. 2014).

Despite some promising results, the exploration of ethnic orientation in sociolinguistic studies has not picked up yet. Part of the reason is the absence of a widely-accepted survey on ethnic orientation and methodology of data collection and analysis. Different researchers borrow from other disciplines, for example, Hoffman and Walker (2010) “adapted questions from studies of ethnic identity in sociology and social psychology” (46) to create a written questionnaire with a Lickert scale that allowed them to calculate the ethnic orientation score based on the responses. Nagy et al. (2014:11) in search for good questions to ask “turned to the fields of anthropology and psychology and chose a tool that had been extensively tested.” The authors elicited answers orally and then quantified them using several different methods. Newlin-Łukowicz (2015) conducted a hierarchical cluster analysis based on the responses to her “Polish involvement survey.” All these authors report correlation of the ethnic orientation scores to at least some of the linguistic production of individuals. It is, however, impossible to

choose the best approach among these or some others not reviewed here. Besides, Nagy et al. (2014:10) caution the researchers to critically evaluate their methodology because they received different results for ethnic orientation scores when the answers to the ethnic questionnaires were approached from different perspectives.

Noels (2014), in a special issue of *Language and Communication* devoted to ethnic identity and linguistic variation in North America, attempts to start an interdisciplinary dialogue and describes several subfields within psychology that deal with ethnicity and ethnic identity to show the relevancy of ideas and the applicability of methods to sociolinguistic research. The next section will focus on them and explain the reasons why one particular framework was chosen for the current research.

Social psychological studies of bi-cultural identity and acculturation

In the last decades, social scientists have shown an increased interest in the description of acculturation of migrants and bi-cultural identity of individuals due to their increasing number all over the world, as well as due to the paradigm shift from an etic to an emic perspective. Numerous social psychological and acculturation studies of the last decades have shown the complexity and fluidity of ethnic identity.

While the term “acculturation” is widely used today, there is a whole range of different frameworks that have emerged during the last seventy years searching to explain this process. Studying the behaviour of individuals in cultural contact led anthropologists Redfield, Linton, and Herskovits (1936) to propose acculturation as an outcome of a situation “when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups” (149). Gordon (1964), one of the early influential theorists, proposed the *unidimensional assimilation model* that suggested the existence of a single bipolar continuum, with immigrant identity on the one end and full assimilation to the host society on the other. In this approach, biculturalism is understood as a transient phase that immigrants go through as they assimilate to their new homeland. According to this theory, there exists an inverse relationship between ethnic group identification and assimilation to the majority culture, that is, the more assimilated a person is to the new culture, the weaker are their ties with the heritage culture (Rotheram-Borus 1990).

While the unidimensional model helped to explore and describe immigrants' experiences, its insufficient explanatory power led to the development of the *bidimensional model of acculturation* which postulates that immigrant identity and host cultural identity are independent dimensions (Berry 1980). Berry (1984) defined four modes of acculturation that emerge out of the cross-tabulation of the immigrants' positions in regard to the host culture and their own culture: assimilation (without preservation of one's minority culture), separation (maintenance of minority culture while distancing from the majority), integration (with both cultures maintained) and marginalization (rejection of both cultures). Bourhis et al. (1997) revised the model to resolve the inconsistency of the original one that included both attitudes and behavioral intentions, as well as to refine the marginalization mode. The authors proposed instead that while some individuals indeed may experience the cultural alienation, termed *anomie*, others prefer to identify as individuals rather than members of any groups, termed *individualism* (378-9).

To explore the application of uni- and bi-dimensional theories, Tsai et al. (2000) collected their data from several hundred Chinese Americans divided into three groups: those who arrived after the age of 12, before that age, and those born in the U.S. The main finding is that being Chinese and being American appears to be bidimensional for American-born people, but unidimensional for immigrants (321) for whom assimilation to American culture often means 'giving up' some parts of their Chinese identity. The authors took "integration" mode to be representative of the bidimensional model: "individuals may be both highly enculturated to their native (or minority) culture and highly acculturated to their host (or majority) culture" (304-5).

Integration mode, where individuals participate in the majority culture *and* maintain their heritage culture has emerged as the preferred acculturation strategy in a number of studies of the minority groups (Berry et al. 2006; Van Oudenhoven, Ward & Masgoret, 2006) and has been shown to be correlated with psychological well-being and other positive outcomes (Nguyen & Benet-Martínez 2013), hence a lot of socio-cultural and psychological studies tried to explain the underlying mechanisms of integration and its possible surface forms. The review of all of them goes beyond the scope of this work, so I refer the reader to Qumseya (2018) and Comănanu et al. (2018) for that.

Regardless of the framework, today, according to Noels (2014), the common practice in psychology is to approach the ethnic identity of an individual “through subjective assessment of personal experiences” (89). Findings from the studies conducted by social psychologists (Giles & Coupland 1991, Cameron 2004), developmental and counselling psychologists (Erikson 1950, Marcia 1966, Phinney & Ong 2007, Yip 2013), and cultural psychologists (Berry 2005, Bourhis et al. 1997) show that people with the same ethnic background may prefer different strategies of acculturation that range from total assimilation to the mainstream culture to its total rejection (Berry 1984; Bourhis et al. 1997, Tsai et al. 2000). Maintaining the original ethnic identity has in recent years been strengthened by the ease of keeping connected with the host country via more accessible international travel and especially via social media. Finally, a lot of researchers studying identity stress that ethnicity is only one aspect of it that can be exceedingly small for some people who discard their ethnicity as a defining characteristic completely (e.g., individualism in Bourhis et al. 1997).

While the acculturation model developed by Berry (1984) treated this process as a social one, with both individual and society involved, the subsequent socio-psychological research often focused exclusively on the individual. An important study by Bourhis et al. (1997) showed that the government policies and the attitudes of the majority society can influence the minorities' choice of acculturation strategy. Berry and Ward (2016) found that minority groups choose integration as a beneficial strategy only when the mainstream community and institutions promote and practice inclusive attitudes at all levels.

Another level between the society and the individual is that of the family that plays a crucial role in the development of an individual (Bronfenbrenner 1979) and in cultural socialization practices of immigrant children (Chakawa & Hogg 2016). Studies have shown that a child's psychological well-being is linked to parental guidance about the heritage culture (Marshall 1995).

Along other dimensions, contextual variability of bicultural individuals is relatively well-described in the social psychological literature (Clement & Noels 1992, Ward 2013, Roccas & Brewer 2002). Ethnic identity was also described to emerge in interaction where people position and reposition themselves in relation to their interlocutors (van Langenhove & Harre 1999; Malhi et al. 2009; Karachaliou et al. 2019). In their study of

2nd generation Chinese immigrants in the U.S., Tsai et al. (2000:305) suggest that because such people are exposed to American culture in a wide variety of domains and to Chinese culture in a limited number of domains (mostly at home, sometimes in church and Chinese schools), “their notions of being Chinese and being American may be context-specific and may develop independently of each other.”

Comănanu et al. (2018) is a study that synthesizes many previous theories in one comprehensive framework. The authors note that because the empirical research on bicultural identity is quite fragmented, they aim not only to create a framework for “a more comprehensive understanding of the diversity of identity experiences of bicultural persons” (526), but also to provide an instrument for their assessment. It is one of the most recent comprehensive studies conducted on Canadian immigrant youth up to date, which is why it was chosen as a framework for the qualitative portion of this study.

Based on previous research and on the results of their exploratory study with young Canadians, Comănanu et al. (2018) name five distinct, though interrelated, orientations to the bicultural identity of individuals: monocultural orientation (choosing one culture and being loyal to it), complementary orientation (compatibility of two identities in one individual), hybrid identity orientation (a single identity that emerges out of blending of cultures), conflicted identity orientation (discord between two cultural identities) and alternation orientation (situational and contextual shifting of individuals between their two distinct identities) (532, 537). Their subsequent study with two generations of immigrants showed that while all of them preferred hybrid and complementary identities, the first generation more often had alternating, conflicted, or monocultural orientation. Comănanu et al. (2018) discuss also the complex nature of hybridity (538) which can take very different forms, such as hyphenated identity, nested identity, or marble cake identity (528).

1.2.4. Approach of the current study

Having considered all of the changes in studying ethnicity and speech community in the previous decades, I can describe and motivate my approach as follows. In the quantitative part of the study, the approach can be described as “first wave sociolinguistics.” While some can criticize such a design as outdated in the era when the third wave sociolinguists are concerned with how social meanings are ascribed to

linguistic variants in social interactions, I believe that the contribution of this work is in laying out the foundation for the future research. As Meyerhoff and Stanford (2015) put it, “For less commonly studied communities, then, sociolinguistic research may need to start from a basic Levi-Straussian structural foundation and then later explore how the meanings of linguistic forms relate to Bourdieuan notions of what we do with those forms, right through to hexis and social capital” (11). The authors particularly talk about smaller and less well-described languages, and while the focus of the current work is on English, there is a clear lack of description of the speech of second-generation immigrants speaking English as their native language. Future projects then may build on this work to apply the third wave approach to the local community.

One very important detail here is my decision to avoid comparing the two non-White groups to the White one which would traditionally be treated as a norm-establishing one. I treat all three groups of speakers as ethnic groups, and look for ways in which they may express their ethnicity through language. Another important methodological decision is to define a baseline to measure variation against. Meyerhoff and Stanford (2015:6) talk about defining “the baseline or norm as the form or structure that is associated with the educational or metropolitan standard of any particular language,” which has been the dominant approach in the first wave studies. The authors also discuss an alternative: to set a baseline as “the most frequently used form in the community” (2015:6).

The section below that reviews the studies of Canadian English conducted so far will show that the variety spoken in Canada has been described on the basis of White speakers (Labov et al. 2006, Boberg 2010), and the few studies that included non-White groups (Hoffman & Walker 2010, Nagy et al. 2014, Umbal 2019) treat them as separate from the mainstream community. Following that lead would mean to treat the White group in the current study as the norm-establishing majority and compare two non-White group with them. However, I will follow the alternative offered by Meyerhoff and Stanford (2015) and to identify what they call “the most frequently used form in the community,” which for the phonological variable would be the mean value for all speakers. This value that will serve as a comparison point to see how the speakers spread around it and if there is any clustering based on ethnicity.

As for the qualitative part of the study, the interview data on ethnic orientation of the participants will be analyzed within the framework presented by Comănaru et al. (2018) who describe complementary identities, hybrid identities, and situational shifting between two identities.

The rest of this chapter will be devoted to the description of the study site and the variety of English spoken here.

1.3. Local context: Demographics, waves of immigration, and patterns of settlement

This section provides the description of the study site – Metropolitan Vancouver, BC, Canada. The history of settlement, waves of immigration, and current demographic situation will be discussed in order to create a background for the description of the linguistic situation in the city.

1.3.1. History

Chambers (1991:91) lists four distinct waves of immigration to Canada: American loyalists in the second half of the 18th century, British settlers in the middle of the 19th century, European and British migrants in the beginning of the 20th century, and global migrants from all over the world starting in the middle of the 20th century (this wave continues today).

British Columbia, the traditional land of a large number of First Nations who spoke diverse languages and developed rich Pacific North West Coast cultures before colonization, saw the first settlers arrive during the gold rushes of the 1850s and 1860s. They remained outnumbered by the indigenous people; however, the situation quickly changed just a generation later, when the local population was decimated by conquest and disease and replaced by a large number of in-migrants (Dollinger 2019:3). British Columbia, among the other Western provinces, was populated mainly through internal migration and immigration of the last two waves of Canadian immigration. The rapid growth is clear from the settler population count: while in 1881 only 4% of the country's total lived in one of the Western provinces, by 1931 29% of the national total of non-indigenous population resided in the West (Boberg 2010:86). This proportion holds

today: about 30% of Canada's population lives in one of the four Western provinces (Manitoba, Saskatchewan, Alberta, and British Columbia) (Statistics Canada 2012b:10).

British Columbia: Free land boom

British Columbia became a Canadian province in 1871, and the City of Vancouver was incorporated in 1886, but it wasn't until the beginning of the 20th century that both experienced a growth spurt. During that period, the highest recorded wave of immigration boosted the country's population by 2 million (Statistics Canada 2005), and the massive settlement of Western parts of Canada started. Two factors played a role in this substantial migration: the Canadian government's efforts to develop the agricultural potential in the West and the bad economy and poor perspectives in immigrants' home countries (Anderson & Frideres 1981:134).

Boberg (2010) names four main groups of migrants that arrived to the Canadian West during the first decades of the 20th century: internal Canadian migrants, Americans, British, and continental Europeans. During the same period, the first noticeable number of newcomers from Asia arrived: Chinese laborers were brought to Canada for railroad construction, and many of them stayed after it was completed (Anderson & Frideres 1981:164). According to Boberg (2010:91), by 1911, there were 40,000 Asian migrants in Canada overall, and many of them resided in British Columbia.

During the first three decades of the 20th century, the population of British Columbia grew more than threefold, with foreign immigration as the important source of population increase (Table 1).

Table 1 Population of British Columbia: Total number and place of birth, 1901-1931 (sources: BC Stats 2011; Macdonald 1980:210-19)

year	total population	% BC-born	% Canadian-born (internal migrants)	% foreign-born
1901	178,657	34.4	22.4	44.2
1911	392,480	21.5	21.6	56.9
1921	524,582	29.9	20.4	49.7
1931	694,236	33.6	20.4	46

By 1931, when the immigration boom came to an end, the population of British Columbia comprised 694,263 people, 46% of which were foreign-born. Most of them were British-born immigrants (200,000); at around 27%, their proportion to the total

population of the province remained steady throughout the first decades of the 20th century (Boberg 2010:89). Among other foreign-born were newcomers from Scandinavian countries, Slavic countries, France, Germany, Italy, and Greece, as well as a considerable number of immigrants from the U.S. (Macdonald 1980:214). With respect to race, by 1931, the province remained predominantly European-Caucasian, with Asians accounting for about 7% of the population and indigenous people for only 3.5% (Roy 1989:268). The Asian population was represented by more than 20,000 of Chinese people and the same amount of Japanese at that time (Boberg 2010:87).

Metro Vancouver

As for Vancouver, since its start as a logging and lumbering community in the second half of the 19th century, it developed very slowly, having a predominantly White population of several hundred settlers scattered around Burrard Inlet. The completion of the Canadian Pacific Railway at the end of the century brought a period of dramatic growth, with the population of Vancouver increasing from about 2,000 in 1887 to almost 14,000 in 1891. 80% of the population resided in the City of Vancouver, so the rate of development of the Metropolitan area at that time was much slower. This situation remained the same during the first three decades of the 20th century: the urban core (Vancouver proper) had about 80% of the total Metropolitan area population (Macdonald 1980:207).

The rapid growth of Vancouver continued and by 1915 the city passed the hundred thousand people benchmark, the main channel of active growth being immigration (Table 2). The internal migrants who accounted for about a quarter of the population were predominantly people of British descent from Ontario. Among the foreign-born immigrants, the proportion of the newcomers from the British Isles was increasing steadily from 40% in 1901 to 62% by 1931, reflecting the politics of the government to strengthen the British presence in the West (Macdonald 1980:206-220). During the first two decades of the 20th century, migrants from European countries accounted for only around 4% of Vancouver population (Macdonald 1980:218), while the Chinese were the largest and Japanese the second-largest visible minority groups in Vancouver, together representing 9% of the population (Boberg 2010:91).

Table 2 Population growth in Vancouver (source: Macdonald 1980:206-214)

year	total population of the Metropolitan District of Vancouver	total population of Vancouver	% BC-born	% Canadian-born (internal migrants)	% foreign-born
1901	28,985	27,010	36.9	24.5	39.4
1911	123,902	100,401	15.5	28.3	56.2
1921	198,468	163,220	24.3	24.6	51.3
1931	304,854	246,593	28.8	23.2	47.9

By 1931 77% of Vancouverites identified as British, about 14% as other Europeans, and 9% as Asians (Chinese and Japanese) (Barman 1986:113). Macdonald (1980:215) argues that such a situation “gave a decided British cast to Vancouver’s population profile,” naming different aspects of cultural and social life of Vancouver that demonstrated the presence of such a strong influence, including politics, education, city architecture and public facilities, and, of course, language.

Boberg (2010) argues that due to the peculiarities of the settlement of the Canadian West, the formative period of Canadian English was characterized in this part of the country by a mix of British and American regional varieties, as well as by the influence of different immigrants’ languages and accents. In British Columbia, however, British influence was the strongest, compared to other Western provinces.

The third wave of immigration to the Canadian West ended with the beginning of the Great Depression, and the fourth one started after World War II.

The most recent wave of immigration

The influx of immigrants to Canada following World War II fluctuated, levelling off in the 1990s at around 200,000 annually and becoming the main source of population growth as the natural increase among the population declined (Murdie 2008:1). The reasons for these immigrants to leave their motherlands were socioeconomic and political; in contrast with the previous wave that mainly had come from Britain and continental Europe, post-World War II immigrants represented a large number of countries in Asia, Africa, the Middle East, Latin America and the Caribbean (Murdie 2008:2). Shifts in Canadian immigration policy in the 1960s, especially the change from a “White Canada policy” to a points system that took into account immigrants’ education, skills, and language proficiency, led to dramatic changes in the composition of immigrants in the following decades (Murdie 2008:6); in particular, the number of

European immigrants has been steadily declining, while the number of newcomers from Asia has been increasing (Boberg 2010:97).

In addition to a large diversity among the newer immigrants, there is another important factor that makes this new wave of immigration very different from the previous one: while before World War II, the immigrants often chose to settle in rural areas and maintain their cultures and languages, the Canadian immigrants of the 4th wave have been settling in major metropolitan centers, partly because they were now better educated, had more skills and language knowledge than immigrants of the previous wave (Anderson & Frideres 1981:134). Vancouver is a good example of this trend: by 1961, about 46% of all BC immigrants lived in the Metropolitan Area; among them, about 30% of all European immigrants to the province settled in the city, as well as up to 60% of all Japanese and Chinese arrivals. By 2001, up to 75% of British Columbia immigrants lived in Metro Vancouver (Strategic Research and Statistics 2005:3), while the rest of the province was the home for families who immigrated generations ago, including the majority of British/Mixed European descendants. According to 2016 Census, 62.7% of the province population reported European origin, while Metro Vancouver is the home for 49.3% of people of European heritage. At the same time, 46.5% of Metro Vancouver population reported Asian origin in contrast to 28.8% in the province overall (Statistics Canada 2017).

Considerable changes made by the Canadian government in the immigration policies after World War II “had indirectly softened the strongly British features of Vancouver’s population profile and had made the city a much more diverse, cosmopolitan community than formerly” (Macdonald 1980:218-9). Already by 1960, one Vancouverite in six was from a country with an official language other than English; there was a great increase of continental Europeans among other immigrants, though the migrants from the British Isles still comprised around 45% of the foreign-born population (Macdonald 1980:216). The number of Asian immigrants in Vancouver remained small in the 1960s, around 3%; however, it is noteworthy that Asian immigrants to Canada were increasingly targeting Metro Vancouver. By 1971, 30% of all Chinese immigrants to Canada came to this area and settled mostly in the city proper (Anderson & Frideres 1981:164).

The ethnic composition of the immigrant population changed drastically during the last 50 years. Before 1961, more than 80% of immigrants arrived to Metropolitan Vancouver from the European countries (including the UK) and around 12% from Asia. In the following decades, the tendency reversed completely. Between 1991 and 2006, the number of Asian immigrants reached 80%, while the number of European immigrants went down to around 10%. Other areas of the world contributed to Vancouver population less significantly, never reaching 10% in either of the decades since 1961 (Figure 1). Another important change occurred in the source countries of Asian immigrants: in 1961, roughly two thirds of immigrants were from China, and one third from Japan (Macdonald 1980:218), with other Asian countries providing a negligible number of immigrants. Currently, there is a large diversity in source countries: in 2011, Asian countries contributing most immigrants were (in decreasing order) China, India, Philippines, and Hong Kong (Statistics Canada 2013:6)

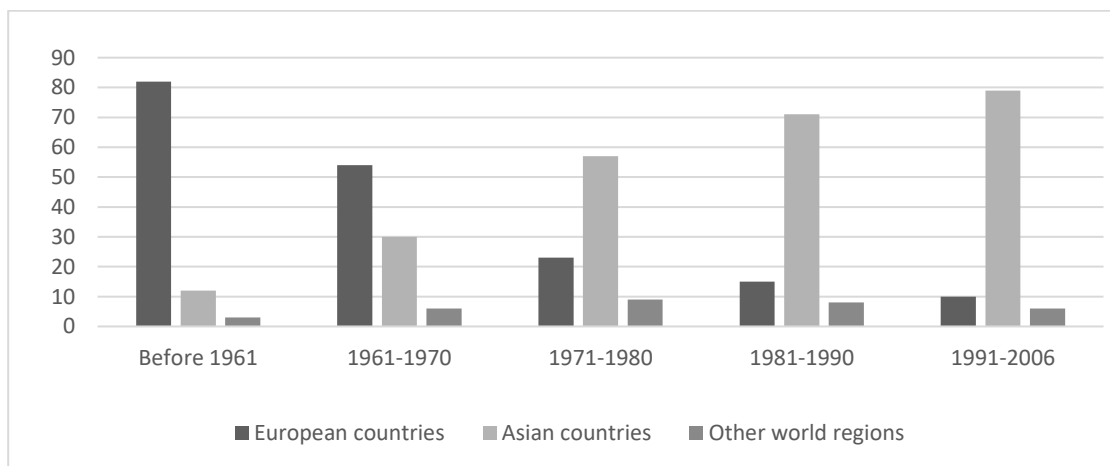


Figure 1 Origin of the immigrants to Vancouver CMA by period of arrival (source: Murdie 2008:2)

1.3.2. Current demographic situation in Metropolitan Vancouver

Today, Metro Vancouver sits on the unceded territories of several nations: Katzie, Sto:lo, kwikwəłəm (Kwkwetlem), xʷməθkʷəy̓əm (Musqueam), SENĆOTEN (Senco'ten), Skwxwú7mesh (Squamish), Tsawwassen, and səliłwətaʔ (Tsleil-Waututh) Nations (Metro Vancouver n.d.). The indigenous population that lives on their traditional land comprises only about 2.5% of the Metro Vancouver population, while the bulk of the population are settlers with different non-North American, non-indigenous backgrounds who came here at different time periods (Statistics Canada 2017).

According to the Census data, in 2016, the population of Metro Vancouver comprised 2,426,235 people, including 40.8% of immigrants defined as “persons who are, or who have ever been, landed immigrants or permanent residents” (Census of Population Dictionary 2016), that is, born outside of Canada. More than 200 different non-North American ethnic origins are represented in the city, with more than 150 non-aboriginal, non-English and French languages spoken as the mother tongue (Statistics Canada 2017). Metro Vancouver ranks second in Canada by the number of immigrants after Toronto, but what makes it unique is the fact that almost half of the current immigrant population arrived *within the last two decades*: Statistics Canada data shows that out of current 989,540 immigrants in Metro Vancouver, 411,000 arrived since 2001, and the majority of them are so-called visible minorities¹ (Statistics Canada 2017). It is very likely that the trend is going to be maintained: the officials document a constant and increasing inflow of immigrants, and some researchers predict that more than half of Metro Vancouver residents will belong to one of the ethnic minority groups in 10-15 years (Hiebert 2012:iii). Table 3 illustrates the overall tendency for the first decades of the 21st century: the number of Canadian-born is slowly decreasing, while the number of foreign-born and non-permanent residents is slowly increasing.

Table 3 Population of Vancouver Census Metropolitan Area, Canadian-born and foreign-born (sources: Statistics Canada 2006; Statistics Canada 2019)

	Population of Vancouver CMA	% Canadian-born	% Foreign-born	% Non-permanent residents
2001	1,967,480	61	37.5	1.5
2006	2,097,965	58.5	39.6	1.9
2011	2,313,328	57.7	40	2.3
2016	2,426,235	56	40.8	3.2

As a result of this trend, there are actually very few truly local residents in Metro Vancouver area who would claim to be the third or more generation. First of all, it is the Aboriginal population that comprises 2.5% of the total population (61,455); among them, 58.2% are First Nations people, 38.1% are Métis, and 0.7% are Inuit.

¹ Visible minorities are defined by Statistics Canada as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-White in color." The source lists the following groups that are described as visible minorities: South Asian, Chinese, Black, Filipino, Latin American, Arab, Southeast Asian, West Asian, Korean and Japanese (Census of population dictionary 2016).

As for the settler non-Aboriginal population who comprise 97.5% of the current local residents, 30.2% of them report that they, as well as their parents, were born in Canada. The rest of the people in this location are 2nd generation immigrants (one or both parents born outside of Canada) and 1st generation immigrants (foreign-born) (Statistics Canada 2017).

It is very hard to provide a good picture of ethnic backgrounds of Canadians because the Census (2016) allowed its respondents to list up to 6 ethnic origins, and almost half of Canadians did exactly that. The table below compares the data from Canada and Metro Vancouver. Overall in Canada, Chinese, South Asians and Filipinos gave a single response more often, but for the rest of the ethnicities, most of the respondents gave multiple responses (Table 4). For example, while about 1 million Canadians claimed to have solely English ancestry, more than 5 million named English as *one* of their ethnicities. The situation is even more dramatic with Scottish, Irish and Welsh: 10% or less of Canadians named themselves just that, while the majority listed being Scottish, Irish or Welsh as *one* of their ethnicities. In Metro Vancouver, the situation is similar. It appears that today the pan-ethnic term “mixed European” describes non-visual minorities better than their ethnic heritage.

To estimate the proportion of White people in Metro Vancouver, the data on visible minority can be used. The official data lists 51.1% of the current residents as “not a visible minority” (Statistics Canada 2017), and it groups together Aboriginal people (2.5%) and White settlers (48.6%) represented by descendants of immigrants from numerous European countries.

Among non-White and non-Aboriginal population of Metro Vancouver, Central and Middle Eastern counties have relatively few representatives (3.5% of the total population, most numerous Iranians at 1.8%), and the bulk of the people of Asian ancestry includes those from South Asia (11.9%) and East and Southeast Asia (31.3%). Among 11.9% of people who reported South Asian origin, the majority (10%) named themselves East Indian, 1.3% Punjabi, and the rest other ethnicities. Among 31.3% of people grouped as East and Southeast Asians, the majority are Chinese (20.6%), followed by Filipino (5.5%), Korean (2.3%), Japanese (1.6%), and Vietnamese (1.4%), while all the other ethnicities of the region comprise less than 1% each (Statistics Canada 2017).

Table 4 Ethnic origin, single and multiple response (Statistics Canada 2017)

	Metro Vancouver		Canada	
	Single response	Multiple response	Single response	Multiple response
English	75,895	394,459	1,098,930	5,221,155
Scottish	28,270	312,805	475,580	4,323,430
Irish	20,080	255,275	457,905	4,169,095
Welsh	1,935	43,000	25,190	449,615
British Isles	11,585	44,110	132,830	511,865
French	11,795	136,045	1,006,180	3,664,415
German	33,575	188,450	569,655	2,752,750
Dutch	16,995	60,640	289,675	821,980
Italian	27,745	60,130	695,415	892,545
Ukrainian	14,295	80,105	273,815	1,085,845
Russian	11,145	47,395	120,170	502,280
Polish	15,415	55,175	264,415	842,170
Chinese	429,945	69,230	1,439,980	329,215
East Indian	205,835	37,295	1,096,850	277,865
Filipino	99,675	34,245	651,390	185,740

As a result of this demographic situation, Metro Vancouver is very multilingual, with 41.8% of its population reporting a language other than English or French (two official languages) as their mother tongue, which is defined as “the first language learned at home in childhood and still understood by the person at the time the data was collected” (Statistics Canada 2017). The use of languages in everyday life differs depending on the domain: 66.5% reported speaking English at home, 7.4% reported speaking both English and one of the non-official languages at home, and the rest of the population speaks only one of the non-official languages at home. At work, 91.8% of respondents reported speaking only English and 5.2% only one of the non-official languages, while 2.8% reported speaking both English and one of the non-official languages at work.

As for proficiency in English, the data from previous censuses demonstrate that in 2001, the majority of immigrants under the age of 45 reported good knowledge of the

official language, much more often English than French (Strategic Research and Statistics 2005:14). Overall, 94.4% of the population reported at least some knowledge of English. Their proficiency varied depending on the immigration admission class, but was high overall: “Official language proficiency is highest among those entering as Live-In Caregivers and Skilled Workers” (Hiebert & Sherrell 2009:10).

Looking closer at non-official languages, Chinese languages taken together are the most frequently spoken among other non-official languages most commonly spoken at home (18.3% Cantonese and 18.2% Mandarin), followed by Punjabi (16.3%), Tagalog (7.7%) and Korean (4.5%). Other language with most speakers, in declining order, include Persian, Spanish, German, and Vietnamese (Statistics Canada 2017).

One last important factor that accounts for variability among immigrants is migration channels. The official source shows that among the immigrant population that landed in Metro Vancouver between 1980 and 2016, 58.2% are economic migrants defined as “immigrants who have been selected for their ability to contribute to Canada's economy through their ability to meet labour market needs, to own and manage or to build a business, to make a substantial investment, to create their own employment or to meet specific provincial or territorial labour market needs” (Statistics Canada n.d.). Among these people, 22.3% are principal applicants and 35.9% are their spouses and dependants. Other channels of immigration include family sponsorship (31.5% in the same time period) and refugees (9%).

Based on the above data, it is clear that Metro Vancouver is a diverse city where people of very different cultures and languages have a chance to meet and interact in daily life. The extent to which they do so may depend on their preferences for settlement areas which will be explored next.

1.3.3. Geography of settlement

The geography of settlement is an important point to consider when conducting a study in a multicultural city because the residential concentration of ethnic groups in

enclaves² could potentially lead to social isolation, as well as reduce the immigrants' need to acquire the host-country language (Hou and Picot 2004:13).

In Metro Vancouver, just like in two other major metropolitan areas of Canada, Toronto and Montreal, there have been significant changes in the geography of immigrants' settlement during the last 50 years: the focus of immigrants has shifted from the central city to the suburbs. Murdie (2008:9) reports that while in 1960s both European and Asian immigrants settled in large numbers in older areas of East Vancouver, by 2006 the immigrant population became mainly suburban because of gentrification of the areas previously populated by newcomers and decentralization of lower-waged jobs to the suburbs. The new Asian immigrants are relatively well-off and can afford to buy new houses in the suburbs; those who cannot afford it, turn to renting apartments in high-rise buildings in the inner suburbs, where the rent is considerably cheaper than in downtown or inner-city areas. Two ethnic groups characterized by such patterns of settlement stand out in particular: the Chinese, who choose Richmond and Burnaby, and South Asians, who prefer Surrey; these two areas of Metropolitan Vancouver are known to locals for their large concentration of these ethnic groups, as well as numerous businesses and services associated with them. Some other ethnic groups that prefer to settle in particular areas of Vancouver (CMA) include Filipinos residing in West and South Vancouver, Iranians in Ambleside and Norgate, Dutch in Kitsilano, Ukrainians in Port Moody, Koreans in Coquitlam, and some others, as described in *Ethnic Enclaves series* in *The Vancouver Sun* (Todd 2013). At the same time, even non-White neighborhoods usually have 20-40% Caucasians.

In all large urban centers, the high concentration of ethnic groups in particular areas usually results in the development of the infrastructure targeted at these ethnicities. Restaurants, stores, services and religious facilities in languages make newcomers choose ethnic enclaves as their ideal destination. The supportive social networks also play a major role: according to Longitudinal Survey of Immigrants to Canada (2003), 41% of newcomers to Canada chose their place of residence because their family member(s) lived in the area, and 18% because their friends lived there. It creates a situation with a high concentration of particular groups in some neighborhoods.

² Portes (1981:290-91) defines ethnic enclaves as "immigrant groups which concentrate in a distinct spatial location and organize a variety of enterprises serving their own ethnic market and/or the general population."

To depict this trend in Metro Vancouver, the data from Statistics Canada (2017) on five of the largest neighborhoods of Metro Vancouver is presented in Table 5.

Table 5 Ethnic composition of Metro Vancouver municipalities (based on Statistics Canada (2017) data)

	Total population	Not a visible minority	Chinese	South Asian	Filipino	Other prominent ethnic groups
Vancouver	618,210	48.4%	27%	6%	5.9%	
Surrey	511,540	41.5%	7.8%	32.8%	6.2%	
Burnaby	230,080	36.4%	33.9%	8.1%	5.7%	Korean 3.4%
Richmond	196,660	23.7%	53%	7.3%	6.9%	
Coquitlam	138,095	49.8%	21%	4.5%	3.9%	Korean 7.2%, Iranian 5.6%
Metro Vancouver	2,426,235	51.1%	19.6%	12%	5.1%	

The data show that, first of all, there are no areas where one ethnicity dominates. Richmond with its 53% of Chinese is the most extreme case among the municipalities; however, there are also 23.7% of people of European origin, 6.9% of Filipinos, and 7.3% of South Asians, and a very diverse sector that comprises the rest of the total (including Russians, Ukrainians, Japanese, French, German, etc.), so it is hardly possible to name this neighborhood mono-ethnic. Similarly, Surrey, often called by locals “mostly South Asian,” has actually only 32.8% of East Indian and Punjabi population, while people of British descent comprise 41.5%, though it should be noted that there are pockets of predominantly one ethnicity in some of these municipalities. The City of Vancouver and Coquitlam have the most people who claim British descent, 48.4% and 49.8%, respectively, while Richmond has the smallest proportion of White people among these five municipalities at 23.7%. Interestingly, Filipinos, one of the three most numerous ethnic groups in Vancouver, do not have any preference for settling – they are present in all the neighborhoods staying at 4-7% of its total population.

The next section will describe in details the history of settlement and residential patterns of the three groups that are the focus of the current study.

1.3.4. Focusing on three ethnic groups: History of settlement and residential patterns

British/Mixed European Canadians in Metro Vancouver

The history of White people in British Columbia in the early years is that of the settlement of this area described earlier. The first non-indigenous settlers who arrived in the 1850-s during the Fraser River Gold Rush were predominantly White, but they remained a minority compared to the local indigenous population. The arrival of internal migrants mostly from Ontario, as well the descendants of American loyalists in the second half of the 19th century was followed by British immigrants, and soon after by European immigrants who came to get the land in the West following the Canadian government's call (Boberg 2010). The massive influx of the first decades of the 20th century that ended with the Great Depression had formed British Columbia as a predominantly European-Caucasian province: White people accounted for 90% of the total population, Asians accounted for about 7% of the population and indigenous people for only 3.5% (Roy 1989:268). British-born immigrants comprised the majority of all immigrants by 1931; among others, there were newcomers from Scandinavian countries, Slavic countries, France, Germany, Italy, and Greece, as well as a considerable number of immigrants from the U.S. (Macdonald 1980:214).

The government's policies to strengthen the British presence in the West resulted in an increase of the immigrants from the British Isles in Metro Vancouver area from 40% in 1901 to 62% by 1931 (Macdonald 1980:206-220). When counting both recent immigrants and the established ones, 77% of Vancouverites were reported to identify as British by 1931, while 14% accounted for other European and 9% as Asian (both Chinese and Japanese) (Barman 1986:113).

The second large wave of immigration to Metro Vancouver started after the Canadian government changed the immigration policies after World War II; this wave brought much more diversity than before (Macdonald 1980:218-9). By 1960s, the British still comprised about 45% of immigrants, while the number of continental European migrants grew significantly; the province remained White with more that 80% of immigrants being of European or British origin by 1961. However, the next decades changed the picture completely, with the number of migrants from Asia gradually increasing and those from other parts of the world decreasing (see Figure 1).

Today, White people remain a majority in Canada and British Columbia: the data for non-visible minorities from the 2016 Census shows that 70% identify as a non-visible minority and non-Aboriginal in Canada overall, and 57% claim European origin (others being of non-Aboriginal North American ancestry). In British Columbia, 62.7% of people claim European origin, while in Metro Vancouver this number drops down to 49.3% of the total population (Statistics Canada 2017).

As for the residential patterns, the proportion of White population fluctuates between 20% and 40% in the largest municipalities of Metro Vancouver (see Table 5); however, it increases in the smaller municipalities, with the smallest ones having the largest proportion of White people. The City of Vancouver and Coquitlam have the largest groups of people who claim British descent, 48.4% and 49.8%, respectively, while Richmond has the smallest proportion of White people among the five largest municipalities at 23.7%. The largest proportion of White people to the total population is in the smaller municipalities located on the periphery which is usually not targeted by immigrants for residence: in Pitt Meadows, 77.3% and in White Rock, 80.1% claim European ancestry out of the total population of less than 20,000 people for each of these towns; finally, Bowen island (population 3,000) has 90% White people.

Chinese Canadians in Metro Vancouver

History of settlement and current demographics

Historical records show that the very first Chinese to arrive to Canada were around 50 carpenters and smiths recruited by Captain John Meares in 1788 to build a trading post at Nootka Sound on Vancouver Island (Li & Lee 2005:645). These first settlers most likely integrated into the local native communities after the Spaniards took over Nootka Sound the next year driving the British out (Chan 1983). This short exploration period is followed by the more extended immigration period that started around middle of the 19th century when poverty and political upheavals in China forced people to look for better lives elsewhere. With no immigration restrictions present at that time, Chinese immigrants were free to arrive and settle from California to British Columbia. The majority of the first immigrants came from Guangdong province. What attracted them to British Columbia was first the gold rush of 1857, and then the construction of the Canadian Pacific Railway that started in the early 1880s (Li & Lee 2005:646). The first large Chinese community in Canada was formed in Barkerville, BC,

now a historic town, where Chinese comprised a significant part of the town's population and were involved in gold mining and service jobs (Boyle & Mackie 2015; Chung 2015). In the beginning, while there was discrimination and violence against Chinese who were believed to be unable to assimilate into the Western society, at least some of the early British colonists were tolerant to the Chinese and even regarded them as reliable workers and valuable members of the community that provided many important services in the colonies (Chung 2015:145). Economic hardships changed that attitude by the end of the gold rush in 1866, when a growing hostility against Chinese workers was motivated by the shortage of jobs and their willingness to work for lower wages (Li 1998:27).

The construction of the Canadian Pacific Railway was the major impetus for a large wave of immigration in the next decades. It is estimated that more than half of the workers who completed the British Columbia section of the railway were Chinese (around 15,000 in 1880-1885), and many of them died due to accidents, bad working conditions, poor nutrition and illnesses (Con et al. 1982:23). After the completion of the Canadian Pacific Railway, the demand in cheap labor in BC lessened and the "anti-Orientalism" became more and more widespread in the province (Li & Lee 2005:646). In Victoria, Nanaimo and Kamloops, first Chinatowns changed from simply residential and commercial neighborhoods preferred by Chinese into ethnic ghettos where as the local governments aimed to segregate Chinese (Ross 2015:164, Con et al. 1982). After the completion of the railway, some Chinese moved eastward, while others remained in BC and took on skilled and semi-skilled jobs at sawmills, canneries, farms and gardens. Chinese immigrants were exploited as they accepted low pay and worked longer hours because of their economic desperation. Some Chinese became shopkeepers, pedlars and opened restaurants; many worked in domestic service, as cooks, waiters, launderers and store clerks (Con et al. 1982).

As the demand for cheap labor dropped, the Federal Government went on with the restrictive legislation. In 1885, prompted by BC Government, a federal bill was passed that enacted a head tax of \$50 on Chinese immigrants. This sum doubled by 1901, and in 1903, the head tax became \$500, roughly equivalent to \$14,000 today, which virtually stopped the Chinese immigration as it was an impossible burden for people (Li & Lee 2005). The high head tax made it impossible for most workers to bring families, so those Chinese men who could save enough money to pay the head tax

usually came alone making it virtually a male community (Con et al. 1982). The segregation and racism were rampant on all levels, from prohibition to attend swimming pools and shop at some particular hours to requiring a sheriff's permit for intermarriage. In 1912-1919, Saskatchewan, Ontario, Manitoba and BC passed acts to prohibit Chinese businesses to hire White women, and in 1921, BC Government attempted to create segregated schools for Chinese children which resulted in a year-long strike and later cancellation of the educational segregation. Among other restrictions are voting rights and professional membership that effectively made it impossible for Chinese to become lawyers or doctors (Li 1998:31-36).

The first wave of Chinese immigration ended in 1923 when the Chinese Immigration Act was put in action by the federal government which banned most Chinese immigrants from entering Canada (except merchants, diplomats, and foreign students) (Li & Lee 2005). During this period, until 1947 when the ban was lifted, Chinatowns that had emerged in different cities became the main location for 90% of all Chinese in Canada. Chinatowns provided jobs, services, housing and security from the discrimination and racism of the White Canadians.

After World War II, as a result of signing the United Nations Charter of Human Rights, as well as due to intensive lobbying by the Chinese community, Canadian Government repealed a number of discriminatory laws against Chinese, and in 1947, the Chinese were granted the right to vote in federal elections (Li & Lee 2005). During the 1950-1960s, new Chinese immigrants started arriving, and more women came which finally corrected the gender imbalance (Li 1998). Still, the Asian immigrants were viewed as "less desirable" compared to those from Europe, and Chinese immigration was highly restricted (Li 1998:91). In 1949, only 111 Chinese immigrants arrived to Canada; this number grew to 2,575 in 1955 (ibid:96). The slow increase continued in the following decade until 1967, when the shift of the federal immigration policy from race-based to the point system started a large new period of immigration (Li & Lee 2005:647). The demands of the labour market and socioeconomic criteria that were the basis of the points system allowed an ever-increasing number of Chinese to enter Canada in the following years. The number of Chinese immigrants in Canada 1956-1967 was 30,546, and in the following decade, 1968-1976, it tripled to 90,118 (Li 1998:97). The majority of them chose Toronto and Vancouver as their destination.

To add to that growing number, there appeared a new category of economic immigration (Li & Lee 2005) as a result of the government establishing first the “entrepreneur” category (1978) and then “investor category” (1985). The Investment Canada Act attracted direct foreign investments from all over the world and brought in many rich Chinese immigrants, particularly in the 1990s, when the political situation in Hong Kong and Taiwan motivated many of their citizens to immigrate to Canada and move here their capitals. Census Canada (1996) showed that for recent immigrants to Vancouver for that decade, the top three places of birth were Hong Kong (44,715 or 23.6% of all recent immigrants), China (27,005 or 14.2%) and Taiwan (22,315 or 11.8%). However, in the following decades, Mainland China has become the main source country of Vancouver immigrants, with Hong Kong and Taiwan remaining in the top 10 source countries (Statistics Canada 2017a).

Between 2011 and 2016, there were 35,890 new immigrants from China to Metro Vancouver, which is one fourth of all immigrants over the four-year period. China also remained the largest source of foreign students in BC. In 2016/2017 alone, 20,498 students came to study in post-secondary institutions, with the majority of them (72%) staying in the Greater Vancouver area (International students in BC’s education systems 2018:28).

Today, in British Columbia, there are more than 500,000 Chinese which comprise 11.2% of the province population. Most of them live in Metro Vancouver ($n = 467,655$) accounting for 19.6% of the total population and 40% of the visible minority population. Interestingly, the median age of Chinese in Metro Vancouver is quite old: 41.1 (Statistics Canada 2017). While in the past, the reasons for Chinese immigration often included poverty and political upheavals, today, many middle-class Chinese choose to come to Canada in search of better social environment and higher life quality for themselves and their children (Todd 2011).

As for the languages spoken by Chinese immigrants, Cantonese and Mandarin are among the most common language spoken at home: around 190,000 of Metro Vancouver residents reported speaking each of them in 2016. A number of dialects of Chinese languages is spoken by a smaller amount of population, as well.

Residential patterns and integration

The residential history of Chinese immigrants in Metro Vancouver is particularly interesting as it reflects the waves of immigration. During the exclusion era, up to 1947, all Chinese immigrants in Vancouver settled in Chinatown as there was a lot of hostility from residents of other areas (Li 1998). When the new waves of immigrants started to arrive in 1950s, they spread out to the neighboring Strathcona area that in a decade turned from a predominantly Eastern European and Italian neighborhood into the one where half of the population was Chinese. Both Chinatown and Strathcona offered security and familiarity to migrants, as well as jobs and services in the language, and were a home for the established “old” Chinese immigrants (Madokoro 2011:18). In the next decade, Chinese became integrated into the local communities to an extent that the battle to save Strathcona from redevelopment in the 1960s, led by both White and Chinese residents, drew attention to the unique Chinese character of the community as a reason to preserve it.

Newer waves of Chinese immigration had a very different spirit and often made the established Chinese immigrants uncomfortable. The notorious “monster homes,” mega-mansions built to fill the maximum lot space allowed, serve as an illustration of this changed patterns of immigration. Hong Kong investors in the 1980s bought and redeveloped a lot of property in the areas of Vancouver with the most history and aesthetic value, according to their older residents: Shaughnessy and Kerrisdale (Madokoro 2011). A public controversy over “monster homes” was resolved with the city putting restrictions on the design, but the story vividly illustrated a huge divide between the established long-time Chinese residents of Metro Vancouver and the new migrants from Hong Kong. The Chinese community was split apart, according to Madokoro (2011): “Newer migrants ... disrupted diasporic unity as their aesthetic and social values clashed with those of more permanent and settled residents” (22).

Chinatown in Vancouver started transitioning from a residential and commercial neighborhood to a more commercial one in the 1960s, with new Chinese immigrants settling all across Metro Vancouver. Thousands of immigrants arriving in the 1970s and later did not have any connection to the historical Chinatown and started settling in Richmond, Burnaby and Coquitlam which are today the municipalities with the largest proportion of Chinese: 54.4%, 34.7% and 22.3% of their total population, respectively

(Statistics Canada 2017). The City of Vancouver is a home to 28.3% of all Chinese in Metro Vancouver area today, and most of them reside in these four neighborhoods: Renfrew-Collingwood (more than 20,000), Kensington, Victoria-Fraserview and Hastings-Sunrise (around 15,000 each), with other Vancouver neighborhoods having several thousands of Chinese each, as well.

Today, people of Chinese heritage are an important part of the economy, culture, and politics of BC and Canada. Once the strict legislation was lifted after the World War II, Chinese Canadians started actively participating in politics and many became elected officials in the following decades: first Chinese Canadian Member of Parliament Douglas Jung (1957-1962), first federal cabinet minister Raymond Chan (1993), first provincial cabinet minister in BC Ida Chong (2001), first Chinese Canadian mayor of Victoria Alan Lowe (1999-2008). The Chinese Canadian culture of the last fifty years is celebrated in the work of numerous writers, filmmakers, producers, actors, and musicians. The Chinese Canadian Historical Society was established in 2004 with a goal to educate the general public. In 2006, an official apology for the historical mistreatment of Chinese in Canada was issued by the Government (Wat 2015).

South Asians Canadians in Metro Vancouver

History of settlement and current demographics

The first South Asians to arrive in Vancouver in the beginning of the 20th century were mostly Sikhs from the Punjabi region of India, though they arrived from Hong Kong or other British Empire countries in the Far East by sea (Singh 1994). In 1906, the Canadian government increased the Chinese head tax to 500 dollars (equivalent to 14,000 Canadian dollars today) making importing labor from China not profitable. Developing industries along the Fraser river, such as sawmills and canneries, as well as farms and logging sites, needed workers, so immigration from India was encouraged. The number of South Asians to arrive to Vancouver went from just 45 in 1904 to 2,623 by 1908, making up a total of 5,179 by 1908 (South Asian Canadian Heritage n.d.). They settled in areas along False Creek and the Fraser River, such as Fraser Mills, Queensborough and Kitsilano. In the following years, some of the immigrants established their own businesses and other entrepreneurial ventures, like the Guru Nanak Mining and Trust Company that was created in 1909 to buy and develop land.

Logging companies operated by South Asians were being established in the area outside of Greater Vancouver (Buchignani et al. 1985).

Anti-Asian riots that took place in Vancouver in August 1907 to protest Asian immigration to Canada mainly targeted Japanese and Chinese homes and businesses. Following the riot, however, the Canadian government imposed a \$200 tax on *all* Asian immigrants which mainly targeted families of South Asian men who had already immigrated, as well as passed a bill to prohibit the immigration of persons who did not travel directly from their own country, which was directed at South Asian immigrants because no ships travelled directly from India to Canada at that time. In 1910, the Immigration Act was amended to allow government officials to deny access to the country based on race. This resulted in the infamous Komagata Maru incident in 1914 when Canadian authorities turned away the ship commissioned by Vancouver-based Punjabis to bring people from India. After two months of being docked in the harbor, the ship was ordered to depart with most of its three hundred passengers (Singh 1994:40-49).

To support the community and voice its concerns, the first official South Asian organization in Canada was established in Vancouver in 1908, and the first Sikh temple was opened in Abbotsford in 1911. To oversee religious matters, the Vancouver Khalsa Diwan Society was created in 1908 and expanded to different parts of Greater Vancouver and British Columbia where more temples were built (South Asian Canadian Heritage n.d.).

In the following years, the ban on family immigration was lifted, but the bureaucratic process and expenses were still hard to deal with. The number of South Asians in the Greater Vancouver area grew slowly, and by 1923 they owned 102 businesses in British Columbia, including logging and lumber companies, grocery stores, farms, shingle factories and fuel dealerships, but soon the depression of 1930s made some of the South Asians return to India (Buchignani et al. 1985:80).

A democrat socialist party Co-operative Commonwealth Federation was founded in 1932 in the western provinces. The party supported the South Asian right to vote that was taken from them in 1907 by the provincial government of BC, as well as worked to improve lives of South Asians in Canada. Due to their activity, as well as that of trade

unions, the work and housing conditions at the mills were improving, and the pay for Asian workers was set to be equal to that of non-Asian ones. In 1947, as a result of the lobbying, rallying and protesting of the previous forty years, South Asian immigrants were granted the right to vote and become Canadian citizens (Singh 1994).

In 1951, a quota system was implemented targeting South Asian immigration to allow 150 Indians, 100 Pakistanis and 50 Ceylonese to enter the country annually (Buchignani et al. 1985:104). In 1958, family sponsorship was allowed that included a wide range of relatives. The South Asian population in Canada was over 6,000 at the time (South Asian Canadian Heritage n.d.).

In the 1960s, the quota-by-country system ended and a new point system was introduced based on criteria like language fluency, education and job skills, which led to a large increase in immigration in the following decades. There was also a large diversification in immigrants by source country: the first Fijian Indians came to Vancouver in the 1970s to start a steady stream of newcomers from Fiji. Southeast Africa that experienced a lot of anti-Indian riots at the time also became a large source of immigrants to Canada who came as political refugees. In 1973, more than 7,000 Ugandan Asian immigrants came to Canada, many of whom were Muslims, and 1600 of them settled in BC. With the political tensions in Sri Lanka, many Sri Lankan Tamils also became political refugees in Canada in the 1980s (South Asian Canadian Heritage n.d.).

By 1971, there were over 67,000 South Asian immigrants in Canada overall, and about a half of them lived in BC (Demwell 2018). The newcomers settled all across Metro Vancouver, but particularly concentrated in South Vancouver and South Burnaby, as well as further from the metropolitan center in Richmond and Surrey. The Punjabi Market (Little India) was established in the late 1960s in the Sunset neighborhood of South Vancouver. North Delta became a destination for many established South Asian immigrants who moved to new housing developments in the suburbs where the land was cheaper. Today, Delta has around 14,000 people of South Asian descent (Demwell 2018).

By 1981, there were more than 34,000 South Asians in Metro Vancouver, mostly Sikhs and some Hindus and Muslims. In the following decades, the population grew dramatically with a 40% increase over each four years, growing from 51,000 in 1986 to

207,000 in 2006. Since 2006, the increase over each four years comprised around 20% which led to the current count of almost 300,000 of South Asians in 2016 (Statistics Canada 2017). The profile of South Asian immigrants has continued to broaden: while Sikhs from the Punjab area of India comprised the majority of them in the first part of the 20th century, in 2001, they were only 28%, with the rest being of diverse backgrounds.

Today, in Canada overall, South Asians are one of the two largest visible minority groups comprising 5.6% of the total population and 25.1% of the visible minority population. Their median age is 33.5 which is younger than many other ethnic minority groups (Statistics Canada 2017). In British Columbia, the most recent census shows that South Asians account for 8% of the province population ($n = 365,705$). Most of these people live in Metro Vancouver ($n = 291,005$), accounting for 12% of its population. South Asia continues to be one of three largest source regions for immigrants, together with China and the Philippines: between 2011 and 2016, 27,460 new arrivals from India were registered, which is 15.6% of all immigrants who arrived in these four years to Metro Vancouver. India also remains the second largest source of foreign students in British Columbia: in 2016/2017, 12,498, or 21%, of all post-secondary international students in the province came from India, and the majority of them (67%) to educational institutions of the Mainland/Southwest of the province (International students in BC's education systems 2018:28).

Of all the South Asians living in Metro Vancouver today, around 85% identify as East Indian, about 10% as Punjabi, 3% as Pakistani, the remaining less than 1% as Sri Lankan Indians, Bangladeshi, Nepali, Tamil, Bengali, and a large number of even smaller ethnic groups (Statistics Canada 2017). Among the most common South Asian languages are Punjabi, Hindustani and Gujarati.

Residential patterns and integration

Of around 300,000 South Asians living in Metro Vancouver, more than half (56%) live in Surrey, around 12% in Vancouver, 7% in Delta, 6.4% in Burnaby, 4.9% in Richmond and the rest are spread out in other municipalities.

Among the 21 municipalities of Metro Vancouver, Surrey is the largest by size and second largest municipality by population count after the City of Vancouver. In Surrey, South Asians account for around 33% of the population, and while other

Vancouverites often name Surrey as predominantly “Indian” (i.e., East Indian), it should be noted that there are very large differences in the demographics of its 6 neighborhoods. For example, while South Surrey is quite White (72% of Caucasian, 6% South Asian, and 15% Chinese), Whalley is the opposite (51% South Asians, 27% Caucasian, and the rest other ethnicities). Other neighborhoods are more multicultural, e.g., in Guildford, 39% of population is Caucasian, 16% Chinese, 12% South Asian, 11% Filipino and 22% other (City of Surrey n.d.).

There are more recent changes in the settlement patterns caused by the gentrification of some of the areas that were traditionally more South Asian. For example, Punjabi Market, a 3-block commercial district in South Vancouver that used to feature lots of shops, restaurants, jewelry stores, and other businesses catering to predominantly South Asian customers, has been losing its customers and businesses over the last decade (Pablo 2000). Most of its 300 or more businesses closed and/or relocated to Surrey that now features a “new” Little India of the Lower Mainland – Newton business district. The Punjabi Market is a historical site and is still prominent in the annual Vaisakhi parade, but it is definitely losing its ground to chain stores and residential development.

South Asians play a significant role in the economy, culture, and politics of BC and Canada. Their presence in different public spheres is prominent since the 1970s, and well-known persons include: the first South Asian Supreme Court Judge, the Honourable Wally Oppal (1982); the first South Asian professional football player David Sidoo (1982); the first South Asian to play in the NHL, Robin N. Bawa (1989); the first Sikh to join RCMP, Baltej Singh Dhillon, which led to the dress code amendments to allow turbans (2000); the first Canadian of South Asian descent to become the premier of BC, Ujjal Dosanjh (2000); four South Asian ministers in the Canadian cabinet (2015), including the Minister of National Defense, Harjit Sajjan from Vancouver (South Asian Canadian Heritage n.d.). In addition to South Asian individuals becoming important political and sports figures, there are also cultural events that the wider community enjoys and participates in. In 1995, the Vaisakhi Parade was officially recognized by the British Columbia Government; it is the largest Vaisakhi parade outside of India held in Vancouver and Surrey that attracts up to half a million visitors every year (Khalsa Diwan Society 2020). In 1996, schools in BC started offering Punjabi in their regular curriculum from grades five to twelve. In 2009, the Canadian Broadcasting Corporation began

broadcasting hockey games in Punjabi. In 2011, the Sikh Heritage Museum opened in Abbotsford to commemorate one hundred years from the establishment of the first temple. In 2016, Prime Minister Justin Trudeau offered an official apology for the federal government's role in the Komagata Maru incident (Trudeau 2016).

Today, South Asians in Metro Vancouver are a very diverse group that features different languages, religions, channels of immigration, and varies in their history of arrival, employment patterns, and the degree of integration into the mainstream community (Tran et al. 2005).

1.3.5. Summary

The history of Metro Vancouver is quite recent, and while it started off as a monoethnic White city, the situation changed drastically in the 1970s-80s, when immigrants from non-European countries became the main source of the population growth in the area. In the current study, Metro Vancouver is referred to as an emerging super-diverse community (Vertovec 2007) because of its increasing diversification along different lines over the last decades.³ In each Census of Population conducted by Statistics Canada every five years, we see more and more variety in the countries of origin of the newcomers, in their cultural and religious affiliation, in their ethnicity and the languages and dialects they speak. The newcomers are welcomed in all spheres of economic activity and are increasingly visible as public figures. Canadian Multiculturalism Act (1988) that guarantees the preservation of the heritage cultures and languages creates a favorable environment for this cultural and linguistic mosaic.

Today, while some municipalities of Metro Vancouver feature large groups of people that share ethnic origin, overall, none of them can be described as an enclave. It should be noted that in some of these areas, there are small neighborhoods with a very high proportion of one ethnic minority. Three ethnic groups in particular feature prominently in all of the largest neighborhoods of Metro Vancouver: people of

³ The term is believed to be appropriate for the current project despite some recent criticism in the literature (Makoni 2012, Reyes 2014, Pavlenko 2019). Arnaut et al. (2016) in the introduction to the edited volume of *Language and Superdiversity* respond to several points made by the critics and maintain the usefulness of the term.

British/European, Chinese, and South Asian decent which explains the focus of the current research.

1.4. Canadian English and Vancouver English

While the focus of this section is Vancouver English, it will be necessarily complemented by data on Canadian English, a national variety that has been much more comprehensively described in numerous studies (Chambers 1991, Clarke (Ed.) 1993, Chambers 2004, Dollinger 2008, Boberg 2010). The most detailed description of Canadian English up to date is provided by Boberg (2010) who focused on regional variation in Canadian English and established several isoglosses dividing the country into six regions. Based on this study, Boberg (2010) states that while the regional variation is certainly present, overall, Canadian English today is characterized by a “comparative pan-regional homogeneity” (104), with the exception of the eastern part of the country that for historical reasons differs markedly from the rest (Newfoundland, the Maritimes and Anglophone Quebec, in particular). This view has been expressed numerous times by different authors (Gregg 1957, Woods 1999, Trudgill & Hannah 2002, Chambers 2012); Labov et al. (2006:214) argue that “to a large extent, a single type of English is spoken across the 3,000 miles from Vancouver, British Columbia, to Ottawa, Ontario.”

It should be noted that in the majority of studies of Canadian English conducted up to date the participants represent only one group: White people of European origin. For example, the *Atlas of North American English* (Labov et al. 2006) presents the results for Canada based on the data collected from 36 people of Caucasian race, one “other” and one Native American (24). Boberg’s (2008) 86 participants in his *Phonetics of Canadian English* project represent “English-speaking communities” from across Canada. They grew up in the respective regions, as did their parents, and therefore can be “good representatives of the local speech of each region, at least for their generation and at the middle-class social level” (133). Boberg admits the bias towards university-educated middle-class speakers (151), but the sample is likely to have the Anglo-Canadian bias, as well, because the ethnic background of the speakers is not discussed, so it is once again the default option which is White.

Numerous studies of Canadian English are based on the *Toronto English Corpus* (Tagliamonte 2003-2006) that was collected in seven Toronto neighborhoods with the lowest proportion of speakers born outside Canada (Tagliamonte 2012:103). The sample consists of 152 participants born and raised in metropolitan Toronto stratified by age, gender, occupation and education. The ethnic background of the participants is not mentioned in many of the studies based on this corpus (D'Arcy's exploration of discourse *like* (2005), D'Arcy and Tagliamonte's work on relative *who* (2010), Jankowski's study of cross-register variation and change (2013), Waters' study on adverb placement (2013), etc.), so it is impossible to tell if descendants of recent immigrants are represented in the sample. Tagliamonte (2012:104) recognizes that the corpus is biased towards the middle class; however, she does not mention the fact that it is most likely biased towards the White monolingual population in spite of the fact that in 2006, 56% of Toronto residents reported an ethnic origin other than British or North American (Statistics Canada 2006a). The Toronto English Corpus has been used in a number of studies that claim to describe the Toronto speech community, as well as make generalizations about Canadian English in general. For example, Tagliamonte (2006) in her study of morpho-syntactic and discourse-pragmatic changes across several generations of speakers talks about the "Toronto speech community" and suggests that the described features are not only characteristic of it, but also "may be taken to represent Canadian English more generally, at least if our view is middle-class urban speech" (ibid.:311). Tagliamonte and D'Arcy (2009) use the data from the same corpus to explore the adolescent peak while looking at morphosyntactic and discourse-pragmatic changes in "contemporary vernacular Canadian English as spoken in Toronto" (72). The authors refer to Toronto as a speech community and ensure the reader that they tried to create a sample of the population "as robust and as representative as possible" (72) but without any discussion of ethnicity.

While such a bias in earlier sociolinguistic studies can be explained by the prevalence of White people in Canada, as well as sociolinguists following the traditional dialectological methods, as discussed in the introduction, with the changing demographics of the country, it is clear that this approach does now allow for a complete description of the variety of English spoken in Canada. Similarly, the existing accounts of Vancouver English do not represent the real population of the area and describe the speech of the White majority which is on its way to becoming a minority in the next

decades, according to official estimates (Metro Vancouver 2018). Some recent studies of Vancouver English have begun including a more diverse population in their sample (Dollinger 2012), as well as look at ethnic groups specifically (Umbal 2016), while others use the “default” setting in terms of ethnicity: Sadlier-Brown (2012), Pappas and Jeffrey (2013), Mellesmoen (2016), among others, do not include “ethnic” speakers. In other parts of Canada, the researchers also increasingly look at the non-White groups (Hoffman & Walker 2010, Rosen et al. 2015, Umbal 2019).

1.4.1. Overview of Vancouver English

Vancouver English is a relatively new variety because of the very recent history of the city settlement. Accordingly, the first thorough sociolinguistic attempts to describe it started in the second half of the 20th century. Since then, there have been several large-scale studies of Vancouver English: *Survey of Canadian English* by Scargill and Warkentyne (1972, data collected in 1970); *Survey of Vancouver English* by Gregg et al. (2004, data collected in 1978-1980); *Vancouver Survey* by Dollinger (2012, data collected in 2008-2010). A number of smaller studies based on the data collected independently include Gregg (1957), Polson (1969), Gibson (1974), Chambers and Hardwick (1986), Sadlier-Brown (2012), Pappas and Jeffrey (2013), Mellesmoen (2018), to name just a few. Data on Vancouver English is often used in comparative studies of regional varieties of Canadian English (Sadlier-Brown & Tamminga 2008, Gold 2008, Boberg 2008), as well as on studies that compare dialects across the border (Sadlier-Brown 2012, Swan 2016). Up to date, the areas that received most attention from the scholars are the lexicon and phonetics; the studies on morphosyntax and discourse pragmatics of Vancouver English are few and far between.

De Wolf (2004b:xi) refers to Vancouver English as “the dialect of Canadian English spoken in the Vancouver Metropolitan area.” It is a regional variety of Canadian English that, according to a number of studies, by and large complies with the development of this national variety of English (Boberg 2010:104); at the same time, as all regional varieties, Vancouver English demonstrates some unique features that will be discussed below.

1.4.2. Vocabulary

In terms of vocabulary, Vancouver English follows Canadian English in that it aligns with American rather than British English (Boberg 2010:109; Chambers 2004). At the same time, it features some unique vocabulary not attested in either of the other varieties, e.g., washroom (CE) vs. restroom (AmE) and toilet/loo/WC (BE), runners (CE) vs. sneakers (AmE) and trainers (BE), etc. (see Boberg 2010:116 for a list of Canadianisms). In addition to typical Canadian vocabulary accepted and used in Vancouver as well, Vancouver English has some regionalisms that are mostly remnants from the Chinook Jargon, e.g., saltchuk (“sea water”), skookum (“big,” “strong”), oolichan (“a small fish”), etc. (Gregg 2004:39; Dollinger 2012:524).

1.4.3. Pronunciation

The phonetics and phonology of Canadian English have much more in common with American English (except for its regional and social varieties) rather than British English (Labov et al. 2006:213). Some of the unique features of Canadian English attested and studied in Vancouver include Canadian Raising and Canadian Shift. Others that often attract commentary are low-back merger, pre-velar /æ/ raising, jod-dropping, and intervocalic /t/ and /d/ realized as a flap.

Canadian Raising is defined as “the articulation of the diphthongs /aw/ and /aj/ with non-low nuclei when they occur before voiceless consonants” (Boberg 2004:351). Contrary to the *Atlas of North American English* claim that /aj/ raising is no longer present in Vancouver (Labov et al. 2006), several studies confirmed its robust status in BC (Rosenfelder 2007; Boberg 2008; Pappas & Jeffrey 2013). At the same time, /aw/ is not as advanced in BC as it is in Ontario; in Vancouver, /aw/ has been shown to undergo fronting of the nucleus (Boberg 2008) led particularly by younger women (Chambers & Hardwick 1986), but younger speakers and females were found not to raise the nucleus (Hung, Davidson & Chambers 1993).

The Canadian Shift that involves the lowering and retraction of the front vowels is a fairly recent development (Clarke, Elms & Youssef 1995), and in contrast with the strong regional differentiation of Canadian Raising, the Shift is pan-Canadian (Boberg 2005:204). In Vancouver, CS is following the general trajectory as everywhere in

Canada; Sadlier-Brown and Tamminga (2008) report the lowering and retraction of /e/ and retraction of /æ/ strongly correlated with age. Pappas and Jeffrey (2013) confirm these results, but report an important difference in gender that may be indicative of the different stage of change.

The low-back merger of /o/ and /oh/ has been completed everywhere in Canada except Newfoundland (Boberg 2010:129). In Vancouver, it was first described by Gregg (1957:21-22) and confirmed in subsequent studies (Boberg 2010:145, Pappas & Jeffrey 2013:41).

Raising of /æ/ in pre-nasal and pre-velar environments has been documented in Canada since about two decades ago. The *Atlas of North American English* (hereinafter referred to as *ANAE*; Labov et al. 2006) reports that pre-nasal raising occurs everywhere in Canada, but to a different degree, with the Prairies lagging behind, and Ontario and Nova Scotia advancing this change (223). Most of Canada is described as having a continuous g > d system (182), that is, speakers produce raised /æ/ before /g/ more than before /d/. BC and Vancouver, according to the *ANAE* data, have both of these features present. These findings are corroborated by Hirayama's (2000) local study, as well as Boberg's data from *PCE* (2008), that both found robust raising of /æ/ in both environments. The most recent studies from BC further confirm the separation of /æ/ from its allophones. Mellesmoen (2016) reports that /æng/ is the most raised of the three allophones, followed by /æg/ and /æN/. Swan (2016) found that both nasal and velar allophones in Vancouver are raised and fronted, and /æg/ shows the highest and frontest position of the two.

Yod-dropping has been a focus of a number of studies of Canadian English in different regions (Clarke 2006 in St. John's, Hamilton (1958) and Boberg (2004) in Montreal, Nylvek (1992) in Saskatchewan, Chambers (1998) in Toronto, Scargill and Warkentyne (1972) across Canada). The usage in General Canadian English is divided: Walker reports three variants of articulation: palatalized [tʲuʷn], yod-dropping [tʰuʷn], and yod-coalescence [tʃuʷn] (2015: 80); however, according to Chambers (2004:238), the yod-retention, a British use that was a standard for Canadian English decades ago, has been declining over the previous seventy years in speakers from the Golden Horseshoe region. Boberg (2010:158) similarly reports more frequent yod-dropping than retention across Canada. Previous data on Vancouver English from Gregg (2004:47) shows the

divided usage: 58% for /ju/ and 42% for /u/. Dollinger (2012:525) reports a strong lexical effect: his Vancouver informants aged 14-29 preferred yod-less *news* (67%) and *student* (76%), and yod-ful *avenue* (75%).

The distinction between intervocalic [t] and [d] is lost in Vancouver, as well as most of Canada, resulting in homophony for words such as matter-madder (Gregg 1957:25). Boberg states that flapping, that is, pronouncing a voiced flap [ɾ] when both /t/ and /d/ are preceded by a stressed vowel and followed by a vowel or a syllabic sonorant, is a feature of both General American and Canadian English (Boberg 2010:137). While Gregg (2004:33) described this feature as a change in progress in Vancouver led by young working-class males, currently, the change appears to be completed and the flapped pronunciation is universal regardless of social characteristics.

1.4.4. Morphosyntax

Boberg (2010:165) argues that there are hardly any unique Canadian morphosyntactic features that would distinguish it from American English (with the exception of Newfoundland English). The ones sometimes mentioned include deontic modals, quotative *like*, the past tense of several irregular verbs, and the use of a noun phrase after *I am done*; these morphosyntactic features are briefly reviewed below.

The system of deontic modals has been shown to be undergoing changes in Canadian English with *must* disappearing, *got to* and *have got to* on the decline, while *have to* is advancing and replacing *must* in many formulaic expressions (Tagliamonte & D'Arcy 2007:74; Jankowski 2004; Dollinger 2008). The quotative *like* has been shown to be advancing rapidly and replacing in many contexts traditional quotatives *say* and *think* (Tagliamonte & D'Arcy 2004:501). The preferred past tense of *dive* (*dove*) and some other irregular verbs is similar in different regions of Canada, in particular, in Vancouver and Ottawa (de Wolf 1992:117; Dollinger 2012). Finally, another morphosyntactic feature attested in Canadian English is *I am done+NP*, which is in a sharp contrast with the structure acceptable in the U.S. (*I am done with+NP*) (Hinnell 2012; Boberg 2010).

The data on Vancouver English, where available, confirm its alignment with Canadian English with respect to these morphosyntactic features (Dollinger 2008).

1.4.5. Discourse pragmatics

As for discourse pragmatic features, there is an attested increase in the use of discourse *like* in Canadian English (D'Arcy 2005). The more traditional intensifier *very* is being actively replaced by several new ones (Tagliamonte 2006). No studies on these changes have been conducted in Vancouver. At the same time, the iconic Canadian *eh*, a sentence tag with a variety of functions, has been shown to be less acceptable in Vancouver English than elsewhere in Canada (Gold 2008).

1.5. Motivation for the study and research questions

The objective of this study is to determine whether and to what extent young people with different ethnic backgrounds participate in some of the on-going changes in Vancouver English.

By pursuing this objective, the study will contribute to a better understanding of modern speech communities. The speech community is one of the fundamental units in sociolinguistic research as, according to Labov (2006:380), "language is located in the speech community, not the individual"; traditionally, the speech community is understood as an aggregate of people who may share some norms of language use, as well as their social evaluation of the language. However, the socioeconomic changes of recent decades that have led to drastic transformations in the composition of urban communities necessitate new approaches to these issues. Due to the increased intra- and international migration in large urban centers (Koser 2007), modern city communities are becoming more and more diverse. It is believed that this diversity should be reflected in sociolinguistic research that still in many cases targets only the monolingual and monoethnic sector of population of large urban centers.

The discussion above demonstrated that Metro Vancouver is a multiethnic urban center that has only been examined from the perspective of the "founding" population. Even the most recent research on Vancouver English continues to bias the sample towards the native speakers of European descent in spite of the growing number of immigrants from non-European countries (most notably, Asians) and an attested rapid shift to English among them and their descendants.

It is argued therefore that a new approach to such a speech community is needed, one that would treat Vancouver (CMA) as an all-inclusive speech community and study the speech of all its residents, irrespective of their ethnic origin and place of birth, and not just traditionally recruited Anglo native speakers with a long history of residence in this location.

Conducting an all-inclusive speech community study is a huge undertaking confounded by many methodological and ideological factors (Creese 2010). The methodology for studying variation in non-native speech is still underdeveloped, and the results received from the few studies conducted on variation in 2nd generation immigrants are sometimes contradictory and overall insufficient to allow any generalizations (Horvath 1998; Boberg 2004; Hoffman 2010). Nevertheless, the current study aims to make the first little step to a more complete description of the all-inclusive speech community by focusing on 2nd generation immigrants who comprise a part of the pool of participants and are treated on a par with the speakers of European descent whose families resided here for generations. It is hypothesized that all these speakers participate in the ongoing linguistic change in Vancouver English. To explore this possibility, the following research questions will be addressed:

- Do speakers with different ethnic backgrounds participate in the phenomena of Canadian Shift, Canadian Raising, raising of /æ/ allophones and fronting of back vowels?
- Is there a difference in use depending on the ethnic background of the participants?
- Does linguistic behaviour depend on the extent of affiliation of a speaker with their heritage community?

Chapter 2.

Methodology

2.1. A note on notation

The current work utilizes the binary notational system followed by the two most influential works in the field, the *Atlas of North American English* (Labov et al. 2006) and the *Phonetics of Canadian English* (Boberg 2005, 2008). Originally developed by Trager and Smith (1951), it has been widely adopted by North American variationist sociolinguists. Labov et al. (2006) describe their choice of this binary system of notation versus the unitary one (broad IPA transcription) following the tradition of American phonologists (Bloomfield 1933, Hockett 1958, Gleason 1961, etc.), as well as generative linguists (Chomsky & Halle 1968, Goldsmith 1990, etc.). The binary system shown in Table 6 below has the following features: short vowels are represented by one symbol, and long vowels by two, e.g., /e/ vs. /ey/, with the second symbol denoting the quality of a glide (front upglide /y/, back upglide /w/, inglide /h/); the nuclei of short and long vowels are roughly identified as “the same,” e.g., /u/ and /uw/, which Labov et al. explain as “is a natural consequence of an approach that takes economy and the extraction of redundancy as a goal” (2006:12). The authors go on to say that the actual quality of the nuclei (for example, /ɪ/ or /i/) may vary greatly among the dialects, but one feature that consistently distinguishes them is the presence of the front upglide in the latter. Thus, at the phonemic level, *bit* and *beat* are represented as /bit/ and /biyt/ in their work (12).

Table 6 The North American vowel system (Labov et al. 2006:12; Well’s (1982) lexical sets are added for comparison)

	SHORT		LONG					
	V		Upgliding				Ingliding	
			Front upgliding		Back upgliding		Vh	
			Vy		Vw			
nucleus	front	back	front	back	front	back	unrounded	rounded
high	i KIT	u FOOT	iy FLEECE		iw	uw GOOSE		
mid	e DRESS	ʌ STRUT	ey FACE	oy CHOICE		ow GOAT		oh THOUGHT
low	æ TRAP	o		ay PRICE		au MOUTH	ah PALM	

Not only does such a binary system requires much fewer special symbols compared to the IPA, more importantly, it represents some important connections within the system that remain hidden when using the IPA-based notations (Labov et al. 2006:12).

For the pre-nasal allophones that include /æ/ before /n/ and /m/, the notation is /æN/. The representation of other allophones is rather intuitive: /uwl/ for the pre-lateral vowel in *cool*, /æg/ for *bag*, etc.

2.2. Study design

The study is conducted within the framework of variationist sociolinguistics (Labov 1972; Tagliamonte 2006). The key idea of this framework is that variation is not random, but characterized by structural heterogeneity (Weinreich, Labov & Herzog 1968). Any linguistic variable, understood as “different ways of saying the same thing” (Tagliamonte 2006:265), is realized as a set of variants. The choice of each particular variant is constrained by a number of linguistic and social factors. Because variation is systematic, it can be quantitatively modeled through statistical analysis that allows us to discover which social and linguistic constraints have the strongest influence on the choice of a variant and if there is an interaction among the constraints. Through variationist analysis, it is possible to explore the importance of ethnic background in constraining the linguistic choices made by speakers.

The study was inspired by Charles Boberg’s work on Canadian English (2005, 2008, 2010) and the methodology of data collection and analysis follows his closely. As for the qualitative part of the study, it was informed by the more recent interest in the emic approach to describe speaker’s ethnicity (Hoffman & Walker 2010, Nagy et al. 2014).

2.3. Data collection site

The study was conducted in Metro Vancouver, BC, which is well known for its multiethnic and multicultural population. While the city started off in the end of the 19th century as a predominantly White settlement with the bulk of the population comprised of British and American immigrants (Boberg 2010:89), shifts in the Canadian immigration

policy in the 1960s led to dramatic changes in the composition of immigrants in the following decades (Murdie 2008:6). Over the last 60 years, the number of European immigrants has been steadily declining, while the number of newcomers from Asia has been increasing (Boberg 2010:97). Today, immigration is the key driver of population growth in Vancouver. First generation (foreign-born) and second generation (those who have at least one foreign-born parent) comprise up to 70% of the Metropolitan Vancouver population (Statistics Canada 2017). What's most important for the current study is that almost half (48.9%) of Metro Vancouver resident's self-identified as visible minorities (Vancouver Immigrant Demographics 2018:5) with the majority residing in Vancouver proper, Richmond, Burnaby, Surrey and Coquitlam (the detailed profile of Metro Vancouver is given in section 1.3 above).

The data for the study were collected at Simon Fraser University (Burnaby, BC), the second largest university in the province. SFU is a place where all neighborhoods of Metro Vancouver meet. Its three campuses are located in downtown Vancouver, Surrey and Burnaby, and attract students from most of the municipalities of the area. According to the official report of Institutional Research and Planning at SFU, in the Fall of 2018, a considerable proportion of SFU undergraduate students resided in one of the four municipalities: 22% in Burnaby, 19% in Surrey, 16% in the City of Vancouver, 10% in Coquitlam, and 6% in Richmond (Institutional Research and Planning 2019a). While data on the ethnic background of SFU students are unavailable, the most recent annual undergraduate survey results show that 62% of students speak at least one non-English language at home (in addition to English), while 12% reported speaking no English at home at all (Institutional Research and Planning 2019b:5). It is clear that 2nd and beyond generation of immigrants comprise a considerable proportion of the undergraduate students of SFU making it a good site for conducting a study of this kind. A limitation that the choice of the study site brings is that it limits the participants to children of the lower middle class and middle-class families who are able to send their children to university, or those young people who have higher motivation to get higher education and work to pay for their school.⁴

⁴ Interestingly, in Vancouver (CMA), the educational level of residents of the areas populated by immigrants is equal to or even fractionally higher than that of the residents of "White" neighborhoods (Hiebert 2009:18). Overall in Canada, the educational goals of 15-year-old visible

2.4. Sampling

For any researcher who attempts to describe a speech community, representativeness of the sample is a key concern. Early urban dialect studies (Gregg 1964, Viereck 1966) were concerned with finding a 'pure' dialect speaker and generally were conducted on a very biased population sample (e.g., twelve male retired manual workers, average age 76, in Viereck 1966). Later studies, while involving a sophisticated sampling procedure, still aimed to describe a 'pure' dialect (Houck 1968, Heath 1980). Labov took a step in a different direction aiming not at finding the 'true' variety, but at describing variation that is inherent in language spoken by all members of the community, and this shift of focus resulted in a range of different sampling methods.

As is clear from the literature, the random sampling is ideal in theory as it provides statistical representativeness, but in real life it is often complicated by many factors (Milroy 1987, Romaine 1980). For example, Labov's Lower East Side NYC study originally was supposed to include 340 speakers selected from a larger sociological study that used random sampling; however, many people from that study were not available for different reasons. In the end, interviews were conducted with 88 speakers, which is about a quarter of the original target (Labov 1966).

Romaine (1980) discusses the objections to random sampling in sociolinguistics, such as difficulty to replace an unavailable member of the original sample and the size of the sample that makes it hard to generalize with credibility to the whole community. If a particular sub-group of the sample is unavailable (as can be the case with a particular ethnic group who does not respond well to an interviewer from a different ethnic group, as described in McEntegart and Le Page 1982), then random sample becomes biased; and if an attempt is made to replace the unavailable members, then the researcher has to select speakers, which compromises the randomness of the sample. Milroy (1987:28) sums it up by saying that it may be unrealistic for a researcher to "aim for true representativeness" while conducting an urban study; however, he goes on to say that even without strictly random selection of informants, useful generalizations about

minorities immigrant students in 2000 were higher than those of their Canadian-born counterparts: 79% of the former hoped to go to university, compared to 57% of the latter (Taylor & Krahn 2005:8).

linguistic variation of the community can be made on the basis of a judgement sample (26).

Judgement sampling is defined by Milroy as follows: “the researcher identifies in advance the types of speakers to be studied and then seeks out a quota of speakers who fit the specified categories” (1987:26). I applied judgement sampling to the current study with the following criteria: speakers had to be from one of the four ethnic backgrounds (British/Mixed European, Chinese, South Asian, and Filipino, later excluded from the study), native speakers of English, born and raised in Metro Vancouver area, ages 18-22. This choice of speakers’ characteristics was motivated by the goal of the study: to compare English spoken by 2nd generation immigrants with different ethnic backgrounds. The three non-White groups form the majority of the population of Metro Vancouver (Statistics Canada 2018), while the White speakers provided a baseline since this group has been studied most extensively in the previous sociolinguistic research.

As for the sample size, Sankoff (1980:52) suggests that samples of more than 150 informants seem to be redundant even in the more complex communities. This number is easy to reach if one wants to represent several social classes, age groups, both genders and ethnicity; however, the amount of collected data may surpass the processing capabilities of the researcher, as has been the case with several studies (e.g., Shuy, Wolfram & Riley 1968). While the initial design of the current study proposed to include up to 96 speakers, in the process of data collection, the sample size was reduced. The results presented here are based on the analysis of speech of 45 individuals from 3 ethnic groups, which is a number comparable to similar studies (35 speakers from 3 ethnic groups in Boberg (2004), 40 speakers from 4 ethnic backgrounds in Riebold (2015), 25 Polish speakers from 2 generations in Newlin-Łukowicz (2015), 39 speakers from 2 geographic locations and 2 age groups in Swan (2016), etc.).

In the following section, I provide the detailed explanation of the choice of the independent variables for the current study. Dependent variables are described later on in section 2.7.

2.5. Social variables

Sociolinguistic research has produced a set of social variables that have been shown to influence linguistic production. Most of the early and recent studies include social class, age, and gender as potential predictors of linguistic behavior. Ethnicity is featured increasingly more often as more and more urban communities become multiethnic. Some of the other variables include neighborhood ties, affiliation with a group of people or a place, friendship circles, etc. The following sections will touch upon the foundational concepts and explain the methodological choice made in the current study.

2.5.1. Social class

The correlation of linguistic variables with social class has been established in the earliest studies in the field (Labov 1966, Wolfram 1969, Trudgill 1974). However, more recently, defining social class of speakers based on a consensus model that draws heavily on the socioeconomic index has been widely criticized (see review in Mallinson & Dodsworth 2009:255-257; see also Savage (2005) for reassessment of the social classes in modern Britain). Newer theories of social class, e.g., Acker's (2006) framework, also raise questions as to their applicability to variationist research. In many cases, occupation seems to be a robust enough criterion for dividing the speakers into several groups, without introducing the complicated notion of social class into the picture (Macaulay 1977; Milroy & Milroy 1992).

The intersection of social class with ethnicity is also quite problematic, as discussed in Milroy (1987). Several issues emerge here, for example, immigrants are often "occupationally declassified" (Milroy 1987:104): in their new homeland, they have considerably less prestigious jobs and status compared to their home country. In large urban centers, immigrants who often hold university degrees and were considered a middle class in their home country often have to settle in poor neighborhoods in the inner city, thus joining the working class of the local population (exemplified by work of Cheshire et al. 2008, 2011 in Inner London). Finally, many immigrants are very socially mobile (Milroy 1987:32): while they start off in rental housing and low-paid jobs, they tend to improve their situation in time, thus stepping up in the social hierarchy. This last sentiment is confirmed by Statistics Canada data (2016): most immigrants who came to

Canada 25 years ago own their houses today and are able to send their children to university.

In the current study, all speakers are assumed to be of a similar socio-economic standing based on the following interview data: despite having very different educational background at the time of immigration, ranging from unskilled (middle school, no other training) to highly skilled (university education) (based on Poplack et al. 2006:189), all of the immigrant parents currently own property where their families reside. All parents hold jobs that support big families, including their children enrolled in the undergraduate programs at SFU. Most of the participants in the study live with their parents and only several of these young people have part-time jobs, so their parents continue to provide for them, as well as pay for their university degrees. It is believed therefore that all these young people roughly belong to the same class.

2.5.2. Age

The study reported here does not have an apparent time component that draws on different generations of speakers to track the progression of the on-going linguistic change (Bailey et al. 1991). The current focus is not on the progression of change, but rather on the synchronic participation of native speakers of English with different ethnic backgrounds in several well-described changes in Canadian English. Because massive immigration from East Asia and South Asia are relatively recent development in the history of Metro Vancouver, parents of the speakers recruited for this study do not speak English natively. While non-native speakers of English have been included in sociolinguistic studies of immigrant communities more recently (Hoffman & Walker 2010, Newlin-Łukowicz 2015, Sharma 2005, 2011), the goals of such studies, as well as their scope, timeline and funding, differ considerably from current work.

All participants in this study were roughly of the same age during the period of data collection, namely 18 to 24 years old (mean age 20). It is an appropriate age group to conduct a study on since numerous sociolinguistic studies demonstrated that young people tend to have a high frequency of innovative forms (Tagliamonte & D'Arcy 2009).

2.5.3. Gender

Gender in sociolinguistics is currently understood as a social construct, in contrast with sex which refers to the physiological distinction between males and females (Cheshire 2002:423). Gender in variationist research is “a particularly salient, meaningful and cross-culturally relevant social category” (Queen 2013:368) that is assumed to account, together with social class and age, for linguistic variation. Gender as a constraint on linguistic variation has been shown to play a very complex role interacting with ethnicity (Adamson & Regan 1991), identity and belonging to a community of practice (Eckert 1989), belonging to a social network (Dubois & Horvath 1999), etc.

Early sociolinguistic studies usually treated gender as a relatively static property of an individual, a simple binary category where male and female are associated with entrenched societal roles and linguistic practices (Labov 1972). A large number of studies (Labov 1990; Trudgill 1986; Fasold 1990; Gordon 1997) confirmed the “gender pattern” in linguistic behaviour that Labov eventually summed up in three principles of language variation and change, namely, that in stable situations, women tend to use more standard forms than men; in case of changes from above, women adopt prestige forms at a higher rate; in case of changes from below, women use higher frequency of innovative forms (Labov 2001:274, 292). It should be noted that the “gender pattern” is not decidedly universal: in some studies, men used more prestigious forms (Sidnell 1999; Haeri 1997) or acted as innovators (Milroy et al. 1994). An intersection of gender with other social variables can change the picture drastically.

The more traditional approach to gender has been critically assessed by a number of scholars (James 1996; Romaine 2008). An alternative approach that was first voiced in Lakoff's (1972) seminal publication emphasized the social importance of gender and its derivation from societal practices. In more recent research, the sociolinguists of the third wave believe that the local contexts define the correlation between the linguistic variant and gender; just like the meaning of sociolinguistic variation is not constant and rigid but emerges in practice, so does gender (Eckert 2008).

The design of the current study does not address issues of gender and identity as its main focus is ethnic identity. The participants were assigned gender (male or female) based on their name and self-presentation during the interview (clothes, make-up, hair styles, voice, etc.). None of the participants specifically identified as gender fluid or non-binary. The issues of gender identity were not directly discussed in the interviews, and none of the participants mentioned gender construction in relation to heritage.

2.5.4. Ethnicity

Ethnicity in sociolinguistic research is an important social factor by itself and in intersection with other non-linguistic variables, as was discussed in sections 1.2 and 1.3 above. Focusing specifically on immigrants, previous research findings show different degrees of participation of second-generation immigrants in the on-going language changes, from aligning with the majority community (Riebold 2015, Newlin-Lukowicz 2015) to having their own, different from the majority group, constraints on variation, both linguistic and non-linguistic (Mougeon & Nadashi 1998). Non-participation in the on-going changes of the majority community has been attested, as well (Gordon 2000), while in other cases, groups with ethnic backgrounds were found to spearhead the incipient change (Horvath 1998) or even introduce new variables into the speech community (Holmes 1997).

In the current study, ethnic categorization was based on self-identification during the initial recruitment stage and confirmed later through the elicitation of demographic information during the interview. Students from Anglo-Canadian, Chinese, South Asian, and Filipino families were recruited. The choice of these ethnicities is motivated by their high proportion in the overall population of the city (see section 1.3 above for a discussion of Vancouver demographics). For Anglo-Canadians, the requirement was that both parents were born and raised in the Metropolitan Vancouver area. For other participants, the requirement was that the child was born locally to a family of immigrants or arrived in the Metro Vancouver area before the age of 5. This particular age is prominent in a number of previous studies. *The Survey of Vancouver English* (de Wolf 1993:277) lists this age as a cut-off point for the inclusion in the local speech community, and so does Labov's New York study (2006:119). The motivation behind the choice of this particular age in sociolinguistic studies may stem from the hypothesized age of vernacular reorganization at 4 years of age (Tagliamonte & D'Arcy 2009:64). Prior to this

age, the children have been shown to acquire language from their caregivers, while later, they are under the influence of the larger speech community, actively socializing in language and acquiring variation from their peers (Smith et al. 2007; Payne 1980; Roberts 1997).

2.5.5. Other factors

Some of the other social factors have been shown to play a role in linguistic behaviour, especially for migrant communities. The first one that naturally comes to mind when we talk about immigrants is the degree of bilingualism and possible language transfer effects. Others include network ties, for example, neighborhood of residence, friendship circles, ties to a community, and schools. This section will briefly address each in turn.

Bilingualism and native English proficiency

In variationist sociolinguistic studies, the degree of bilingualism is not generally controlled for. A number of studies that include several generations of immigrants normally refer to speakers who grew up in an English-speaking country as “English-dominant bilinguals” (Hoffman & Walker 2010, Rankinen 2014). Some studies that specifically focus on language contact situations provide a sort of a continuum that allows to position speakers in regard to their reported language use (Poplack et al. 2006). To my knowledge, however, no attempts have been made in variationist studies to quantify the degree of bilingualism for entering into statistical models. In the current study, the issues of heritage language knowledge and use were discussed to a different degree during the interviews. These data will be employed at the stage of qualitative analysis, in the discussion of ethnic identification of the speakers.

A brief note is needed at this point regarding native command of English. All speakers self-identified as native speakers of English at the time of the interviews and reported either not speaking their heritage language at all, or speaking it in very limited domains, compared to English. At the same time, it should be noted that the onset of English acquisition differed within the non-White ethnic groups. While in some families, English and another language were home languages from the very beginning, in others, children were immersed in the non-English home environment before starting pre-school (most often when grandparents were caregivers in early childhood, which is a typical

situation in immigrant families). In both cases, however, the children grew up in an English-speaking country and were exposed to English everywhere outside of their immediate family even in their early childhood. The presence of older siblings who were already in school also facilitated English acquisition, as will be discussed later. In any case, all participants reported rapidly picking English up and establishing it as their main language as soon they were immersed in an English-speaking pre-school institution at the age of 4 or around that time. A number of studies of children acquiring a second language report that the earlier the onset of acquisition is, the more native-like proficiency a child would attain (Asher & Garcia 1969, Flege et al. 1999, Moyer 1999, Munro & Munn 2005, Abrahamsson & Hyltenstam 2009, Aoyama et al. 2017). Based on these facts, the operative assumption is that all speakers in the sample are indeed native speakers of English with a varying degree of bilingualism in their heritage languages.

Language interference and transfer

Related to bilingualism is the issue of language transfer which describes the presence of features of a language acquired first in the speech in the language acquired later (Thomason & Kaufman 1988, Romaine 1995, Gass 2000). Language transfer is very clear in the speech of first generation of immigrants who generally acquire English as adults (Horvath 1998, Sharma 2005, Drummond 2012). As for the second generation who in most situations rapidly shift to the language of the majority community, there may or may not be some of the features of the heritage language in their speech. Labov, among others, found that children who grow up speaking a majority community language do not acquire the accents of their parents (2008:316). However, provided there are some specific socio-economic and cultural conditions within the minority community, non-native speech patterns may be maintained across generations: Sharma in her work with British Asians showed that if the community is tight and maintains traditional norms, “deep accent structures from parent speech can be maintained over the long term” (Sharma 2017:242). Additionally, some of the features that originate from language transfer may acquire social meaning and constitute an ethnic marker in the minority ethnic community (Sankoff 2002, Newlin-Lukowicz 2015) or even cross the ethnic boundary and become a marker of the local community overall, which has been attested in many European countries and large urban centers (Cheshire et al. 2011 in London,

Dittmar and Steckbauer 2013 in Berlin, Gross et al. 2016 in Sweden, etc.), as well as more recently in other multiethnic world communities (Satyanath 2018 in India).

Investigating the transfer effect goes beyond the scope of the current study since it focuses on the features of Canadian English that are currently undergoing change. There is a possibility for the future research with the current corpus that would search for features that could be attributed to the transfer from the heritage languages.

Network effects

In addition to a speaker's characteristics such as age, gender, or ethnicity, a number of factors that go beyond the individual have been shown to influence the linguistic behaviour, in particular, their social relationship. Network studies emerged within the second wave of sociolinguistics that relied on ethnographic methods to describe how local meanings and categories may affect the linguistic behaviour. Milroy's (1980) studies of social networks showed that their structure and characteristics, such as density (how many people interact with each other within a network) and multiplexity (if people within a network know each other in many different ways), are related to the linguistic production of the individuals, as well as to the diffusion of change in the speech community. Another strand of research looked at the degree of contact in multiracial neighborhoods to explain the speech patterns of the residents with different ethnic backgrounds (Wolfram et al. 1971, Ash & Myhill 1986). Multiracial schools have been also shown to influence the development of speech varieties of teenagers (Bucholtz 1999, Mendoza-Denton 1997, Eckert 1997, Fought 1999, Kirkham 2015, Farrington et al. 2017); what is important, ethnicity most often merges or intersects with local social categories and does not by itself serve to create a linguistic boundary. Finally, studies that included examining the structure of friendship ties proved that multiethnic friendship groups may be a key factor in the diffusion of innovations (Fox 2007, Cheshire et al. 2008, Meyerhoff & Schlee 2012).

Network studies are invaluable in uncovering the hidden meanings and categories unique to each community. Their reliance on prolonged ethnographic work in close collaboration with the community in question presented a hurdle in my case. As a newcomer to Metro Vancouver, I did not have any familiarity with or access to any such community. Since the focus of the project was on three heritage groups, following this approach would mean conducting three in-depth network studies, for which I did not

have time or budget. However, the findings of the current study can certainly serve as a launching pad for conducting a network study as the results expose some unique features of each of the heritage communities.

Although the current study was not conceived as a network study, during the interviews, I asked the speakers about their neighborhoods, schools they went to, and friendships they maintained throughout their lives. The elicited data vary in the degree of details, so it is impossible to quantify it for use in the statistical model. Instead, these rich data will be referenced in the discussion part of this dissertation.

2.6. Participants

2.6.1. Recruitment

The participants were recruited through the Research Participation System at the Department of Linguistics (SFU) and fliers distributed at all three SFU campuses (in Burnaby, Surrey and Vancouver). They were either paid \$10 for their participation or received 2 RPS credits they could use as extra points in one of the participating classes of the Linguistics department. Participants contacted me via email introducing themselves and expressing interest in the study. I replied to the initial emails asking several questions about their background (e.g., if they were born here, the age parents arrived to Canada, etc.), and then either confirmed the eligibility and scheduled the interview or rejected a candidate and explained the reasons via email. The recruitment and data collection were on-going from Fall 2015 until Fall 2017.

2.6.2. Changes in the study design

The initial design of the study was presented as a dissertation proposal and approved by the committee. However, once the study commenced, some changes had to be made in agreement with the committee to ensure the successful completion of the project.

Initially, I planned to interview speakers from four ethnic backgrounds: British/Mixed European, Chinese, South Asian, and Filipino. The choice of these ethnicities was motivated by their high representation in the overall population of the city,

as described above. The first change in the study design happened after the first year of data collection: the Filipino group was very hard to reach, and only 4 interviews with such speakers were conducted in about 12 months of data collection. After discussing it with my committee, I eliminated this group and focused instead on the three others that were responding to recruitment more readily.

The second change in the study design was relatively minor and concerned the age of the participants. Initially, the age was proposed to be from 18 to 21 years; however, since a number of slightly older speakers were interested in the study, the cap was lifted to include them, as well. The age of the participants in the final sample ranges from 18 to 24, and the average age is 20 years old.

In regard to gender, among all three groups, many more females than males responded to the call for participation, hence the sample is not well balanced by gender. It should be noted that this situation is relatively normal for the majority of sociolinguistic studies. Overall, I conducted 71 interviews with 43 females and 28 males.

The eligibility of participants who expressed interest in the study was confirmed via emails prior to the interviews. However, despite my best effort to keep the sample as homogenous as possible, the interviews often revealed considerable differences in speakers' backgrounds and demographics. Thus, once the data collection was completed, the demographic information elicited during the interviews was carefully examined to ensure that the final sample includes only participants with similar characteristics. Below is the list of speakers excluded from the final sample:

- Filipinos (4 speakers)
- Speakers with speech or hearing impairments not reported before the interview (2 speakers)
- Speakers of Mandarin as their heritage language in the Chinese group (5 speakers)⁵
- Speakers who spent a considerable amount of time (more than 1 year) in their heritage country as pre-teens or teenagers (4 speakers)

⁵ Spoken Cantonese and Mandarin differ to the extent that they are mutually unintelligible. Given that the majority of the Chinese heritage participants are fluent speakers of their heritage language, in order to avoid considering heritage language as a factor potentially influencing variation, I decided to remove from the final sample a few participants who grew up speaking Mandarin.

- Mixed heritage speakers, with mother and father belonging to different ethnic groups, e.g., Anglo-Canadian and Chinese (9 speakers)
- A speaker from the British/Mixed European group who turned out to be a 2nd generation Canadian
- A speaker whose word list recording got damaged

2.6.3. Final sample

The final sample was established that included interviews with 45 speakers, 31 females and 14 males (Table 7). All of the participants at the time of the interview were enrolled in full-time undergraduate programs at SFU; all resided in one of the areas of Metro Vancouver throughout their lives (the description of neighborhoods is provided in Chapter 7).

Table 7 **Participants by ethnicity and gender**

	British/Mixed European	Chinese (Cantonese)	South Asian	total
female	10	9	12	31
male	4	5	5	14
total	14	14	17	45

A note is needed here on the individuals of mixed heritage, with one White parent and one non-White. 7 out of 9 of them at the stage of recruitment self-identified as representatives of the “Anglo-Canadian” group and as native speakers of English (one White parent and one either Chinese, or South Asian, or Filipino). These speakers were 3rd generation, that is, their non-White grandparents immigrated to Canada and their non-White parent was born and raised locally. Identification with the “Anglo-Canadian” group raises many interesting questions (cf. Rampton 1995), but answering them goes beyond the scope of this project. Previous research produced some interesting results in regard to individuals of multiracial origin (Bucholtz 1995, Gordon 2000, Fought 2010) who differ in some respects from both the majority community and from the ethnic group one of their parents belongs to. Having that in mind, I decided to exclude the mixed-origin individuals from the study to avoid any confounding effect.

2.7. Linguistic variables

2.7.1. Choice of variables

Previous studies of ethnic variation in the mainstream language examined a wide array of features, such as discourse and pragmatics variation (Meyerhoff 1994), variation in morphosyntax (Cheshire & Fox 2009) and in lexicon (Benor 2010); however, it wouldn't be overexaggerating to state that variable realization of consonants and vowels deserved the most attention of the researchers. The analysis presented here is limited to the vowel system, but following Wagner (2013) I would like to acknowledge that ethnolinguistic variability may go way beyond what is described in this study. Future work on the data collected for this project may shed light on those other areas, as well.

The choice of variables to focus on was motivated by the abundance of previous descriptions of the two major changes in Canadian English: changes in the short vowel system and changes in the diphthongs. These changes have been shown to be correlated with social variables which makes them the best candidates for the current study that aims to investigate if speakers with different ethnic backgrounds similarly participate in them. Thus, the list of the dependent variables that are the primary focus in this study includes the Canadian Shift, allophonic variation of /æ/, Canadian Raising, and the fronting of back vowels /uw/, /ow/, and /aw/. The detailed description of each of them is provided in the background sections of chapters 4 and 5.

2.7.2. Materials for the study

The findings reported here are based on the analysis of the word list recordings because they provide a uniform data for each of the speakers and, compared to spontaneous speech, eliminate “phonetic, prosodic, lexical, and other linguistic variables” (Boberg 2008:133). Since the study followed Boberg's (2010) methodology, the word list was the same as in his *Phonetics of Canadian English* project, published in the appendix to Boberg's article (2008:153). The word list contained 180 words including the main vowels and allophones of Canadian English, with the ones of particular interest (e.g., those involved in one of the on-going changes) represented in several tokens, as well as several words with consonantal variables and variables of phonemic incidence.

For the current study, only 145 words representing main vowels and allophones of Canadian English were analyzed (see Appendix 1).

The word list was presented to the speakers on a sheet of paper handed to them, the same for all participants. The order of the words on the list is random, that is, they are not grouped by vowels. The participants were instructed to read the words one by one in their normal speaking voice and at a normal pace, leaving a second pause after each word.

2.8. Data collection

The interviews were conducted in a quiet place (e.g., a study room or an office) in one of SFU campuses (in Burnaby, Vancouver or Surrey). Each one lasted for up to one hour. It always started with an explanation of the procedure and the signing of the consent form. All participants were informed that they can stop the interview at any time if they wish to do so.

All interviews started with questions about each participant's major or area of study and their path to the university, including their parents' opinion about the chosen major. This led to questions on parents' education and history of immigration, or, in case of the British/Mixed European group, history of family in Canada. After that the interviews were more or less free flowing, except for a set of questions asked of all participants at different points, whenever it was appropriate: about their neighborhood, elementary and high school, friends, languages they can speak, as well as questions about ethnic identification for participants with immigrant parents. To elicit spontaneous speech, the topics of hobbies, favorite sports and travel were also discussed. In several cases, when participants were clearly not willing to discuss a particular topic, it was not pursued further which resulted in some gaps in the data, e.g., pertaining to school's ethnic composition.

At the end of the interview, the participants were asked to read the word list from a paper sheet. After the interview, the participants were debriefed as to the focus of the study and paid for their participation or, if they chose to receive course credits, their information was recorded to be later reported to the Research Participation System manager.

As for the duration of the session, Schreier (2013:33) suggests to aim for gathering 45 to 60 minutes of recorded data per participant. While the shortest interview lasted around 30 minutes, the majority were 45-50 minutes long which provided a lot of data per participant.

Interviews were recorded at 44.1 kHz/16-bit using digital Zoom H4n Handy Recorder and encoded as uncompressed WAV files. Every attempt was made during the interviews to minimize noises, though they sometimes did occur. The files were copied on the password-protected computer for processing. Back-up files were stored in a secured place according to the requirements of the SFU Ethics Board.

2.9. Data processing and analysis

The audio files were coded using a unique identifier that includes the group (A for British/Mixed European, C for Chinese, and I for South Asian), gender (F for female and M for male) and number in the chronological order of conducted interviews. The interviews were transcribed and the relevant demographic information was tabulated. Random Western-sounding names were assigned as pseudonyms for all participants instead of their real names.

Word lists containing the recordings of 145 words for each speaker were analyzed in Praat (Boersma & Weenink 2017) using LPC (linear predictive coding, a computational method of estimating formant frequencies). The *Maximum formant* setting was set at 5000Hz for females and 4500Hz for males, and the *Number of formants* for 5. In a few cases, Praat would detect non-existent formants between F1 and F2 or miss the existing formants. In such cases, these two settings were manipulated to achieve legible readings. Formant measurements for F1 and F2 were taken manually using a script that opens each file in sequence and records the measurement point chosen by the researcher. The single measurement point was chosen within the nucleus of each vowel following the procedure described by Boberg (2010:144-5):

“This was the maximum value of the first formant (F1) in the case of vowels whose central tendency is vertical aperture, or a point of inflection in the second formant (F2) in the case of vowels whose central tendency is the movement of the tongue toward, then away from, the front or rear periphery of the vowel space (such as ingliding vowels). Where the nucleus featured

a protracted steady state in the values of both formants, a measurement was made within that steady state.”

Labov (1994:165) explains that while the central tendency of the vowel is not completely representative of its pronunciation what it gives us is a comparison point across the system:

“The selection of a single point should not imply that this represents all the perceptually important information about the vowel - obviously untrue in the case of a diphthong. The one point that represents a given token of a vowel can be compared with a point for another token of the same class, so that the overall distribution of the word class or phoneme can be registered. If the same rules for measurement are observed across speakers, we will be able to use these clusters of points to trace the progress of a sound change across apparent time”

The number of observations for each of the vowels in this study varies and will be reported in the respective sections.

In order to eliminate sex-related differences that arise because of the differences in the oral tract size, F1 and F2 measurements were normalized using the online NORM tool (Thomas & Kendall 2007). The normalization method chosen for the study was Labov *ANAE* Method, which is a modification of Nearey’s (1978) method. The primary reason for this choice is that it makes the results most comparable with previous large-scale studies that used similar methods (*ANAE* and *PCE*). The normalized values are in Hertz and can be readily plotted as such producing easily readable plots. While a direct comparison of formant values with other studies may be difficult because of the different normalization methods employed, the focus in the current work is on comparing three groups of speakers from the same sample, so in this case, the chosen method of normalization is adequate.

The normalized measurements were used for visualizations and descriptive statics, followed by inferential statistics. All of the calculations and plotting were conducted in R 3.5.0 (R Core Team 2018).

2.9.1. Descriptive and inferential statistics

Mean values were calculated using R base package (R Core Team 2018) and plotted using the R ggplot2 package (Wickham 2016) for different groups of participants

in order to get a general idea of individuals' and groups' vowel spaces and position of the vowels that are the focus of this study. Descriptive analysis and comparison with previous research were conducted on the basis of mean values and plots.

Plotting was based on the widely accepted Ladefoged (1975, 2006) approach where the plot resembles the articulatory dimension of height and backness.

The description of the data proceeds from looking at the general position of the vowels involved in the changes in the vowel space in comparison to vowels that are not usually involved into any changes, e.g., diphthongs in the prevoiceless environments are compared to those in voiced environments to estimate their raising; fronting of /uw/ and centralization of /ow/ is described as compared to their unshifted allophones before /l/, as well as to the position of /æ/ in F2. This relative, within-system description is complemented by the comparison with the thresholds established in the literature.

In order to see if ethnicity and gender play a role in linguistic variation, mean formant measurements were subjected to a Multivariate Analysis of Variance (MANOVA) and Mixed Effects analysis in R (R Core Team, 2018). The dependent variables were different combinations of formant values (e.g., mean F1 or F2 values of vowels or Cartesian distance between two allophones) and the independent variables were gender with two levels and ethnicity with three levels.

Following Baayen's (2008:165-169) principles of model building, one factor at a time was dropped and the resulting model was compared to the full model using ANOVA. The decision about a better fit was based on the AIC values (a lower value means a better fit) and p (p -value). The procedure was repeated until the best model was found for each vowel's F1 and F2. Next, the residuals of the models were examined to see if they are normally distributed and if variance of the residuals is equal across groups for different random effects. Following the method described in Winter (2013), I first checked for homoscedasticity by comparing residuals to the fitted items. The plots created in R with residuals on the y -axis and fitted values on the x -axis were inspected to detect non-linearity, unequal error variances, and outliers. The residuals spread randomly around 0 indicating that the relationship was linear. An approximate horizontal band was formed around 0 indicating homogeneity of error variance. No extreme outliers were present. Second, I checked for the normality of residuals using a Q-Q plot and a

histogram. Overall, the dots in the Q-Q plot fell on the straight line and the histogram showed a bell shape, so the normality of residuals was confirmed. The results of the best fitted model were then interpreted. Post-hoc tests were conducted where necessary to determine the source of significance (e.g., which of the three ethnic groups is responsible for the significant effect of ethnicity in the overall model).

2.9.2. Thematic analysis

Previous sociolinguistic research has employed questionnaires to elicit data on ethnic orientation of participants (Hoffman & Walker 2010, Nagy et al. 2014). Following the same set of questions and offering a number of answers to choose from ensures the uniformity of responses that allows us to quantify the results. Some correlations of the score of ethnic orientation (the degree of affiliation with heritage culture and language) and linguistic behaviour were established in that approach. A disadvantage, however, is the reductive nature of this method as it only allows a participant to choose from a limited set of answers (e.g., “Do you consider yourself Canadian, Chinese or Chinese Canadian? Choose one.”). To explore this area deeper, I decided to include the questions regarding different aspects of ethnic identification in the interview. The questions broadly covered the following topics: participants’ ethnic identification (the question was posed as above, but the participants were encouraged to explain their choice and to discuss the meaning of these terms), participants’ attitudes to and knowledge of the heritage language and culture, life circumstances related to ethnicity (description of the neighborhoods and schools in terms of ethnic composition), social circles maintained by participants. It should be noted that the conversation was led by the participants to elicit the variety of responses, hence not every participant spent equal amount of time talking about each of these topics. In several cases, participants avoided talking about some specific details, potentially because they were not comfortable with the topic. In these few cases, they were not pressed to discuss those topics further, following the guidelines of the ethical research.

The transcribed interview data were subjected to thematic analysis using NVivo12, Qualitative Data Analysis Software (QSR International 1999). The goal of the thematic analysis is to identify common themes in the interview data; Braun and Clarke (2006) offer the following definition of themes: “A theme captures something important about the data in relation to the research question, and represents some level of

patterned response or meaning within the data set” (82). The analysis progressed from coding the data in order to explore emerging themes and patterns to interpreting the data in relation to previous research, in particular, the bicultural identity orientation framework (Comănaru et al. 2018) described in detail in the first chapter.

2.10. Summary

This chapter aimed to provide a complete description of the study’s methodology to allow for replicability. My goal was to be transparent about every step of the design and implementation, including the changes that had to be made in the study design. I provided the reasons for such methodological choices as the size of the sample, demographic characteristics of the participants, social factors and linguistic variables. In short, this study is the analysis of the word list data from participants with different ethnic backgrounds that aims to compare their production of short and long vowels of Canadian English to investigate the potential effect of heritage.

Chapter 3.

Overview of the vowel system

3.1. Vancouver English vowel system

While the main goal of this chapter is to provide an overview of the three ethnic groups' vowel systems, I will start with looking at the results for just one group, British/Mixed Europeans, in order to establish to what extent these speakers align with the previous descriptions of Canadian English and Vancouver English. This is a necessary step because the previous descriptions in Boberg (2010) and Labov et al. (2006) were based on White speakers only. After the similarities and differences are established, the Chinese and South Asian groups' data will be introduced.

3.1.1. British/Mixed European group

Vowel system overall

Figure 2 below provides a general view of Vancouver English vowel system described on the basis of the word list data of 14 speakers of British/Mixed European heritage in comparison with Canadian English as described by Boberg (2010:144). The graph includes all of the vowels and some allophones that have been shown to be markedly different in previous research. It can be established on the basis of visual inspection that the general configuration of the two systems is the same, while the differences concern the degree of advancement of particular vowels and allophones.

Some of the important features that clearly align Vancouver English with Canadian English as described in previous research (Boberg 2010) are as follows. In both systems, the short front vowels /i/, /e/, and /æ/ are relatively retracted and lowered: /i/ is slightly lower than /ey/ and much more retracted, at around 2200 Hz in F2; /e/ is as low as and even more retracted than the raised pre-velar /æ/ allophone; /æ/ is very low and retracted, located very close to /aw/ in the vowel space. In the low back area, /o/ and /oh/ are merged in both systems, and /ʌ/ is lowered and advanced to almost meet the raised /awT/ allophone. All these features are characteristic of the Canadian Shift pattern. Canadian Raising is obvious in both systems from the raised position of /aw/

and /ay/ in the prevoiceless environments compared to their counterparts in the elsewhere condition. In the upper part of the vowel space, /uw/ is fronted to occupy the central area of the vowel space, while its allophone before /l/ remains in the upper corner of the vowel space, and /ow/ is only moderately centralized.

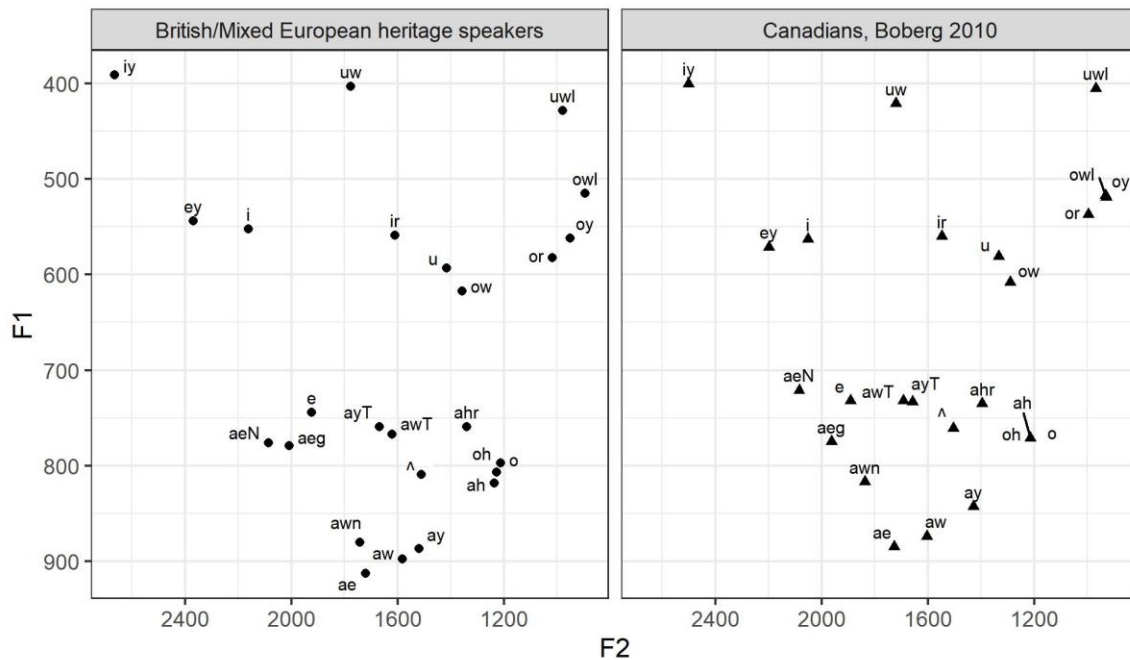


Figure 2 Side-by-side comparison of Canadian English as described in Boberg (2010) and Vancouver English spoken by participants with British/Mixed European heritage in the current study

Note: Since the current study replicates Boberg's *PCE* methodology, the notations and the set-up of the graphs are in exact correspondence with those from his publication (2010:144-145) for ease of comparison.

Overall, the Vancouver English vowel system seems to be less condensed compared to the Canadian English one. In Vancouver English, the high front vowels are more peripheral, low central ones are lower, and the back ones are more towards the back of the vowel space compared to those in Boberg (2010). Since Boberg reported interregional mean values for these vowels, it may be the case that some of the values of the current study reflect the regional peculiarities that were concealed by averaging the values of different regions in the *PCE* study. The differences may also point to the direction of changes that have been happening in between the two studies: the data for *PCE* was collected more than a decade prior to the data collection for the current study.

The next section will review the isoglosses for Western Canada and British Columbia established by Boberg (2010) on the basis of the data from the *Phonetics of Canadian English* project to examine how Vancouver English as described in this study fits into the picture. Whenever appropriate, references will also be made to the *Atlas of North American English* (Labov et al. 2006).

Isoglosses according to the Phonetics of Canadian English (PCE)

The *Atlas of North American English* (ANAE) proposed five features that distinguish Canadian English from American English: Canadian Shift, Canadian Raising of both /ay/ and /aw/, and “conservative” (peripheral rather than centralized or fronted) /ey/, /ow/, and /aw/ (Labov et al. 2006:221-222). All five of these features were found to be present in the central region of Canada encompassing the Prairies and part of Ontario, with the major cities in the East having some or most of them present. In contrast, the Atlantic Provinces, according to ANAE, do not exhibit *any* of the above features, and both Montreal and Vancouver are marginally involved since their speakers only had the Canadian Shift and none of the other four features. British Columbia was thus differentiated from the Prairies that was shown to have all five features, based on the findings reported in ANAE.

To expand on and add to the data of ANAE, Boberg’s PCE study aimed to describe the dialect division within Canada utilizing a statistical analysis, in contrast to the purely descriptive approach of ANAE. In regard to the diagnostic features from ANAE, Boberg (2010) showed that Canadian Raising is present in Vancouver, in contrast to what was reported before, while the other three features proposed by ANAE are still absent in BC English. Since these features were mainly aiming to distinguish the U.S. and Canadian varieties of English, Boberg focused instead on a different set of features that served as a diagnostic for distinguishing six dialect regions within Canada (2010:209). The Canadian regions were shown to differ in the degree of advancement or presence of following features: raising and fronting of /awT/, fronting of /uw/ and /ow/, the position of /ahr/, raising of /æN/ and fronting of /æg/. Table 8 shows the features with their relevant thresholds, the values for BC reported in Boberg (2010) and my corresponding values for the British/Mixed European group.

**Table 8 Phonetic variables used to establish regional divisions in Canada
(Boberg 2010:204)**

Description	Relevant threshold	BC in Boberg (2010:209)	BC current study	Numeric value for BC in Boberg (2010:204)	Numeric value in current study (British/Mixed European group)
/awT/ raising	F1(awT) < 750 Hz	+	–	736 Hz	767 Hz
/awT/ fronting	F2(awT) > 1750 Hz	–	–	1636 Hz	1618 Hz
/uw/ fronting	F2(uw) > 1800 Hz	+	–	1804 Hz	1774Hz
/ow/ fronting	F2(ow) > 1300 Hz	+	+	1337 Hz	1376 Hz
unretracted /ahr/	F2(ahr) > 1350 Hz	–	–	1298 Hz	1339 Hz
/æN/ raising	F1(æN) < 700 Hz	–	–	741 Hz	775 Hz
/æg/ fronting	F2(aeg) > 2000 Hz	+	+	2008 Hz	2005 Hz

The table shows that the current study agrees with Boberg's data on five out of seven counts. Both studies found the following in BC: no fronting of /awT/, fronting of /ow/, back articulation of /ahr/, no raising of /æN/, and fronting of /æg/ (where presence or absence of a feature is defined by a relevant threshold). The differences between Boberg's data and the current study concern the fronting of /uw/ and the raising of /awT/: he found both of these features to be present in BC, but my data show that they both fall short of the relevant threshold. I will now look at each of these features closely following the order of the table above.

/awT/ raising and fronting

The first two features proposed by Boberg to separate Canadian regions are the raising and fronting of /aw/ in pre-voiceless environment. While usually this diphthong is reported together with /ay/, together constituting Canadian Raising pattern, Boberg (2010) did not find any significant regional variation in /ayT/ across Canada, therefore he focused on /aw/ only. In contrast with ANAE that defined Canadian Raising as 60 Hz difference between F1 values of the raised and unraised allophones (2006:222), Boberg established two threshold: /awT/ is considered raised if its F1 is less than 750 Hz and it is fronted if its F2 is larger than 1750 Hz (2010:204).

Vancouver was reported in *ANAE* as having inconsistent Canadian Raising: some speakers only raised /awT/, while others only raised /ayT/ (2006:220). Boberg, however, found a robust presence of both allophones in BC. While my value for Vancouver (767 Hz) does not meet the threshold of less than 750 Hz in F1, it is quite close to the said threshold, and there is other evidence of raising. The mean distance between raised and unraised allophones of /aw/ in my study is equal to 130 Hz which is comparable to Boberg's value of 142 Hz for the same measure (2010:149). I suggest the following explanation for the non-application of Boberg's threshold value: compared to the Canadian English vowel system, in Vancouver English, the low vowels are positioned lower in the vowel space, as can be seen in Figure 1 above. F1 value for /aw/ in the current study is 897 Hz, while Boberg has his higher in the vowel space at 874 Hz (mean value for Canada overall, 2010:145). The lower /aw/ together with similar raising of /awT/ produces a value that technically does not meet the threshold, but I argue that given the circumstances, this diphthong can be considered raised.

As for /awT/ fronting, Boberg reports that a difference in F2 of /awT/ of about 100 Hz is an important feature that led him to split the Inland Canada region as described in *ANAE* into eastern and western regions, with the Prairies and BC having the F2 value below 1650 Hz, hence less fronting, and Ontario above 1750 Hz (2010:206), that is, more fronting. For BC, Boberg gives the value of 1636 Hz (2010:204) which is corroborated by my data: I found /awT/ to be even less fronted, with F2 of 1618 Hz. Thus, the current study confirms the absence of fronting of /awT/ in BC in that it stays beyond the threshold of 1650 Hz established by Boberg (2010).

/uw/ fronting

The next feature, fronting of /uw/ from the back towards the central position in the vowel space, shows different degrees of advancement in Canadian regions. Boberg proposed a threshold of 1800 Hz that distinguishes areas with most fronted /uw/ from the rest. The author reports the most advanced F2 value in British Columbia: his F2 of /uw/ is 1804 Hz, which is much higher than in the neighboring Prairies where it is 1657 Hz (2010:205). The value I found in my study is in-between these two extremes: 1774 Hz, which definitely shows centralization, though less advanced than in Boberg (2010). Two other measures allow us to claim the centralization despite not meeting the 1800 Hz threshold: a comparison with /uwl/ and with /æ/. Compared to its /uwl/ allophone located

in the back of the vowel space with F2 of 978 Hz, /uw/ is considerably advanced. The other measure that allows us to see the extent of centralization of /uw/ is its position relative to /æ/. Boberg reports that for the most innovative speakers, such as those from BC, the F2 of /uw/ is about 100 Hz larger than that of /æ/, meaning that these two vowels reversed their relative position in the horizontal dimension of the vowel space (2010:205). I similarly found that /uw/ is located slightly further front compared to /æ/, but the difference is smaller, 57 Hz.

To conclude, while not meeting the relevant threshold, /uw/ does show evidence of fronting in the current study based on the additional evidence.

/ow/ fronting

Regarding /ow/ fronting, the data from *ANAE* and *PCE* differ. *ANAE* described Inland Canada as having a “conservative” /ow/ with minimal fronting of the nucleus (F2 < 1100 Hz), and Vancouver as having a more fronted /ow/ than the core area of the country (2006:222). In contrast, Boberg (2010:204) showed that overall in Canada, /ow/ is more fronted than reported in *ANAE*, that is, for all Canadian regions, the F2 of /ow/ is larger than 1100 Hz threshold proposed by *ANAE* for “conservative” /ow/. Boberg also showed that the threshold of 1300 Hz in F2 separates advanced and more conservative regions within Canada (2010:206), with BC being “advanced” (1337 Hz), while the neighboring Prairies “conservative” (1227 Hz). In my data, the F2 value of /ow/ is 1376 Hz, which shows that this region is very advanced with regard to /ow/-fronting. Similarly to /uw/ discussed above, the following liquid blocks centralization of /ow/: the mean F2 value for /ow/ is 894 Hz.

Unretracted /ahr/

The next feature that distinguishes regional varieties of Canadian English is the F2 of /ahr/. Boberg showed that it is more central in the eastern part of the country and more retracted in the west (2010:152). Both British Columbia and the Prairies are reported by the author to have F2 value of /ahr/ below 1350 Hz (204). My finding regarding this value aligns with what was reported before: F2 of /ahr/ in the current study is 1339 Hz, so it remains retracted, albeit it is pretty close to the threshold. The same allophonic pattern reported by Boberg (2010:152) is observed, as well: the following

voiceless consonant increases centralization. The average F2 for *harp*, *start*, and *dark* in the current study is 1427 Hz, while the same value for *bar*, *car*, and *star* is 1248 Hz.

Pre-velar and pre-nasal allophones of /æ/

Two last features selected by Boberg as diagnostic for regional varieties of Canadian English concern the pre-nasal and pre-velar allophones of /æ/: raising of /æN/ and fronting of /æɡ/. In terms of regional distribution, Boberg found that /æN/ is most raised in Ontario and the Maritimes, while in Western Canada, it is moderate, not reaching the threshold of less than 700 Hz for F1 of /æN/. For BC, Boberg gives a value of 741 Hz for F1 of /æN/, which is confirmed by my data: moderate raising of /æN/ is present in the British/Mixed European group at 775 Hz.

The last feature, fronting of /æɡ/, according to Boberg, is highly indicative of regional variation: this allophone was shown to be most fronted in the Western Canada, compared to the rest of the country, which led Boberg to establish the isogloss of more than 2000 Hz for F2 of /æɡ/. Boberg gives a value of 2008 Hz for F2 of /æɡ/ in BC (2010:204), and in my data, this allophone is similarly fronted at 2005 Hz.

Summary

The review of the seven phonetic variables proposed by Boberg for dialect regions within Canada showed that with the exception of /awT/ raising and /uw/ fronting, the current study confirms that the defining features described by Boberg for British Columbia are also present in this sample of Vancouver speech. The speakers of British/Mixed European conform to most of the patterns of the local dialect established in previous research. Close inspection of the two features that differ compared to previous research shows that they come close enough to the proposed thresholds and should not be considered deviant.

Having established one group from the corpus as the ‘baseline’ group, I will now proceed to look at the vowel systems of the two other groups in order to establish to what extent they conform to the local patterns of pronunciation.

3.1.2. Chinese and South Asian groups

Vowel system overall

Figure 3 below allows us to examine the general configuration of the vowel systems of the three heritage groups (mean formant values and standard deviations for each group are given in Appendix 2). A direct visual comparison is possible because the charts show the same vowels and allophones plotted on identical axes, with the values obtained following the same normalization and averaging procedure. It appears that these three systems are very similar except for the degree of advancement of some vowels and allophones.

Regarding the short vowel system, all groups demonstrate merged /o/ and /oh/ in the back of the vowel space. /ʌ/ is positioned further front, coming close to the raised /awT/ allophone. /æ/ is quite low and very retracted for all three groups, while /e/ is lowered and retracted enough to meet the pre-nasal and pre-velar allophones of /æ/. /i/ for all three groups is slightly lower than /ey/ and is considerably retracted. Based on these features, all three groups participate in Canadian Shift. All three groups also show a robust presence of Canadian Raising: their pre-voiceless diphthongs /aw/ and /ay/ are considerably raised compared to elsewhere environment. /ayT/ is more fronted than /awT/ for all speakers. In the upper half, /uw/ is fronted across the board, and /ow/ shows some centralization. Pre-liquid allophones of both /uw/ and /ow/ remain in the very back of the vowel space. Lastly, front peripheral /iy/ and /ey/ remain as such in very similar configuration. The largest difference seen in the plots concerns the pre-nasal and pre-velar allophones of /æ/: for British/Mixed European speakers, /æN/ is slightly more front and higher than /æg/, while for both non-White groups, /æg/ is raised and fronted considerably more than /æN/.

In the next section, I will examine to what extent the non-White groups adhere to the isoglosses established for BC by Boberg (2010).

PCE isoglosses

Overall, all groups exhibit the same pattern with respect to the thresholds for 7 variables identified by Boberg (2010), with one exception: Chinese speakers do not exceed the threshold established by Boberg for centralized /ow/, while the other two groups do so (Table 9). For all the other variables, all three groups are consistent in staying beyond or trespassing the threshold. On this basis, it can be claimed that all participants, regardless of their ethnic background, speak Vancouver English.

Table 9 Mean formant values for three ethnic groups for isoglosses

Description	BC in Boberg (2010:204)	British/Mixed European	Chinese	South Asian
/awT/ raising: F1 < 750 Hz	736 Hz +	766 Hz –	772 Hz –	792 Hz –
/awT/ fronting: F2 > 1750 Hz	1636 Hz –	1618 Hz –	1507 Hz –	1639 Hz –
/uw/ fronting: F2 > 1800 Hz	1804 Hz +	1775 Hz –	1742 Hz –	1773 Hz –
/ow/ fronting: F2 > 1300 Hz	1337 Hz +	1376 Hz +	1268 Hz –	1301 Hz +
unretracted /ahr/: F2 > 1350 Hz	1298 Hz –	1338 Hz –	1314 Hz –	1310 Hz –
/æN/ raising: F1 < 700 Hz	741 Hz –	775 Hz –	818 Hz –	834 Hz –
/æg/ fronting: F2 > 2000 Hz	2008 Hz +	2005 Hz +	2050 Hz +	2173 Hz +

To look closer at each group's production for the vowels included in the isogloss description, they were plotted together with the thresholds for the diagnostic variables (Figure 4). Visual inspection allows to see some interesting peculiarities. /uw/ is very similar across board, and so is /ahr/. Only Cantonese speakers remain beyond the threshold for centralized /ow/. /awT/ allophone for the Chinese group is backed compared to others. The largest discrepancy among the three groups concerns the position of the /æ/ allophones that was already mentioned above: the positions for pre-velar and pre-nasal allophones are reversed for the White and non-White groups. South Asian speakers demonstrate the most extreme fronting of pre-velar allophone.

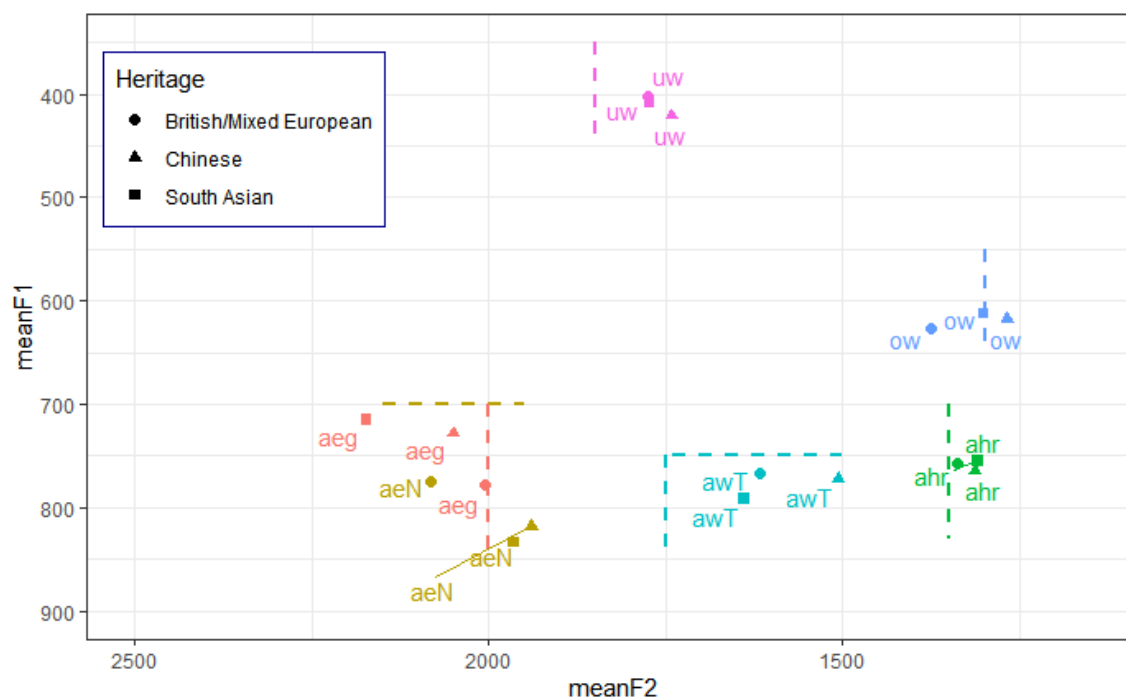


Figure 4 Adherence to BC isoglosses by three ethnic groups (color of the threshold line corresponds to the color of the data points)

The effect of heritage on vowels

Visual observations of the three vowel systems (Figures 3 and 4), as well as the general focus of the study on the changes in progress, prompted me to conduct a statistical analysis of the following vowels in order to see if heritage is a significant predictor of any of the measures:

- Vowels participating in the Canadian Shift: /i/, /e/ and /æ/
- Pre-velar and pre-nasal allophones of /æ/: /æɡ/ and /æN/
- Vowels participating in Canadian Raising: /awT/ and /ayT/
- Vowels participating in fronting/centralization: /aw/, /ow/ and /uw/

A linear mixed effects regression analysis was conducted with the statistical software package R (R Core Team 2018) using 'lmer' function in the package *lme4* (Bates et al. 2015) to determine the significance of the effect of ethnicity on the phonetic measures. Mean F1 and F2 values of each vowel were separately entered into the statistical model as the response (dependent) variables. The independent variables were

Gender with two levels (male and female) and Heritage with three levels (British/Mixed European, Chinese, and South Asian). The model contained a random intercept for speaker and context. The formula was as follows:

$$F1/F2 \sim \text{Heritage} + \text{Gender} + (1|\text{Speaker}) + (1|\text{Context})$$

Table 10 presents the results of the tests for the effect of heritage (gender effects will be reported where appropriate in the subsequent chapters) on F1 and F2 of each vowel. For each change in progress, at least one vowel showed a significant effect of heritage, which prompted an in-depth investigation reported in the following chapters.

Table 10 Results of mixed effects test for the effect of heritage (significant values are boldfaced)

change	vowel	F1	F2
Canadian Shift	/i/	$F(2, 44) = 0.16, p = 0.84$	$F(2, 44) = 4.77, p = 0.01$
	/e/	$F(2, 44) = 0.12, p = 0.9$	$F(2, 44) = 4.38, p = 0.02$
	/æ/	$F(2, 44) = 0.45, p = 0.63$	$F(2, 44) = 0.43, p = 0.65$
Raising of allophones of /æ/	/æɜg/	$F(2, 44) = 2.64, p = 0.08$	$F(2, 44) = 5.86, p = 0.005$
	/æɜN/	$F(2, 44) = 2.13, p = 0.12$	$F(2, 44) = 4.76, p = 0.01$
Canadian Raising	/aɜT/	$F(2, 44) = 1.22, p = 0.3$	$F(2, 44) = 8.2, p = 0.0009$
	/aɜT/	$F(2, 44) = 0.73, p = 0.48$	$F(2, 44) = 1.41, p = 0.25$
Fronting of back vowels	/aɜ/	$F(2, 44) = 0.12, p = 0.9$	$F(2, 44) = 3.8, p = 0.03$
	/oɜ/	$F(2, 44) = 0.7, p = 0.49$	$F(2, 44) = 6.07, p = 0.0046$
	/uɜ/	$F(2, 44) = 2.08, p = 0.13$	$F(2, 44) = 0.5, p = 0.6$

3.1.3. Summary

The results show that the overall configuration of the vowel system is similar across the three heritage groups. All three groups participate in the most important changes in Canadian English, the Canadian Shift and Canadian Raising, as well as the fronting of back vowels, and all exhibit the low-back merger of /o/ and /oh/. The three groups are relatively unified in terms of their adherence to British Columbia isoglosses, as well. At the same time, closer inspection of the variables of interest suggests that there are some differences along the ethnic lines that will be explored in the following chapters.

The following two chapters that present the detailed results are organized in the same way informed by my approach to the speech community explained earlier, in the Background section. To reiterate, instead of treating the British/Mixed European group as a norm-establishing one to which we can compare the non-White groups, I follow Meyerhoff and Stanford (2015) who encourage researchers to identify the community norm and then to compare the groups against it. Each of the two sections within each chapter will start with the description of the values for all speakers in the current sample as they are believed to comprise the unified speech community of Vancouver. Then, the discussion of gender and heritage patterns based on the statistical tests will be presented. The three groups with different heritage will be treated as such instead of having a default White group and comparing the non-White groups to it.

Chapter 4.

Variation and change in the short vowels

The first of the two major changes attested in Canadian English is the change in the short vowel system, which includes lowering and retracting of the short front vowels, known as the Canadian Shift, and raising and fronting of the pre-velar and pre-nasal allophones of /ae/. These will be discussed in this order in the following sections.

4.1. The Canadian Shift

4.1.1. Background

The Canadian Shift is a sound change traditionally considered to be one of the diagnostic features of Canadian English (Labov et al. 2006:216), contrasting with other shifts happening elsewhere in North America, namely, the Northern Cities Shift (Labov 1981, Gordon 2001) and the Southern Vowel Shift (Thomas 1989, Farrington et al. 2018). Usually, the following processes are discussed under the term “Canadian Shift”: lowering and/or retraction of /i/ and /e/, lowering and retraction of /æ/, and low-back merger of /o/ and /oh/⁶ (Boberg 2010:146); lowering and centralizing of /ʌ/ is variably addressed as part of the Shift (Clarke et al. 1995). More recently, some authors propose the simultaneous (though not necessarily structurally connected) fronting of back vowels that can be described as part of this vowel shift (Boberg 2019:101); however, the present work will not look into that.

The most established view on the Canadian Shift especially concerning the front vowel space holds that it is triggered by the low-back merger that creates a gap in the low central part of the vowel space which produces the pull effect on the front vowels (Clarke et al. 1995, Roeder 2012), in accordance with one of Labov’s principles of chain shifting (1991:29). The change was originally described as a pull chain shift involving all three short front vowels (Clarke et al. 1995:223). However, a number of subsequent

⁶ While the merger implies a loss of distinction between these two vowels, the place where the vowels merge varies: for the Western part of the U.S., Hall-Lew (2013), as well as Kendall and Friedland (2017:254), found lowering and fronting of /oh/, while other researchers found backing and/or raising of /o/ (Eckert 2004).

studies provided varying evidence regarding to which vowels participate and what the trajectory of shift for each of them is. For example, some authors have proposed a parallel shift rather than a chain shift, at least in some locations in Canada (Boberg 2005; see discussion in Chambers and Hall 2018), while others have suggested more retraction than lowering (Hagiwara 2006). Some researchers also dispute the status of the Canadian Shift as a chain shift: for example, Roeder and Jarmasz (2009, 2010) propose that the redistribution of the vowels “within the reconfigured vowel space” is a result of the low-back merger (2009:9). The role of the low-back merger in the shift, however, has also been contested. According to some studies from outside of Canada, similar vowel shifts may happen due to the rotation of vowel space (Dublin study, Hickey 2018:14), or due to the overall horizontal compression of the vowel space (California Vowel Shift, D’Onofrio et al. 2019:210), or as result of the push-chain initiated by /i/ (also California, Kennedy and Grama 2012:51). It is clear that despite the close attention of the researchers, the front vowel shift is still far from being exhaustively studied, in terms of both its structural features and origin.

In Canadian English, the Canadian Shift is believed to be a relatively recent development. Boberg (2017:384) examined recordings of the First World War veterans and found that both /e/ and /æ/ are in their “pre-shift positions” which led him to suggest that the Canadian Shift began around mid-twentieth century. At the same time, Roeder and Jarmasz (2009) based on their apparent-time study suggest that in Toronto, the shift was already completed by the 1950s and from then on started diffusing across the country.

While the question of the origin of what is now known as the Canadian Shift remains open, the systematic sociolinguistic description of its various aspects began in the 1990s. De Wolf (1993), on the basis of his work with *SVEN* (a large-scale study of Vancouver English, data collected in 1979-1981), reported that there were three variants of the variable (æ) in Vancouver: [æ], [æ ~ a] and [ɛ]. Esling and Warkentyne (1993:237) also used *SVEN* data to show that in Vancouver English, females and younger speakers were leading the change towards retraction of /æ/, though it remained relatively high in the vowel space. The authors also reported that middle-class speakers shifted more than working class speakers.

Clarke, Elms and Youssef (1995), based on the findings of their study of young speakers mostly from Southern Ontario, connected the retraction of /æ/ with shifting of three other vowels, /i/, /e/ and /ʌ/, and coined the term “the Canadian Shift”. The authors conducted impressionistic analysis of the word list data to show that there is lowering of the front high and mid vowels /i/ and /e/, accompanied by a slight retraction of /e/, while /æ/ retracts and lowers towards central open /a/, and /ʌ/ lowers and centralizes. The authors suggest that the low-back merger of /o/ and /oh/ is what triggers this pull chain vowel shift (1995:212). They found that women were leading the change in all vowels except for /i/ that did not have any effect of gender. A small apparent time portion of the study allowed the authors to describe several noticeable differences among the older and the younger informants in regard to the Canadian Shift where the younger speakers were considerably more advanced, thus confirming that it was a change in progress.

Labov et al. (2006) reported that this sound change was present across Canada except for the Atlantic provinces (216); however, they did not find any changes in /i/, while /æ/ was retracting and /e/ was following a diagonal path down and towards the center. The authors provided a number of diagnostics for the Canadian Shift, namely, a retracted /æ/ with F2 less than 1825 Hz, a lowered /e/ with F1 greater than 650 Hz, and an F2 of /o/ less than 1275 Hz where it meets /oh/ in a relatively raised position (219).

Based on these thresholds, Canada was distinguished from the U.S. as a separate dialect area. A number of subsequent studies confirmed presence of the Canadian Shift in different locations across Canada: Montreal (Boberg 2005), St. John's (D'Arcy 2005), Winnipeg (Hagiwara 2006), Toronto (Hoffman 2010), British Columbia (Pappas & Jeffrey 2013), urban and rural Ontario (Roeder 2012, 2014), Victoria (Roeder et al. 2018), Ottawa (Peterka 2019), to name just a few. It should be noted that some of these studies do not agree on the peculiarities of the shift, for example, neither Boberg (2005) in Montreal, nor Roeder and Jarmasz (2010) in Toronto found lowering of /i/ in the apparent time studies, and Peterka (2019) did not find statistically significant retraction of /æ/, only lowering among her younger speakers. Regardless of the details, however, there is no doubt that the Canadian Shift is present everywhere in Canada, which was confirmed statistically by Boberg who did not find any statistically significant regional differences in the position of the three front short vowels (2010:204).

The most recent data on the progress of this change in Canada overall comes from Boberg's (2019) publication of the results of his study of young Canadians from across the country. The author states that the three short front vowels involved in the Canadian Shift, /i/, /e/, and /æ/, 'behave as a unified set' (110). He once again did not find any statistically significant regional variation confirming the status of the Canadian Shifts as a "pan-Canadian pattern" (108). Boberg also discusses the important structural role of the low-back merger in the shift: his U.S. speakers who did not have the merger participated in the Canadian Shift less than those Americans who had /o/ and /oh/ merged (108). However, Boberg claims that the "social symbolism" is as important as the structural forces (109) based on his finding that there is a lack of correlation of the merged back vowels with the degree of shifting of his Canadian participants.

Studies of Canadian Shift in Vancouver and British Columbia

Different aspects of the Canadian Shift received variable attention in the studies conducted locally, with /æ/ getting more coverage than /e/, and /i/ being relatively undescribed. The reason for that is probably the most dramatic change in /æ/ in both horizontal and vertical dimension, as well as large and (at least partly) socially conditioned allophonic variation of this vowel compared to the absence of such allophonic split for either /i/ or /e/. As was mentioned above, it was on the data from Vancouver speakers that the retraction of /æ/ was first reported by De Wolf (1993) and Esling and Warkentyne (1993). De Wolf (1993) found that women produced about 35% of retracted [æ] in the word list reading and 10% in the reading passage (285), a somewhat unexpected stylistic difference given more attention paid to the word list. Esling and Warkentyne (1993) similarly found more retracted variants of /æ/ produced by women in Vancouver (237). Comparing two locations across the country, Hall (2000) reported on the basis of her analysis of four females from Toronto and Vancouver each that Vancouverites produce retracted /æ/ 25-50% more across several speech styles than their Toronto counterparts (24).

Moving on from description of only /æ/ shifting to other components of this vowel change, Hirayama (2000) provided the first description of the Canadian Shift in British Columbia. The author collected data from fifteen (nine males and six females) speakers, older and younger, most of whom were raised in British Columbia, both in Vancouver and Victoria (2000:21). On the basis of impressionistic and instrumental analysis of the

word list, Hirayama reported that the Canadian Shift was clearly present in this location, though, compared to Ontario, it was less advanced (46). All three vowels are reported to be shifting in the following manner: /i/ and /e/ mostly lowering, and /æ/ lowering and retracting (12-13). Females and younger speakers overall were found to have more advanced shift than males and older speakers (48). Consistent with previous research (Clarke et al. 1995), the author found similar phonological conditioning: the front lax vowels were strongly affected by voicing of the following consonant and to some extent by the manner of articulation of the following consonant (47).

The *Atlas of North American English* established a set of thresholds for the Canadian Shift, as discussed earlier, though /i/ shifting was not mentioned (2006:220). Vancouver, according to this source, fully participates in the Canadian Shift (map on page 219). Sadlier-Brown and Tamminga confirm that Vancouver speakers adhere to the thresholds established by *ANAE* (2008:7). On the basis of the instrumental analysis of the word list data for 12 Vancouver speakers, the authors report correlation of both F1 and F2 of all three front lax vowels with age which proves that it is a change in progress (9). According to their findings, both /i/ and /e/ are moving diagonally across generations, and /æ/ retracts more than lowers in the younger participants (Sadlier-Brown & Tamminga 2008:9).

The subsequent studies in this location confirm this general pattern: Boberg (2010:227) reports for Vancouver that “all three vowels are moving downward in apparent time, while /e/ and /æ/ are also retracting.” Similarly, Pappas and Jeffrey (2013:45) in their apparent-time study of 12 Vancouverites found a moderate correlation of retraction and lowering of /e/ with age, as well as a very strong correlation of age with the retraction of /æ/. Females were shown to lead the change.

Two of the most recent studies for BC provide some additional details on the retraction of /æ/. Swan (2016:296) once again focused specifically on /æ/ and found that, compared to Seattle, Vancouverites produce more back realizations of /æ/, while the height dimension is not affected. The author also suggests that /æ/ retraction in Vancouver is phonologized since, compared to Seattle, there is a smaller expected coarticulatory effect (296). As for the non-linguistic factors, Swan reports that females in Vancouver retract more than males, but no age group differences were found (184).

Mellesmoen (2016:11) found that males are catching up with females in lowering /æ/, while females consistently lead in the retraction of /æ/ in apparent time.

Finally, Roeder et al. (2018) conducted an apparent time study in Victoria drawing on data from 114 speakers of British descent from the *Victoria English Archive* and found that all three vowels are shifting, but each has its own trajectory: /i/ is moving diagonally across the three generations, more so in F2 dimension; /e/ has completed its lowering by the second generation and now is retracting; finally, /æ/ has reached its lowest limit in the vowel space in the second generation as well, and is now retracting (98). The authors only found the gender effect for /æ/ in their youngest group, with males lagging a generation behind females in the retraction (98). They also conclude that the young Victorians participate in the shift as other Canadians as reported in Boberg (2010), while the older ones are more conservative. Finally, they suggest that the Canadian Shift appears to be more recent in Victoria than in other parts of the country (99).

To sum up, the Canadian Shift is present and robust in the province of British Columbia and Vancouver, based on previous research, though the degree of advancement of some vowels may be different which can represent the stage of the change in a particular sample of speakers in each study. Earlier studies focused on /æ/ shifting; /æ/ has been shown to either both retract and lower, or only retract, while /e/ is believed to be moving diagonally. /i/ has been described less often and the results for this vowel vary from just lowering to moving diagonally.

Among social factors conditioning variation, we find gender with females leading the change, as shown by all studies that included gender as a variable. Adding ethnic variation into the picture will contribute to a more complete description of this on-going change in Vancouver English.

Ethnic groups participation in Canadian Shift

Overall ethnic groups have been shown to participate in vowel shifts in different varieties of English to varying degree (in the U.S.: Labov 1972, Gordon 2000, Hall-Lew 2016; in Australia: Horvath 1987; in the U.K.: Cheshire et al. 2008, etc.). In Canada, so far only few sociolinguistic studies of the Canadian Shift have included ethnicity as one of the explanatory variables.

Boberg (2005, 2010) investigated the degree of participation in the Canadian Shift of Jews, Irish and Italians in Montreal. He reports no statistically significant effect on either F1 or F2 of the short vowels involved in the Canadian Shift (2010:218), that is, all speakers in his sample participated in the shifting according to the general community pattern.

Hoffman (2010:132) focused on British, Italian and Chinese in Toronto and found no conditioning effect of ethnicity on the Canadian Shift: all three groups participated in the shifting of /i/, /e/ and /æ/, and the slight differences, mostly in F2, were not statistically significant. The author states that young people of British, Italian and Chinese ancestry “share similar linguistic systems, at least with respect to the CVS” (135).

Hoffman and Walker examined the same ethnic groups in Toronto and concluded that 2nd generation Italians participated in the Canadian Shift on par with the British/Irish group, and so did Chinese, though at a lower rate. Importantly, the linguistic conditioning was very similar across the 2nd and 3rd generation non-British speakers (2010:57). The exceptions were some allophones: Chinese speakers shifted /e/ more in a pre-nasal environment compared to the other groups. They also did not retract /æ/ before laterals, in contrast to the other groups (57). The authors then conclude that while all of these Torontonians share the same linguistic system in regard to CVS, “at least some of them may be using overall rates of use to construct and express ethnic identities” (58).

Overall, all three studies suggest overwhelming participation of non-British, 2nd generation immigrants, in the Canadian Shift in Toronto and Montreal. The current study will add to this body of knowledge.

Data and methods of analysis

The results reported in the following section are based on the analysis of 2013 tokens, mostly monosyllabic words. The following environments included /p/, /t/, /d/, /k/, /n/ (except before /u/ and /ae/), and /l/:

270 of /æ/: bad, sack, sad, sat, tally, tap

313 of /e/: dead, deck, sell, set, step, sterile, ten

358 of /i/: did, sick, singer, sit, spirit, still, tin, tip

270 of /ʌ/: cup, cut, duck, dull, sun, stud

354 of /o/: bother, collar, cot, Don, sock, sod, strong, top

269 of /oh/: caller, caught, dawn, saw, sawed, talk

179 of /u/: cook, foot, full, stood

Following the methods laid out in the *ANAE* by Labov, Ash and Boberg (2006) and Boberg (2008, 2010) for the *Phonetics of Canadian English* project, the tokens were subjected to acoustic analysis using linear predictive coding (LPC). The measurements for F1 and F2 were conducted in Praat (Boersma & Weenink 2017) according to the algorithm described in Boberg (2008:134). The cursor was placed at the maximal value of F1 for vowels involved in so-called rising changes, and at a point of inflection in F2 for vowels involved in fronting or backing changes. In all other cases, the cursor was placed in the middle of the steady state of the vowel. The resulting values were normalized using the NORM version of the Nearey (1978) method to ensure comparison with the results reported by Boberg (2010). Analysis was conducted in R (R Core Team 2018) using lme4 package (Bates et al. 2015) for statistical calculations and ggplot package (Wickham 2016) for visualization.

4.1.2. Results

The two issues at hand are the peculiarities of the Canadian Shift in Vancouver and its ethnic profile, if it exists. The results will be presented in this order: first, I will compare the configuration of the short vowel system in Vancouver English compared to Canadian English as described by Boberg (2010) and discuss the adherence to the Canadian Shift thresholds established in the literature. Then I will explore the gender pattern and compare the data across the three ethnic groups, discussing also the interaction of these two factors.

Overall pattern of the Canadian Shift in Vancouver

Figure 5 below shows the position of the short vowels based on the averaged F1 and F2 values from all Vancouver speakers plotted against the same data points from Boberg (2010:145).

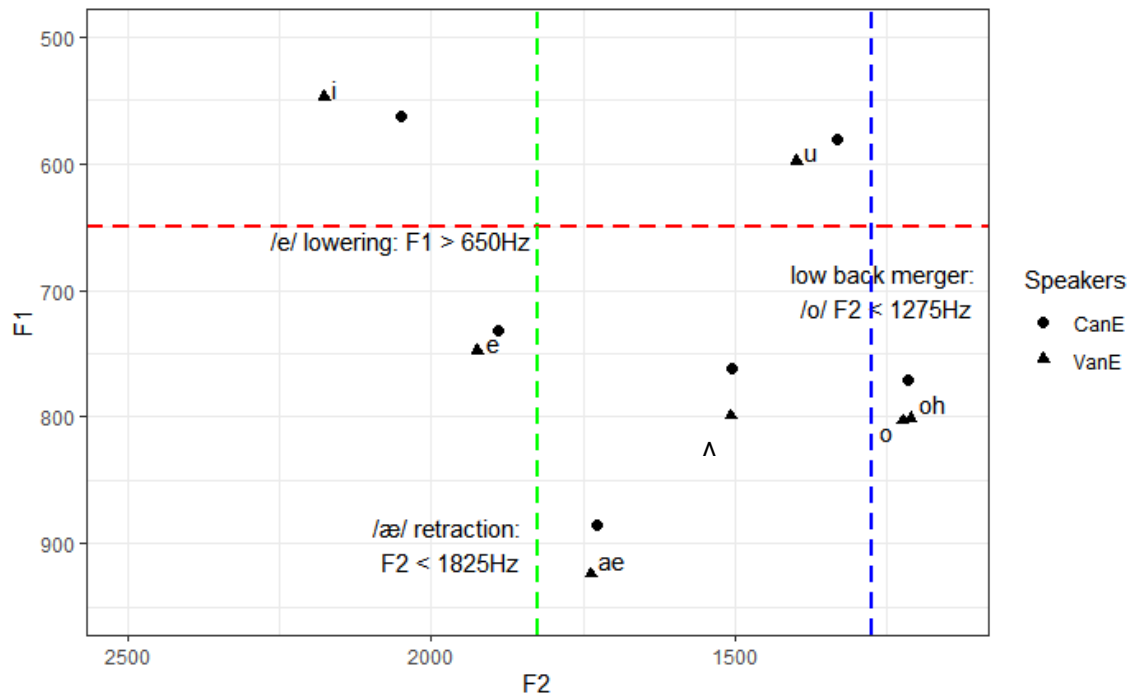


Figure 5 The Canadian Shift in Vancouver and in Canada as reported in Boberg (2010:145)

It is clear that the Canadian Shift is present and robust in Vancouver speakers as they adhere to the thresholds established by the ANAE: an F1 of /e/ is 747 Hz, so there is lowering of /e/, an F2 of /æ/ is 1736 Hz, so there is a retraction of /æ/, and an F2 of /o/ is 1222 Hz, so it is in the back of the vowel space, near-merging with /ɒ/ (14 Hz difference in F2).

The overall configuration of the two systems is similar, with the difference concerning the height on the low vowels and the degree of advancement of the high vowels (Table 11). In Vancouver English, /i/ is not as retracted as in Boberg's data for Canada overall, as shown by the difference of 123 Hz between these two realizations of the same vowel. As for /u/, it is more centralized in Vancouver than in Canada overall, with a difference of 64 HZ. The vowel /e/ differs slightly in both dimensions: it is 14 Hz lower and 33 Hz fronter in Vancouver than in Canada overall. With /ʌ/, the difference is

strictly in F1, with Vancouverites having a lower vowel by 37 Hz. The same is true for /æ/: Vancouver speakers show a lower vowel compared to Canadians overall, with the difference of 39 Hz. Finally, in the back of the vowel space, both systems show merged /o/ and /oh/ in a somewhat raised position, with a difference of around 30 Hz between the two clusters of the merged vowels (Boberg provides the same value for both of these vowels, hence the overlap on the graph).

Table 11 Mean formant values for all Vancouver speakers in comparison with Canadian speakers as reported in previous research

	Relevant thresholds (ANAE 2006: 219)	Canadian English (Boberg 2010:145)		Vancouver English (current study)		Vancouver English (Sadlier-Brown & Tamminga 2008:7)	
		F1	F2	F1	F2	F1	F2
/i/	--	563	2051	546	2174	557	2063
/e/	F1 > 650 Hz	732	1891	746	1923	747	1958
/æ/	F2 < 1825 Hz	885	1727	924	1736	871	1774
/ʌ/	--	761	1504	798	1505	--	--
/u/	--	581	1333	597	1397	--	--
/o/	F2 < 1275 Hz	771	1214	802	1222	--	--
/oh/	--	771	1214	800	1208	--	--

Sadlier-Brown and Tamminga, in their comparative study of Vancouver and Halifax, provided the normalized formant values for the three front vowels (2008:7). Because the authors employed a similar method of data collection and normalization, a direct comparison is possible (Table 11). The height (F1) of /i/ and /e/ in these two studies is quite similar, if not the same, and the F2 difference for /e/ is quite small, 35 Hz; however, Sadlier-Brown and Tamminga found much more retraction of /i/ than I did: the difference in F2 between these two studies is 111 Hz. The authors found a moderate correlation with age for the F2 of /i/, which leads them to suggest that this vowel retracts in apparent time. In this respect, Sadlier-Brown and Tamminga agree with Boberg, who also found a correlation of the F2 of /i/ with age (2010:227), with younger people having a more retracted /i/ with the F2 of 2051 Hz. Some of the differences between the values for the F2 of /i/ in the previous studies and in the current one can be accounted for by because of ethnicity, as will be discussed below. Finally, Sadlier-Brown and Tamminga describe /æ/ as slightly higher than I do (F1 difference of 53 Hz) and not as retracted (F2

difference of 38 Hz). Overall, these findings align with the retraction and lowering in apparent time described for this vowel in previous research (Pappas & Jeffrey 2013).

To check for the effect of gender and heritage, linear mixed effects regression analysis was conducted in R (R Core Team 2018) with F1 and F2 of the three main vowels that participate in the Canadian Shift (/i/, /e/ and /æ/) as the dependent variables, and heritage and gender as independent variables. A visual inspection of residual plots did not reveal any deviations from homoscedasticity or normality. The results (Table 12) showed an interaction of heritage and gender for the F1 of /i/ only, that is, being of a particular gender and heritage makes one produce this vowel at a different height, as will be discussed below.

As a separate main effect, gender is a significant predictor for the F1 on /e/ and /æ/, that is, males and females differ in the height of these vowels, and heritage has a significant effect on the degree of frontness (F2) of /i/ and /e/.

Table 12 Mixed effects results for gender and heritage influence on F1 and F2 of /i/, /e/ and /æ/ (boldfaced values are significant)

	/i/		/e/		/æ/	
	F1	F2	F1	F2	F1	F2
gender	$F(1, 44) = 0.05, p = 0.81$	$F(1, 44) = 0.49, p = 0.48$	$F(1, 44) = 13.3, p = 0.0007$	$F(1, 44) = 1.31, p = 0.25$	$F(1, 44) = 6.94, p = 0.01$	$F(1, 44) = 3.60, p = 0.054$
heritage	$F(2, 44) = 0.16, p = 0.84$	$F(2, 44) = 4.77, p = 0.01$	$F(2, 44) = 0.12, p = 0.9$	$F(2, 44) = 4.38, p = 0.02$	$F(2, 44) = 0.45, p = 0.63$	$F(2, 44) = 0.43, p = 0.65$
interaction of heritage and gender	$F(2, 44) = 3.49, p = 0.03$	$F(2, 44) = 0.71, p = 0.49$	$F(2, 44) = 0.59, p = 0.55$	$F(2, 44) = 1.55, p = 0.22$	$F(2, 44) = 0.43, p = 0.64$	$F(2, 44) = 1.15, p = 0.32$

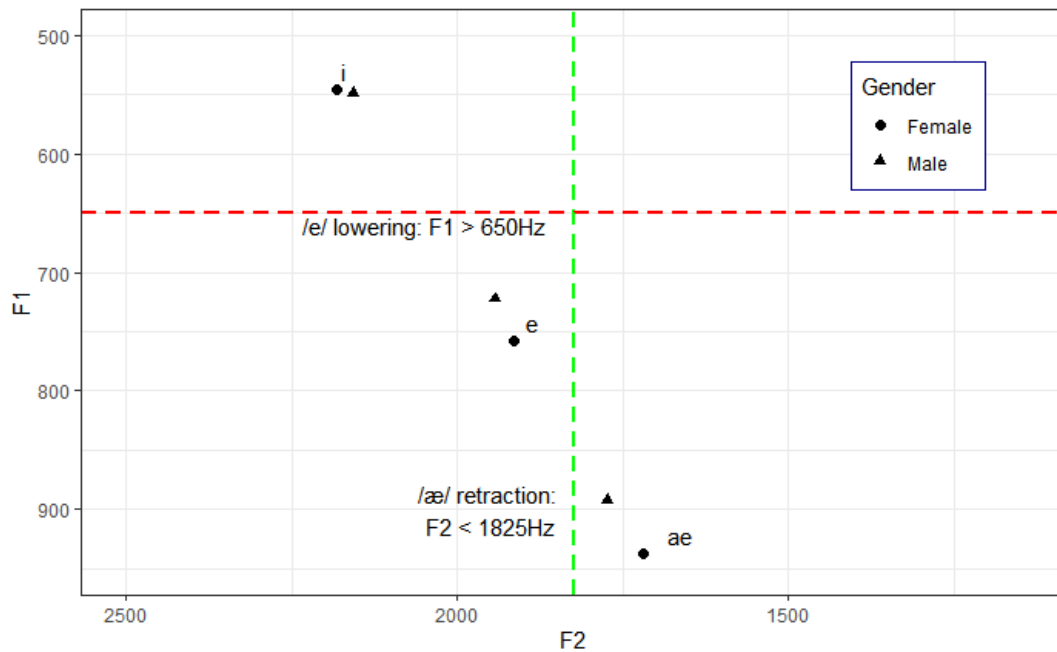
The effect of gender

Absence of the apparent-time component does not allow me to judge the direction of the change based on the present data. However, because females have been consistently shown to lead the change in Canada overall and in British Columbia (Clarke et al. 1995, Pappas & Jeffrey 2013, Swan 2016), looking into the gender differences may provide some hints about the progression of this change. Table 13 presents the numeric values for the short vowels split by gender, and Figure 6 provides the visual.

Table 13 Mean F1 and F2 for short vowels in Vancouver, by gender

Vowel	Female				Male			
	<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>	<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>
æ	938	80	1719	113	892	66	1774	124
e	758	90	1914	186	722	75	1943	171
i	545	76	2182	183	549	61	2157	165

It is clear from Figure 6 that both males and females adhere to the thresholds; however, there are some noticeable differences in the lower part of the vowel space. A comparison of the values in Table 13 shows that both /e/ and /æ/ are lower and more retracted in females than in males. Statistical tests showed, as reported in Table 12 above, that gender has a significant effect on the F1 of /e/ ($F(1, 44) = 13.3, p = 0.0007$) and F1 of /æ/ ($F(1, 44) = 6.94, p = 0.01$), but no statistically significant effect on F2 of these vowels was found. At the same time, the difference in the position of /i/ appears to be small which is confirmed by the absence of a separate gender effect in the statistical tests.

**Figure 6 Males and females' participation in the Canadian Shift**

To sum up, while both males and females in Vancouver participate in the Canadian Shift, the degree of advancement differs for some vowels. The discovered gender difference for /e/ and /æ/ suggests that the lowering of /e/ and lowering and

retraction of /æ/ are still in progress, with males lagging behind females, which corroborates previous findings from this location (Pappas & Jeffrey 2013:44, Mellesmoen 2016:18, Roeder et al. 2018:98).

The effect of heritage

Visualizing the data points with the threshold allows us to state that all Vancouver speakers, regardless of their ethnicity, participate in the Canadian Shift, as well as uniformly produce other vowels marginally involved in the Shift (Figure 7). The speakers are quite unified in their realizations of the low-back merger, as well as vowels /æ/, /u/ and /ʌ/; however, there are some differences mostly in the horizontal dimension for the front short vowels /i/ and /e/ that will be discussed below.

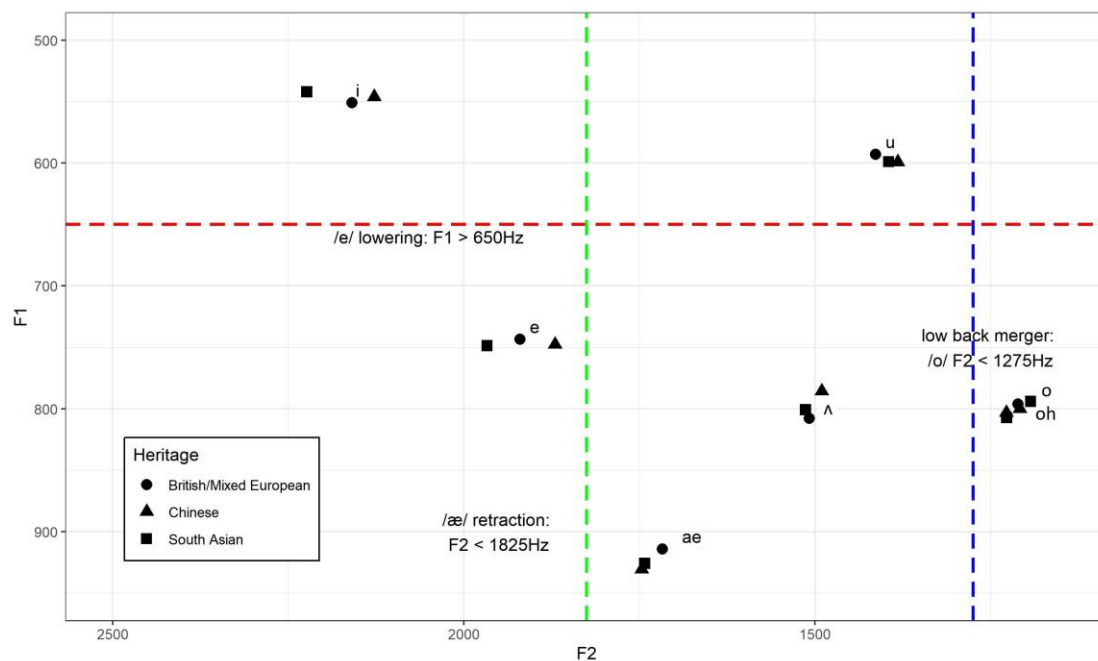


Figure 7 Canadian Shift across three ethnic groups in Vancouver

Table 14 provides the numeric values for the three main vowels involved in the Canadian Shift: /i/, /e/ and /æ/ in speakers with different ethnic backgrounds. Interaction of ethnicity with gender will be discussed at the end of this section.

Table 14 Mean F1 and F2 for /i/, /e/, and /æ/ vowels in Vancouver: Speakers from three ethnic groups

Vowel	British/Mixed European		Chinese		South Asian	
	<i>M</i> (F1) and <i>SD</i>	<i>M</i> (F2) and <i>SD</i>	<i>M</i> (F1) and <i>SD</i>	<i>M</i> (F2) and <i>SD</i>	<i>M</i> (F1) and <i>SD</i>	<i>M</i> (F2) and <i>SD</i>
i	551 (78)	2159 (175)	546 (62)	2128 (181)	542 (74)	2224 (165)
e	743 (88)	1920 (164)	748 (79)	1870 (156)	748 (92)	1967 (202)
æ	914 (81)	1717 (120)	931 (92)	1747 (133)	926 (65)	1742 (105)

It is clear from the visual inspection (Figure 7) that the three ethnic groups pattern differently in regard to the front high vowels, but only in the horizontal dimension. South Asians have the most conservative un-retracted /i/ and /e/, while Chinese, on the opposite, have the most retracted vowels. All three groups have their /æ/ low in the vowel space, but this time it is the British group that has the most retracted (though not as lowered) vowel, compared to the two non-White groups. The results of the mixed effects tests reported above (Table 12) show that the heritage has a statistically significant effect on the F2 of /e/ ($F(2, 44) = 4.38, p = 0.02$) and F2 of /i/ ($F(2, 44) = 4.77, p = 0.01$). The results are in line with the previously reported findings from the same project (Presnyakova et al. 2018): the effect of heritage is statistically significant for F2 of /i/ and /e/, and not for any other measures.

To explore the direction of the effect, post-hoc Tukey tests were conducted. The results show that for both F2 of /i/ and F2 of /e/, Chinese and South Asians differed significantly at $p = 0.0171$ for F2 of /i/ and $p = 0.0176$ for F2 of /e/. For both vowels, Chinese have a smaller F2 value that corresponds to a more retracted position in the vowel space. The British/Mixed European group was not significantly different from the other two groups, staying somewhere in the middle.

Finally, to explore the interaction effect of heritage and gender found earlier (Table 12) for the F1 of /i/ ($F(2, 44) = 3.49, p = 0.03$), the last set of tests was conducted to check for the direction of effect. The results show that in regard to the F1 of /i/, being a Chinese male makes one significantly different from the rest ($p = 0.015$), and so does being a South Asian male ($p = 0.048$).

4.1.3. Summary

To conclude the section on the Canadian Shift, I found that British/Mixed European, Chinese and South Asian speakers all participate in the Canadian Shift in Vancouver as defined by the thresholds established by the *ANAE* (2006). At the same time, I discovered some interesting ethnic differences along the horizontal dimension: Chinese and South Asian speaker appear to differ from each other in the F2 of /i/ and /e/, while the British/Mixed European group remains in the middle. Investigation of the interaction of gender and ethnicity suggests a more complex pattern where non-White males show differences in regard to F1 of /i/ compared to the rest of the speakers. The mean value for all speakers falls around that for British/Mixed Europeans for /i/ and /e/; if we take this value as being the community norm, then Chinese seem to push the change towards retraction, while South Asians hinder it.

4.2. /æ/ allophones

4.2.1. Background

In North America, the articulation of /æ/ and its allophones (so-called short-a system) is one of the two key diagnostic variable that, together with the low-back merger, helps distinguish many regional dialects of the U.S., as well as differentiate the American and Canadian varieties of English (Labov et al. 2006:120). Labov et al. (2006) describe several different short-a systems present in North America that differ in the degree of raising in pre-nasal and pre-velar environments, as well as retraction and/or lowering in other contexts not affected by raising. The authors comment that there is a great variety and complexity of configurations of such systems, from the split system of New York and the Mid-Atlantic States with very complex raising conditioning pattern to the nasal short-a system with a clear separation of pre-nasal and elsewhere allophones found in many regions, to continuous short-a system with no such clear break, which predominates in the West (2006:172-183). The systems also vary in the ordering of raised allophones, ranging from “n > d > g system”, where the pre-nasal allophone is the most raised and elsewhere environment is more raised than in the pre-velar position, to “g > d system,” where the pattern is reversed (Labov et al. 2006:182). Western part of the U.S. shows the latter configuration; raising of pre-velar /æ/ more than pre-nasal /æ/ is typical of the northwestern areas and has been the focus of many studies of the

Pacific Northwest English. In some location in the U.S., /æɡ/ has been shown to merge with /ɛɡ/ and even /eyɡ/ (Freeman 2014, Wassink et al. 2009).

Canada overall is characterized by a continuous short-a system where the pre-nasal /æ/ is more raised than the pre-velar /æ/, and both are more raised than the allophone in the elsewhere condition, but there is no clear separation of the allophones (Boberg 2010:207). Boberg (2010:209) includes raising of pre-nasal and fronting of pre-velar allophones of /æ/ in his list of diagnostic features that distinguish regional varieties of Canadian English. The threshold of less than 700 Hz for raised /æN/ is passed by speakers from Ontario and the Maritimes, while pre-nasal raising remains moderate in the rest of the country, including BC. Fronting of /æɡ/ is on the contrary most advanced in the Western Canada compared to the rest of the country.

The mechanisms of raising in pre-nasal and pre-velar environments are described in the literature as follows. Acoustic and instrumental measurements show that pre-nasal realization of a vowel occurs when the velum is lowered for a following nasal segment leading to lowering of F1 value of the preceding vowel (Ladefoged 2001, Labov et al. 2006:174). Pre-velar realization also originates in co-articulation: a velar stop is pronounced with the tongue dorsum raised which influences the preceding vowel (Ladefoged 2001). Voiced velar stop /g/ has been shown to have much greater effect on lowering F1 and raising F2 of /æ/ than voiceless /k/ (Zeller 1997; Wassink et al. 2009; Freeman 2013; Riebold 2015) which has been explained by the compensatory lengthening of a vowel preceding a voiceless consonant (Wassink & Riebold 2013). It should be noted that raising of /æ/ in both of these contexts can be sometimes accompanied by the development of a glide, though its direction is different: for the pre-nasal /æ/, the trajectory is downward (e.g., [beən] *ban*), while with the pre-velar /æ/, there is an opposite raising pattern of the glide (e.g., [bejg] *bag*) (Mielke et al. 2017:332). Interestingly, Swan (2016) found “slightly up-gliding” realization of /æN/ in Vancouver compared to Seattle where it is “sharply in-gliding” (305). The current study will not look at the possible glides since the focus here is on the degree of raising of /æ/ in pre-nasal and pre-velar contexts.

In terms of the social meaning assigned to this variable, Swan (2016) reports that several Vancouverites reported pre-velar raising as a feature of their own city, but no one mentioned pre-nasal raising in this respect (299). Pre-velar raising may be emerging

as an iconic feature of the Pacific Northwest region overall, according to the author. As for a possible association with ethnic groups, it appears that pre-nasal raising may be associated with “White” speech (Gordon 2000, Roeder 2009), or, alternatively, “White majority community” (Boberg 2004, based on Montreal study), while pre-velar raising has been shown to be exhibited by speakers with non-White backgrounds (Becker & Wong 2010, Riebold 2015). Finally, pre-nasal raising was discussed by Eckert (2008b) as a local marker of belonging to the “crowd” in California high schools where social class, local prestige and ethnicity all intersect. I will review these and other relevant studies later on in this chapter.

Studies of the /æ/ allophones in Vancouver and British Columbia

In Canada overall, the first mentioning of the influence of the phonological environment on /æ/ allophones occurred in the context of the description of the Canadian Shift by Clarke et al. (1995), reviewed in the previous section. The authors examined phonological factor groups and found that in Ontario, the following nasal segment causes tensing and raising of /æ/ (214), while the following velar has no significant effect on shifting of /æ/ (216). Two studies of Vancouver English from the same decade focused on the retraction of /æ/ in elsewhere contexts but did not report pre-nasal or pre-velar variation (De Wolf 1993, Esling & Warkentyne 1993). Finally, Hall (2000:25) in her small comparative study based on impressionistic analysis of vowel backing in Toronto and Vancouver found retraction of pre-nasal /æ/; however, absence of instrumental analysis precludes reporting changes in the height dimension. Based on these studies conducted in the last decade of the 20th century, it’s impossible to say what the status of the allophonic raising of /æ/ was in Vancouver or BC at that point. However, some later studies that included an apparent time component suggest that the raising in pre-velar and pre-nasal contexts was already well-established in BC as early as the middle of the 20th century (Roeder et al. 2018:102).

Regardless of its start, a number of studies confirmed the robust presence of allophonic variation in Vancouver and BC in the following decades. Hirayama (2000) collected data from fifteen (nine males and six females) young speakers, most raised in British Columbia. Recordings of the word list were analyzed impressionistically and instrumentally; the author measured two first formants of the vowels. Hirayama found raising in both environments, with pre-velar (and pre-velar nasal) context favoring raising

of /æ/ more than pre-nasal context (2000:23). Hirayama also notes that in her data, “raised /æ/ was never broken into a diphthong [eə] type” (ibid.). Hirayama’s findings are corroborated by two later large-scale studies: *The Atlas of North American English* by Labov et al. (2006) and *The Phonetics of Canadian English* by Boberg (2008).

According to *ANAE* (Labov et al. 2006), British Columbia is somewhat close to overall Canadian average in terms of /æN/ raising measured as Cartesian distance between pre-nasal /æ/ and elsewhere condition (241 Hz in BC vs. 276 Hz overall Canadian mean) (223). Interestingly, the map for Vancouver in *ANAE* shows two very different patterns: one speaker with a large difference of greater than 300Hz between /æ/ and /æN/, and two speakers with a small difference of less than 100Hz for the same pair (175). As for pre-velar /æ/, *ANAE* delimits an area including most of Canada and a large part of the Northwest and North Central U.S. where /g/ leads to raising of /æ/. Vancouver in particular is marked as having a “continuous g > d system” (182), that is, speakers produce raised /æ/ before /g/ more than before /d/, but there is no clear separation of the tokens into two groups. Based on these reported results, it is not clear which allophone was higher.

The Phonetics of Canadian English (Boberg 2008) describes significantly more raising of pre-nasal allophone (Cartesian distance 392Hz) than was reported in *ANAE* (Cartesian distance 241Hz) for British Columbia. Boberg found no statistically significant differences between raising of /æɡ/ and /æN/ in British Columbia (2010:207); he gives values of 741 Hz for F1 of /æN/ and 746 Hz for F1 of /æɡ/ (204). However, a case study in the same publication challenges this conclusion: an individual vowel system of an older Vancouver male shows more raising of pre-velar /æ/ than pre-nasal /æ/. Boberg describes this speaker’s English as having several ‘western features’, including “the raising of /æɡ/, two tokens of which are well above the distribution of both /æ/ and /æN/; the pre-nasal allophone shows fronting more than raising” (Boberg 2010:233).

The most recent studies from BC further confirm the separation of /æ/ from its allophones but describe somewhat contrary trends in regard to pre-nasal allophone. Mellesmoen (2016) collected data from sixty-five BC English speakers (36 females and 29 males, ages 16-62) who were asked to read a word list. Vowels from the words were measured at two points, the nucleus and the offglide. Based on her data, Melesmoen reports that /æng/ is the most raised of the three allophones, followed by /æɡ/ and /æN/,

based on the measurements of the nucleus, which aligns with the previous findings. Mellesmoen provides the following normalized F1 values: 737 Hz for /æN/, 718 for /æɡ/ and 706 for /æŋɡ/ (6), so the allophones are slightly more raised than reported previously in Boberg (2010) for BC. Mellesmoen also measured the height of the allophones at offglide, that is, 80% of the vowel duration. She found that the offglide of /æN/ lowers towards the elsewhere condition, while the two pre-velar allophones continue raising at offglide (7). The author concludes that females are lowering pre-nasal /æ/ in apparent time since the younger females showed statistically significant increase in F1 values for pre-nasal condition compared to older speakers, while males remain unaffected by this process (12). The two other allophones, pre-velar and pre-velar nasal pattern together and are categorically distinct from the pre-nasal allophone (18). The reported lowering trend is somewhat unexpected and does not find confirmation in the other studies from the same time period (Swan 2016, Roeder et al. 2018).

Swan (2016) interviewed nineteen speakers from BC (10 females and 9 males, ages 18-35) as part of her comparative study of American and Canadian English in the Northwest and analyzed the word list tokens instrumentally. Swan found that younger speakers and females raise and front pre-nasal allophone more than males and older speakers. She describes pre-nasal raising in Vancouver as coarticulatory compared to Seattle, where it is phonologized (149). As for the pre-velar allophone, Swan reports that younger speakers in Vancouver raise it more than older speakers. Females in the younger group lead males in raising (132). Interestingly, Swan states that compared to Seattle where pre-nasal raising is phonologized, in Vancouver it is purely co-articulatory in contrast with pre-velar raising which is conventionalized in both cities (conventionalization being a stage between a phonetic and a phonologized form) (2016:310).

While all the previous studies of BC cited here more or less centered on Vancouver, a team of authors from Victoria gives a glimpse of this variation from the capital of the province. Roeder et al. (2018) conducted a study based on a subsample of the Synchronic Corpus of Victoria English that included one hundred fourteen Victoria residents (59 females and 55 males, ages 14-98). The vowels from the word list reading were measured at one-third of their duration (except the ones with the glide, which were measured at F1 maximum). In regard to /æ/ allophones, Roeder et al. report that in Victoria, /æɡ/ is slightly more raised than /æN/. They also found, based on the

Synchronic Corpus of Victoria English, that pre-nasal and pre-velar raising is a stable feature, “one that has characterized Victoria English for at least eighty-five years, dating to speakers born as early as 1913” (102).

To sum up, all studies conducted in the last two decades report movement of /æ/ allophones in British Columbia, but the degree of raising, as well as the relative position of the allophones to each other, differs slightly. Table 15 provides data from the cited studies (NA marks absence of the reported data, which does not necessarily mean the phenomena were not present at the time). It demonstrates the robust presence of the allophonic variation in BC, more reports on pre-velar-nasal raising lately, as well as more raising in pre-velar environment compared to pre-nasal one in recent years. The current study will add to this body of knowledge, check for the proposed lowering trend in females, as well as enhance our knowledge about the ethnic variation in realization of these allophones.

Table 15 Previous research on /æ/ allophones in Vancouver/BC English

study	/æN/ movement	/æɡ/ raising	/æN/ - /æɡ/	/æŋɡ/ raising
De Wolf 1993, Esling and Warkentyne 1993	NA	NA	NA	NA
Hall 2000	backing	NA	NA	NA
Hirayama 2000	raising	present	NA	present
Labov, Ash and Boberg 2006	raising	present	NA	NA
Boberg 2008, 2010	raising	present	/æN/ > /æɡ/	NA
Mellesmoen 2016	lowering in young females	present	/æN/ < /æɡ/	present
Swan 2016	raising	present	/æN/ < /æɡ/	present
Roeder et al. 2018	raising	present	/æN/ < /æɡ/	NA

Ethnic group participation in allophonic variation

This section presents a review of previous work with immigrant groups in the U.S. and Canada that focused on /æ/ allophones. It should be noted that most of the

studies in the U.S. examine pre-nasal /æ/ as part of the Northern Cities Shift (fronting and raising of /æ/ in all environments) or as part of the change affecting New York English (move from a short-a split system to a nasal system). Despite the fact that Canadian English is undergoing a very different type of vowel change (retraction of /æ/ as part of the Canadian Vowel Shift), the findings from the U.S. studies on different non-White heritage groups serve as an interesting comparison point. As for pre-velar raising, it has been a sole focus of a number of studies in the American Pacific Northwest as this feature is very salient in this region, but to my knowledge, only one study included immigrant populations. In Canada, very few studies looked at the ethnic group participation in this allophonic variation. I will start with reviewing these and then move on to the U.S. studies; pre-nasal raising featured in many more studies than the pre-velar one, so it will be addressed first.

Pre-nasal raising

As for ethnic patterns in Canadian English, Boberg's (2004) Montreal study was the first to examine the speech of three non-Anglo ethnic groups of European descent. Montreal English has been described to have the low-front (close to low central) articulation of /æ/ except before nasal consonants (550). Boberg interviewed three groups of native speakers of Montreal English from the Irish, Italian and Jewish heritage groups. Vowels from the word list reading were measured at the point that best represented the central tendency of the vowel (549). Boberg observed that Irish speakers in Montreal "exhibit clear and regular raising of /æ/ before nasal consonants, while both Italian and Jewish speakers exhibit only variable raising, if any at all" (559). The author found some other ethnolinguistic features in the speech of the non-British groups and suggests that their origin and perpetuation are due to the unique "residential, social, educational, and occupational patterns" of these ethnic groups in Montreal, as well as the status of English as the minority language which means limited availability of the native model for acquisition (539).

Hoffman and Walker (2010) conducted a study on two generations of Chinese (33 participants) and Italian (27 participants) immigrants in Toronto to see if they participate in Canadian Vowel Shift. The authors extracted tokens with vowels from the interviews and coded them impressionistically as shifted or not shifted. Tokens for /æ/ included those in pre-nasal environment (53). Hoffman and Walker showed that nasal

environment disfavors /æ/ backing among all participants, though not significantly for Chinese with high degree of affiliation to their heritage (54-55). The same pattern is reported by the authors for the British/Irish control group, so Italians and Chinese, in particular the second and third generation, follow the pattern of the majority in this case.

Finally, two previous Canadian studies described pre-nasal, as well as pre-velar, raising by Filipinos. Umbal (2016) found that second-generation Filipinos in Vancouver shift both /æ/ allophones, with pre-nasals showing greater raising than pre-velars. Li et al. reported similar results at the conference (2018): their Filipinos raise these allophones as much as “founder population” of Winnipeg.

In contrast to Canada, the studies that include ethnic groups in the U.S. generally focus on African Americans, Latinos and, more recently, on Asian immigrants. Gordon (2000) looked at a set of variables associated with the Northern Cities Shift, including the raising and fronting of /æ/, and its use by speakers from four distinct ethnic backgrounds: European Americans, Mexican Americans, African Americans and mixed heritage group in northern Indiana. All of the twenty-two participants (ages 18-23) were native speakers of English, some bilingual in Spanish. The study only included females who participated in sociolinguistic interviews and did reading tasks. The tokens of vowels were coded auditorily as shifted or not. Overall, Gordon found that Northern Cities Shift predominantly characterized White speech, while African Americans and Mexicans did not participate in this change (132), while mixed group did so to some extent. African American females had some pre-nasal raising of /æ/ (122), which Gordon explains as a possible first step in the adoption of NCS by this group (123). On the other hand, three out of five Mexican American females, as well as one speaker of mixed heritage, produced lowered and backed /æ/ ~ [a] in pre-nasal environments (130) which was not found in any of the other groups. Gordon rejects the Spanish language transfer explanation (130) and says that more work needs to be done to determine ‘sociolinguistic status’ of pre-nasal retraction in Mexicans (133). Finally, Gordon reports some interview data of an outlier from the Mexican group who patterned like Caucasians in regard to /æ/ raising (and did not have /æN/ backing). This speaker grew up in a White neighborhood and had White friends. Gordon concludes, “In speaking she distinguishes herself from other Mexicans and allies herself with Whites, just as she appears to have done in other areas of her life” (124).

Eckert (2008b) found that in a predominantly White middle class school in San Jose, all speakers had the nasal system (/æ/ is raised and fronted only in pre-nasal contexts) typical of White California English, but the most extreme examples of the pre-nasal raising were found among the kids who expressed affiliation with the “crowd” (a group of popular kids that had an informal authority), including one Latina. At the same time, in a school in the same neighborhood that serves a poor and ethnically diverse population with Latino and Asian Americans dominating in numbers, the pattern was reversed. The “crowd” members, including Latina girls and students of several other ethnic backgrounds, did not have the nasal split which is typical of Chicano English; however, the non-“crowd” students of different ethnicities in this school, including Latinos, did show the nasal pattern in different degrees of advancement. Eckert concludes that it’s not the ethnicity, but the affiliation with the “crowd” and coolness and authority associated with the “crowd” membership that determines the presence or absence of the pre-nasal raising of /æ/ (2008b:41). In a similar vein, in Fought’s (2003) study of Chicano English speakers in Los Angeles area, more pre-nasal /æ/ raising was produced by young Chicano females who were not affiliated with gangs. In both of these studies, what influenced the production of the variant was not belonging to a particular ethnic group, but the indexical meaning the raised allophone had.

Roeder (2009) discusses the shifting of /æ/ as part of NCS in native speakers of English of Mexican descent in Michigan. Pre-nasal raising is “ubiquitous in the local Anglo population,” according to Roeder (14). The data was obtained from sixteen (10 males aged 14-71, 6 females aged 14-23) life-long residents of Lansing, Michigan’s capital, all second or third generation Mexicans. The words with /æ/ vowel were extracted from the word list read by all participants and formant measurements were taken during the steady state of the vowel. Roeder found that all six women (but none of the ten men) in her sample had pre-nasal raising of /æ/ that was statistically significant. The author states that young women of Mexican heritage appear to lead the change towards NCS in their group, but also suggests that “raising in the production of /æ/ before nasals is a distinctly female marker in this group” (2009:14). These results are the reverse of Gordon’s (2000) who reported that most of the young Mexican females in Indiana did not raise /æ/ and in fact backed it in pre-nasal environments. Some possible explanations can be in the dialectal differences of Indiana and Michigan and the degree of advancement of the Northern Cities Shift in these two locations, in the time span

between the two studies, as well as in differences in the ethnic identity of the two populations. Gordon says that his Mexican participants “took the questions about ethnic heritage as an opportunity to demonstrate their ethnic pride, speaking in glowing terms of the central role of their ethnicity in defining their identity” (2000:124). Roeder only mentions that her participants are second and third generation Americans, mostly monolingual, well-assimilated into the local community (2009:4). It is possible that Roeder’s speakers are less heritage-driven than Gordon’s. Finally, Roeder mentions the lack of assimilation of Mexican Americans to pronunciation of other vowels participating in NCS and states that it is not because of “lack of contact with the Anglo community or lack of perceptual acuity” (14). It almost seems like heritage speakers (unconsciously) chose to adopt one raised vowel that is salient enough to be associated with local White speech and disregarded others.

Another ethnic group that has attracted more attention by researchers in recent years is Chinese Americans. Wong (2010) interviewed four young American Chinese females, born and raised in New York City. After examining tokens of several vowels extracted from her recorded interviews, she found that none of the participants have short-a split system typical of New York City dialect where voiced stops, voiceless fricatives and front nasals [m, n] create tensing (raising and fronting). Instead, the speakers produced a *nasal system* with tense (raised and fronted) /æ/ in pre-nasal and pre-velar-nasal contexts and lax /æ/ in all other environments (2010:7).

Becker and Wong (2010) corroborate the findings of Wong (2010) and provide evidence of other speakers from the non-White groups in NYC not acquiring traditional short-a split system. The authors compared vowel systems of four African Americans, four Chinese Americans, four Puerto Rican Americans with vowel systems of 12 White speakers, all natives of New York City and native speakers of English. The vowel tokens were extracted from the interviews and each vowel was analyzed at two points, at 35ms in the onset and offset. Young speakers of ethnic minorities were found to produce highest tokens of /æ/ in pre-nasal and pre-nasal-velar contexts (2010:17) and showed no distinction between tense and lax environments, demonstrating not NYCE short-a split system, but nasal system instead. By doing so, young New Yorkers with non-White heritage seem to align themselves with the youngest White group who has stepped away from the classic New York short-a split system. Becker and Wong found that in young White New Yorkers, pre-nasal tokens form a separate group that is located

highest in the vowel space. Interestingly and relevant to the results discussed later, while the highest tokens of /æ/ in the White group are found in pre-nasal contexts, the highest tokens in Puerto Ricans and Chinese are pre-velar-nasal.

One last study to be reviewed here that reports results for pre-nasal raising in immigrants is by Newlin-Łukowicz (2015) who interviewed thirty-five speakers (18 females and 17 males), first and second-generation Polish immigrants in New York City. Tokens from word list with /æ/ were measured for the first three formants at three point: vowel onset, midpoint and offset (252). The analysis showed that both generations adopt the new system of NYCE, the nasal split for /æ/, also confirmed in the control group of non-Polish New Yorkers. The second generation of Poles is more advanced in its realization and very uniform within the group (294). The author reports a surprising lack of gendered pattern in the second generation: males and females have similar distinction between pre-nasal and other contexts. Newlin-Łukowicz notes that it is unclear if there is any social meaning attached to this variable, but also states that the absence of gendered pattern proves that there is no negative connotations as is the case with the raised /ɔ/ in New York (295).

Pre-velar raising

There are much fewer studies on pre-velar raising in non-White ethnic groups. In the U.S., Riebold (2015) conducted a study of five ethnic groups in Washington state to explore their production of pre-velar front vowels. The author suggests that pre-velar raising is a change from below due to the lack of a prestige variety featuring this variant, as well as absence of social commentary and evaluation of raising (2015:37). Pre-velar raising and merging of BAG and BEG vowels (as well as BAGEL in some cases) has been shown to be a feature of White speech in the area (Wassink et al. 2009, Freeman 2014, Becker et al. 2016, among others). Riebold interviewed 6 African Americans, 15 Japanese Americans, 11 Mexican Americans and 8 people from Yakama Nation, all native speakers of English who grew up in the Washington state. F0, F1, F2 and F3 measurements were obtained from the onset, midpoint and offset of each vowel. Riebold reports that all groups included in the study exhibit statistically significant /æɪ/ raising which provides “further evidence of non-White participation in regional dialects” (117). Of particular interest to my study is the reported extreme advancement of /æɪ/ raising in a

younger Japanese female who is the only one without an overlap between /æ/ and /æɡ/ (96) (unfortunately, the young female group only included one participant in this study).

In Canada, the only two studies that described ethnic group participation in the pre-velar raising are Umbal (2016) and Li et al. (2018). Umbal (2016) found that Filipinos in Vancouver raised their pre-nasal /æ/ more than the pre-velar allophone. Li et al. (2018) reported that their Filipinos raise pre-velar allophones as much as the “founding population” of Winnipeg.

To sum up, previous studies from the U.S. and Canada regarding participation of non-White speakers in the allophonic variation of /æ/ range from those that show the same or similar pattern with White speakers to those that suggest complete abstinence of participation in this change by non-White speakers. Some work has been done on the indexical meaning of variants of this variable.

Data and methods of analysis

For the present analysis, the focus is on /æ/ and three of its allophones: /æN/, /æɡ/ and /æŋɡ/, of which a total of 719 tokens were obtained from the word list. The tokens included:

- 270 of /æ/: bad, sack, sad, sat, tally, tap
- 224 of /æN/: band, stamp, ham, sanity, tan
- 135 of /æɡ/: bag, tag, gag
- 90 of /æŋɡ/: bang and hanger

The F1 and F2 of each vowel were measured following Boberg’s (2010:144-145) methodology, and the resulting values were normalized as described in the methodology section. The mean values for F1 and F2 were used in statistical analysis. Because raising has been shown to proceed along a diagonal trajectory at the front of the vowel space, Cartesian distance between /æ/ and each of the allophones was calculated for individual speakers (Boberg 2010:207); the formula is given below. The smaller the value of the Cartesian distance in Hz, the closer the position of the two allophones.

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Equation 1 Formula for calculating Cartesian distance

The Cartesian distances were entered into a MANOVA to see if heritage (with three levels) and gender (with two levels) are significant predictors in conditioning variation. Post hoc tests were conducted to define which group was responsible for differences. The analysis was conducted in R (R Core Team 2018) and ggplot package (Wickham 2016) was used for building the plots.

4.2.2. Results

First, I will discuss the overall results for all 45 speakers that demonstrate the presence of allophonic raising in Vancouver and its adherence to the isoglosses as defined by Boberg (2010). Then, the gender and ethnic variation will be described since there appear to be some significant differences along these lines. Both mean F1 and F2 values and Cartesian distances will be used for the analysis.

Overall pattern of the allophonic variation of /æ/ in Vancouver

Table 16 provides the normalized mean formant values for the allophones and Figure 8 below represents the distribution of the allophones in the vowel space (the corners of the vowel space are marked by the highest and most spread-out vowel /iy/ and allophone /uwl/). It is clear that all three non-elsewhere conditions contribute to both raising and fronting of the /æ/ allophones.

Table 16 Mean formant values for F1 and F2 /æ/ allophones

	<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>
/æ/	925	79	1738	119
/æN/	812	112	1995	182
/æɡ/	740	93	2084	176
/æŋɡ/	708	78	2272	177

In terms of adherence to the isogloss values for raising of /æN/ and fronting of /æɡ/proposed by Boberg (2010) for distinguishing the Canadian regions, current data confirms Boberg's findings: BC does not meet the 700 Hz threshold for raised /æN/ established for other Canadian regions with more extreme pre-nasal raising. In Boberg's study, the value for F1 of /æN/ for BC is 741 Hz, while my data shows even less raising

at 812 Hz. As for fronting of /æɢ/, according to Boberg, this allophone was shown to be most fronted in the Western Canada, compared to the rest of the country, which led Boberg to establish the isogloss of more than 2000 Hz for F2 of /æɢ/. Boberg gives a value of 2008 Hz for F2 of /æɢ/ in BC (2010:204), and in my data, this allophone is even more fronted at 2084 Hz.

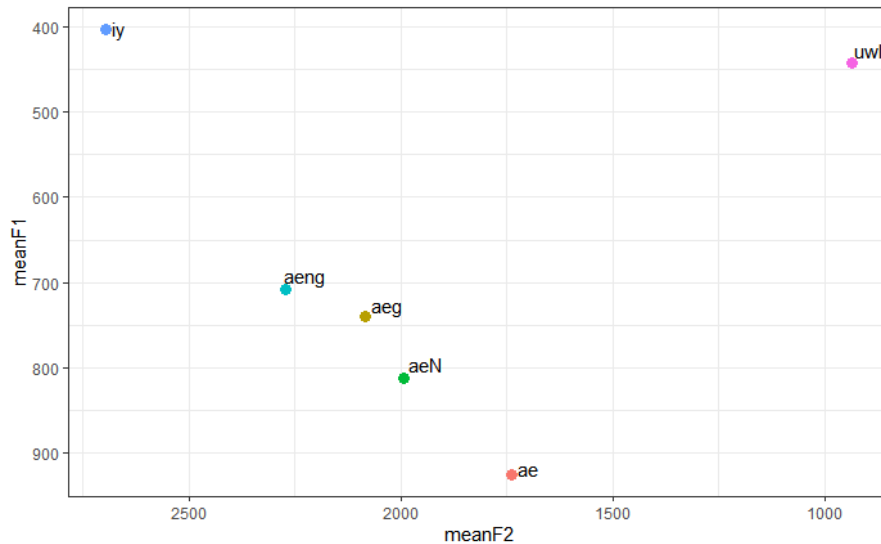


Figure 8 Distribution of /æ/ allophones in the vowel space

To assess the relative degree of raising against each other, mean F1 values of /æ/ and its allophones for all 45 Vancouver speakers were visualized as a box plot (Figure 9). There is slight overlap between the elsewhere condition and the pre-nasal allophone, and substantial overlap between the two velar allophones which appear to be the most similar among them all. The pre-nasal allophone overlaps with all the others to a different degree. There are only a few outliers for each allophone who will be dealt with later.

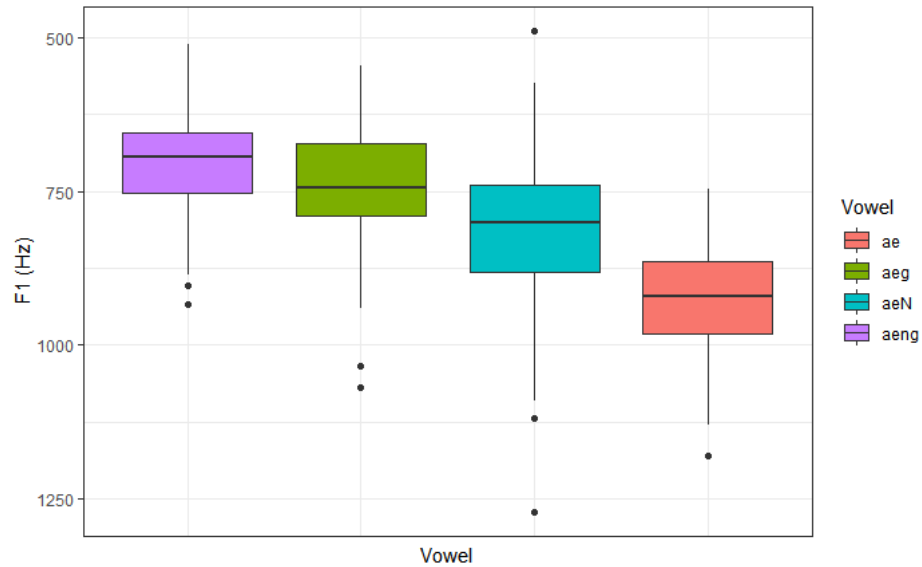


Figure 9 F1 of /æ/ allophones in all speakers (ordered from the most to least raised)

Table 17 below provides mean formant values for /æ/ allophones for all speakers and for the British/Mixed European group for the sake of the direct comparison with Boberg (2010) whose participants were White. Though two other more recent studies in BC provided F1 and F2 values for these allophones (Swan 2016 and Mellesmoen 2016), the methods of measurements and normalization in those studies were different, so the direct comparison is impossible.

Table 17 Comparison of mean values of /æ/ allophones of the current study and Boberg (2010)

Vowel		Current study, all participants	Current study, British/Mixed European	Boberg (2010:204)
/æN/	F1	812	775	741
	F2	1995	2083	-
/æg/	F1	740	779	746
	F2	2085	2006	2008

In terms of pre-nasal raising, the British/Mixed European group in the current study patterns somewhat close to what was reported before: F1 value for my speakers is 775 Hz, while Boberg gives a value of 741 Hz. All participants taken together in the current study produce a higher value of 812 Hz for F1 of /æN/, which corresponds to the lower position of this allophone in the vowel space. As for the F2 value for /æN/, the mean for all speakers is 1995 Hz, while for British/Mixed Europeans this allophone is

more fronted at 2083 Hz. These differences in F1 and F2 arise because of the speakers from the non-White groups who have a lower and less fronted pre-nasal allophone, as will be discussed below.

As for /æɡ/, in the F1 dimension, my British/Mixed speakers (779 Hz) and the group as a whole (740 Hz) pattern close with Boberg's participants (746 Hz). The same is true for the F2 of this allophone: the British/Mixed European group in the current study patterns just like Boberg's participants: 2006 Hz and 2008 Hz, respectively. At the same time, all participants as a group have a more front realization of /æɡ/ (2085 Hz).

While the direct comparison with Swan (2016) and Mellesmoen (2016) is not possible because of the different methodologies, their authors also report raising and fronting of /æ/ allophones to a different degree in BC/Vancouver. Current findings align with those in Swan (2016) and Mellesmoen (2016) in that /æɡ/ is raised more than /æN/, while Boberg (2010) found that /æN/ is slightly more raised than /æɡ/, which may indicate the on-going change. Overall, the allophonic distribution is confirmed and the results are consistent with previous studies.

To examine the extent of the movement of allophones, Boberg (2010) provides values for the Cartesian distance; the following will address this comparison. Cartesian distance was calculated using a formula provided above to compare the allophones along both dimensions simultaneously. The values are presented in Table 18 and visualization in Figure 10. To check if there is a statistically significant difference among Cartesian distances in each pair of allophones, one-way ANOVA test was conducted, followed by Tukey multiple comparisons of means. The results show that indeed there is a statistically significant difference among all three pairs allophones with $p = 0.008$ for the pair /æ-æN/ and /æ-æɡ/ and $p < 0.0001$ for pairs /æ-æɡ/ and /æ-æŋɡ/, and æ-æN/ and /æ-æŋɡ/.

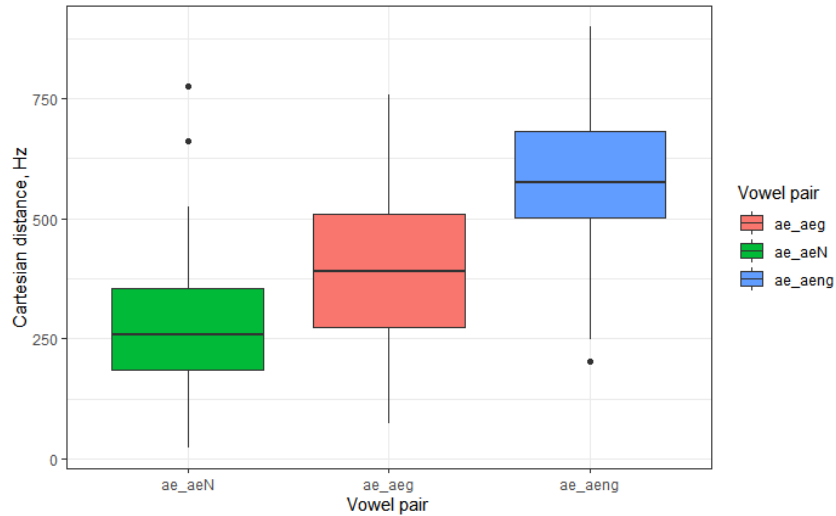


Figure 10 Mean Cartesian distance in Hz for three pairs, 45 speakers

Table 18 Cartesian distance and standard deviation, comparison with Boberg (2008)

Cartesian distance	Current study: All speakers	Current study: British/Mixed Europeans	Boberg 2008
æ-æN	291 (151)	395 (180)	392 (147)
æ-æg	396 (177)	319 (145)	323 (129)
æ-æng	581 (164)	503 (190)	-

The values in Table 18 demonstrate that British/Mixed European speakers in the current study pattern very closely with those from Boberg (2008). At the same time, all speakers as an aggregate have smaller distance between /æ/ and /æN/ than British/Mixed Europeans separately (291 Hz vs. 395 Hz) and larger distance between /æ/ and /æg/ than the British/Mixed European group (396 Hz vs. 319 Hz). This difference arises because of the contribution of the two other ethnic groups, as will be seen later. /æng/ is not included in Boberg's study (2008:145), but he mentions that at least some speakers raise it: "For some speakers it [the position of /æg/] is even higher and also includes /æ/ before velar nasals, as in bang or bank" (2010:153). Current results corroborate this observation, as evidenced by the large Cartesian distance for /æng/. The large standard deviations should be noted as indicative of a lot of variation within groups. Looking at the variation along the gender and ethnic lines will clarify this more.

A MANOVA test was conducted in R (R Core Team 2018) with Cartesian distances as the dependent variable and heritage and gender as independent variables.

Visual inspection of residual plots did not reveal any deviations from homoscedasticity or normality. The results show that both heritage and gender are significant predictors of Cartesian distance but there is no interaction between them. Table 19 presents the results of the statistical analysis.

Table 19 Results of MANOVA for gender and heritage effect on Cartesian distances

gender	$F(1, 37) = 4.98, p = 0.0052$
heritage	$F(2, 76) = 5.16, p = 0.0001$
interaction of heritage and gender	$F(2, 76) = 0.34, p = 0.9$

The effect of gender

Figure 11 and Table 20 present measures of Cartesian distance (distance of each of the allophones from /æ/) for three pairs, split by gender group.

Table 20 Mean Cartesian distance and standard deviation by gender; post-hoc results for significance of differences between males and females

Gender	æ-æg	æ-æN	æ-æng
Female	432 (176)	315 (156)	635 (141)
Male	317 (157)	239 (131)	460 (151)
Post-hoc results	$t(43) = -2.08, p = 0.04$	$t(43) = -1.58, p = 0.12$	$t(43) = -3.8, p = 0.0005$

MANOVA results show that gender is a significant predictor of differences in the Cartesian distances overall ($F(1, 37) = 4.98, p = 0.0052$). At the same time, running the post hoc tests for each of the pairs showed that the difference is not statistically significant for /æN/, while it is for both /æg/ and /æng/ (Table 20). Thus, the degree of raising of /æN/ by females in Vancouver is comparable to that by males, but they raise /æg/ and /æng/ much more than males. Boxplots (Figure 11) visualize these findings.

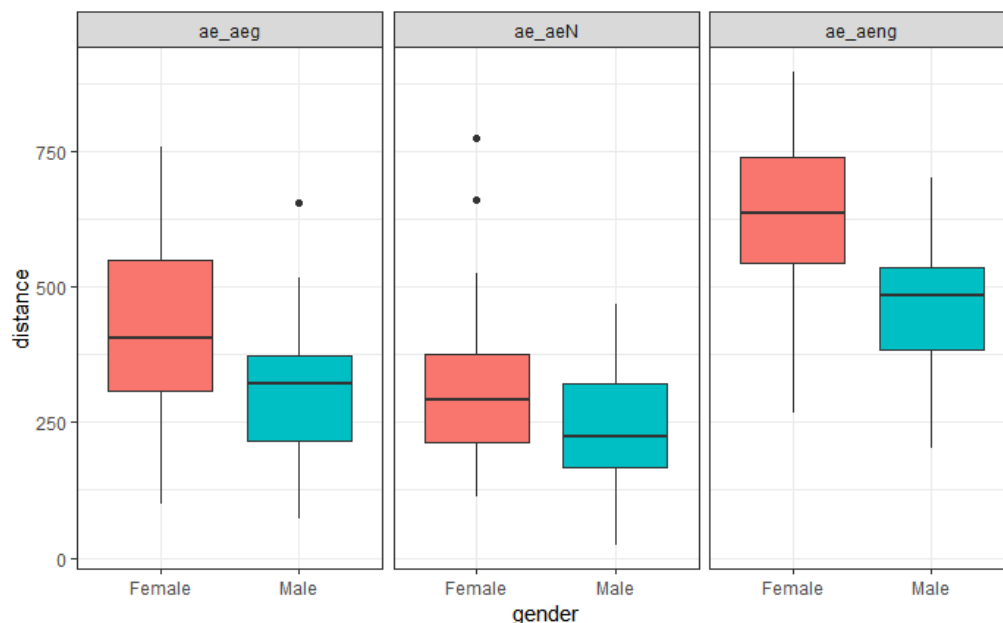


Figure 11 Raising of /æ/ by gender group

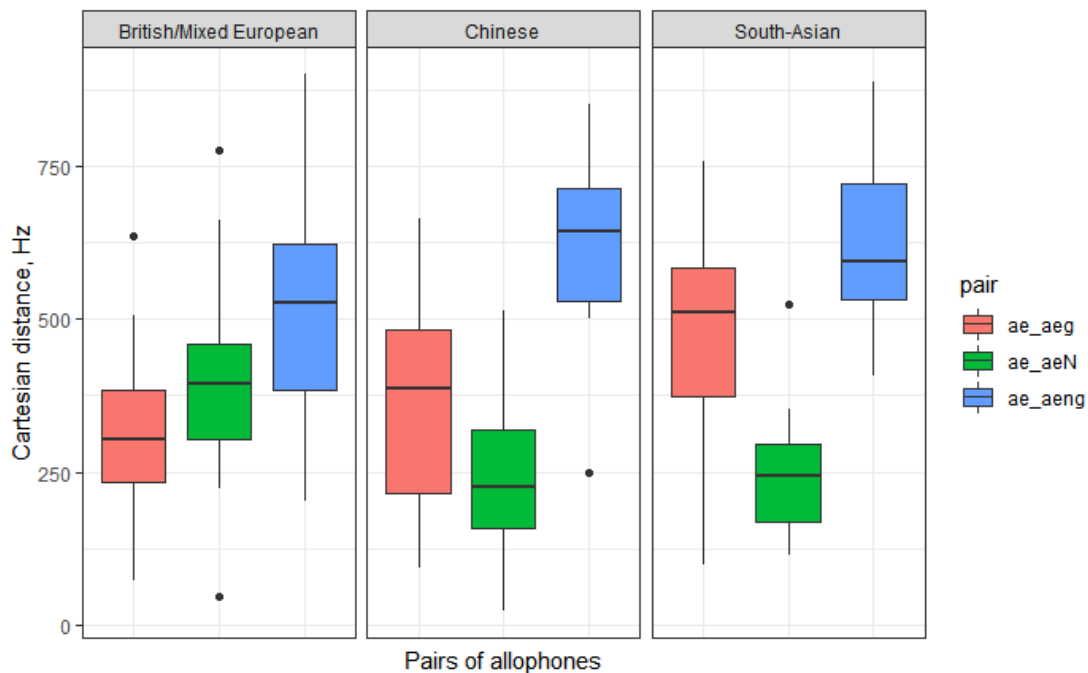
Visual inspection suggests that though below the level of significance, females raise /æ/ slightly more than males. The Cartesian distance between /æ/ and /æN/ for females is 315 Hz, and for males 239 Hz, which aligns with findings reported by Swan (2016:132) who found that females raised /æN/ more than males. Mellesmoen did not report the numeric values for gender groups, so it is impossible to compare; she does report that females were lowering /æN/ over apparent time, while males were not affected by this development (2016:12); however, the actual position of the allophones in different gender groups is not clear from her report.

The effect of heritage

Table 21 and Figure 12 below present the data for the three ethnic groups. There is a quite striking difference in the ordering of the allophones according to Cartesian distance: for the British/Mixed European group, /æ/ is the least raised, followed by /æN/ and followed by /æng/. There is a significant overlap of each adjacent pair, but no overlap of pre-velar and pre-velar nasal. The two non-White groups present a stark contrast in that their pre-nasal allophone is the least raised, followed by pre-velar and pre-velar nasal. Both Chinese and South Asians have a very similar /æng/ distribution, but their other two allophones differ a lot once again: for Chinese, /æN/ and /æ/ overlap considerably, but /æng/ remains separated, while for South Asians, /æN/ and /æ/ do not overlap, but /æ/ and /æng/ do.

Table 21 Mean Cartesian distance and standard deviation by heritage group

Ethnicity	(æ-æg)	(æ-æN)	(æ-æng)
British/Mixed European	319 (145)	395 (180)	504 (190)
Chinese	369 (178)	240 (125)	618 (152)
South Asian	482 (173)	248 (102)	614 (134)

**Figure 12 Raising of /æg/, /æN/ and /æng/ by ethnic group**

Because the MANOVA test showed that heritage is a significant predictor for Cartesian distance of all three pairs, post hoc tests were conducted to determine the source of significance. Post hoc comparisons using the Tukey HSD test indicated that the Cartesian distance between /æ/ and /æg/ of the South Asian group ($M = 482$, $SD = 173$) was significantly different from British/Mixed European ($M = 319$ Hz, $SD = 145$) at $p = 0.027$. At the same time, the mean value of the Chinese group ($M = 369$, $SD = 178$) did not differ significantly from neither the South Asian, nor British/Mixed European groups. Among the three heritage groups, South Asians are leading in /æg/-raising.

As for pre-nasal raising, a pair-wise comparison using Tukey HSD showed that the Cartesian distance between /æ/ and /æN/ of British/Mixed Europeans ($M = 395$, $SD = 180$) differs significantly from that of both South Asians ($M = 248$, $SD = 102$) at $p =$

0.012 and Chinese ($M = 240$, $SD = 125$) at $p = 0.013$. British/Mixed Europeans are leading in /æN/ raising, while South Asians and Chinese pattern very closely together.

Finally, the same test for pre-velar nasal raising showed that the Cartesian distance between /æ/ and /æŋg/ of British/Mixed Europeans ($M = 504$, $SD = 190$), Chinese ($M = 618$, $SD = 152$) and South Asians ($M = 614$, $SD = 134$) is not significantly different for any of the pairs, with p ranging from 0.15 for Chinese/British pair, 0.14 for South Asian/British pair, and 0.99 for South Asian/Chinese pair.

To sum up the results, ethnicity in the current study is a strong predictor of /æN/ and /æŋg/ raising. For /æN/, British/Mixed Europeans raise more than South Asians and Chinese who pattern closely together in having a lower /æN/. For /æŋg/, South Asians raise more than British/Mixed Europeans, while Chinese are in the intermediate position. As for /æŋg/, the test showed that the difference among the groups is not statistically significant, so ethnicity is not a predictor of raising of pre-velar nasal allophone.

4.2.3. Summary

Allophonic variation of /æ/ is well established in Vancouver area. In speakers taken as an aggregate, /æŋg/ is the most raised allophone, followed by /æŋ/ and /æN/ (Figure 8 above). However, a closer look at the speakers with different ethnic backgrounds reveals an interesting difference in the ordering of allophones: in the British/Mixed European group, /æN/ is slightly higher than /æŋg/, while in the South Asian and Chinese groups, /æŋg/ is considerably higher than /æN/ (Figure 12 above). Statistical analysis results show that South Asian speakers lead in the raising of /æŋg/, while British/Mixed European speakers lead in the raising of /æN/.

A number of previous studies consistently reported that more /æN/ raising is found in White speakers or in speakers with ethnic backgrounds who affiliate more with the mainstream (or White) culture of the speech community (Gordon 2000, Roeder 2009, Becker and Wong 2010, Eckert 2008b). The results reported above show a statistically significant difference in /æN/ raising among the White and non-White groups, as well. None of the previous studies reported any evidence of social commentary about this variable, so it may remain below the level of awareness. As for pre-velar and pre-velar-nasal allophones, no studies, to my knowledge, explored a connection of this

pronunciation to ethnicity. Each group showed quite large standard deviations in the Cartesian distances, as well as the presence of outliers. The differences within each of the ethnic groups will be explored later in correlation with the demographic and social descriptions of the speakers in the hope to shed some light as to who the speakers that prefer these variants are.

Chapter 5.

Variation and change in the diphthongs

The second major change that has been described in Canadian English is the change in the diphthongs. The best known is Canadian Raising (raising of the nuclei of /aw/ and /ay/ in pre-voiceless environments) that has been described in detail in several studies of Canadian English. Another change is the fronting of back vowels; the fronting of /uw/ has been described in pretty much all varieties of English world-wide as very much advanced or completed; the fronting of /ow/ and /aw/ are changes in progress that in North America have been correlated with some social factors, including ethnicity.

5.1. Canadian Raising

5.1.1. Background

Archival work suggests that the raising of the onset of the diphthongs distinguished speakers from Ontario (Canada) and Michigan and New York (U.S.) since at least 1880s (Thomas 1991). In the literature, the first mentioning of this phenomenon goes back to the 1930s (Ahrend 1934, Ayearst 1939), and the first publication devoted fully to raising of the diphthongs appeared in the next decade (Joos 1942). Chambers (1973) coined the term *Canadian Raising* to describe the process of raising of the low nuclei of the diphthongs /aw/ and /ay/ to a mid-position when they are followed by voiceless consonants (114). Raising in pre-voiceless environments was explored in the following decades from various perspectives and continues to be a focus of numerous studies (Onosson 2010, Sadlier-Brown 2012, Swan 2016, Fruehwald 2016, Berkson et al. 2017, Newman et al. 2018, Nycz 2018, to list just a few most recent ones).

In terms of the mechanism of raising, Joos (1942:141) provides the following description in the first ever paper devoted to this phenomenon that still holds today: “the Canadian diphthongs /aj, aw/ have higher initial tongue-position in pre-fortis context than elsewhere.” Thus, there are raised nuclei in *sight* and *lout* which contrast with unraised nuclei of *side* and *loud*. Based on their survey of a large number of North American dialects, Labov et al. (2006) proposed the threshold of 60 Hz between the F1 of

prevoiceless variants and the F1 of the elsewhere variants, which continues to be an accepted measure of raising in most studies.

The raising of these diphthongs is described as purely phonetic if it occurs only before the surface voiceless consonant (e.g., *write*), but not before the underlyingly voiceless consonant realized as a voiced flap (e.g., *writing*). Berkson et al. (2017) suggest that this is the “incipient phase of Canadian raising” (182) that quickly goes into the next one, that of phonologized raising, where the surface form *writing* has the raised diphthong before the voiced flap which means that raising occurred before flapping in the underlying form in the pre-voiceless environment (Fruehwald 2016, Berkson et al. 2017). In Canadian English, the raising of diphthongs has been shown to be phonologized (Chambers 1973), with most recent data coming from a study that employed a dynamic analysis of the trajectory to show that raising of the nucleus in Canadian speakers starts much farther from the trigger than in U.S. speakers (Swan 2016:205).

Both Joos (1942) and Chambers (1973), two important early studies of the Canadian Raising, report data from the Ontario area. Later research confirmed the presence of this phenomenon in many other locations in Canada, as well: New Brunswick (Kinloch & Fazilah 1993), Ottawa (Woods 1993), Montreal (Boberg 2004), Winnipeg (Hagiwara 2006), Manitoba (Onosson 2010), Victoria (Rosenfelder 2007) and Vancouver (Gregg 1957, Gregg 2004, Sadlier-Brown 2012, Pappas & Jeffrey 2013, Swan 2016); however, Canadian Raising is absent in Newfoundland (Kirwin 1993, Clarke 2004).

Diphthong raising has also been described in a number of dialects in the U.S. and Great Britain (Chambers 2006:105). There is a widespread /ay/ raising in the United States (see Labov 1994 for Philadelphia, Eckert 2000 for Detroit, Berkson et al. 2017 for Indiana) in contrast to /aw/ raising which remains a stereotypical defining feature of Canadian English. /aw/ raising is a subject of overt social commentary and sometimes criticism, while /ay/ raising remains merely an indicator (Nycz 2018:180). Perception studies show a strong association of /aw/ raising with Canadians (Niedzielski 1997, 1999), to the extent where the speakers of the U.S. dialect that has sporadic occurrences of the raised diphthongs could only hear raising in the recordings if they were primed to believe that the speaker was Canadian (Niedzielski 1999:79). An earlier

language attitude study by the same author showed that raising of the diphthongs is a feature strongly associated with Canadians (Niedzielski 1995:81).

Swan (2016) looked into the regional meaning of raised diphthongs comparing samples of Seattle and Vancouver speakers. The author reports that /aw/ raising was identified by Seattle respondents as an iconic feature of Canadian speech (2016:299). However, Vancouverites rarely mentioned it as an identifying feature of their own speech, and neither did they notice a lack of raising in Seattle speech. Despite this lack of awareness, Vancouverites who expressed more national pride have significantly more raised /aw/ than those who didn't (2016:295). More recently, Nycz (2018) provided some evidence of the active manipulation of the variation. The author showed that Canadians who had lived in the U.S. for more than 10 years were able to change the degree of raising of their /awT/ depending on the stance when talking about Canada and the U.S.: positive comments and alignment with Canada were shown to result in higher raising of /awT/, while expressing ambivalence or distance from Canada led to speakers producing the lowest raising (196). No such correlation with /ayT/ was found. Based on Swan (2016) and Nysz (2018), it appears that currently, /awT/ has a very strong association with Canadian identity, while /ayT/ doesn't.

As for /ayT/, a number of studies suggests association of the raising of this diphthong with a whole set of other indexical meanings, such as toughness, masculinity and/or working class. Eckert (1996) found that the Burnouts in one of the Detroit schools produced the most advanced tokens of raised /ayT/ when they were discussing some of the key cultural themes related to burnout identity, such as getting into trouble with parents or police, alienation from school, use of illegal substances, fights and other not acceptable behavior. Ultimately though, Eckert suggests that by using this phonological variable, Burnouts are "orienting to the local area and the local marketplace" (Eckert 1996: 66).

Two more studies suggest a link of this variable to toughness. Conn (2005:189) examined the subjective reaction of listeners to the use of raised /ayT/ in Philadelphia and found that the extreme raising of this diphthong by males was evaluated as tougher and more masculine compared to moderate raising, while there was no similar evaluation for females producing a very raised /ayT/. Wagner (2013) studied the use of the raised /ayT/ by the descendants of Irish and Italian immigrants in a high school in

Philadelphia. She found that both groups raised this diphthong similarly, but there was a statistically significant difference in the horizontal dimension: Irish girls had a more backed variant of /ayT/ compared to Italian girls (2013:370). Given that overall in Philadelphia this /ayT/ has been shown to index men and the working class, and that in this particular neighborhood, the Irish community is associated with adherence to working class values and practices, Wagner proposes that the teenage girl use the indexical meaning of this variable for their own stylistic purposes: what is reflected in the backed variant of the raised diphthong is “intersection ... of masculinity and Irish ethnicity: two social values that locally index “toughness”” (2013:376-7). The fact that the meaning goes beyond ethnicity is obvious from the similar production of Italian girls who value “toughness” as a social category.

Before examining the use of the raised diphthongs by the speakers in the current sample, it is necessary to review the work that has been done in Vancouver and BC so far. The same caution as with other variables investigated in this study applies: all of the previous studies in Canada and BC are based on the speakers with Anglo-Celtic heritage (or White Europeans, as in Boberg 2004), so the issue of participation of the non-White groups in this change in progress remains unexplored. The literature review below will focus on the key findings of the studies of Canadian Raising in Vancouver and then review one study from Montreal that involved non-Anglo heritage groups (Boberg 2004).

Studies of Canadian Raising in Vancouver and BC

Early studies of Canadian Raising relied on impressionistic analysis. In Vancouver, Canadian Raising was first described by Gregg (1957) in his auditory analysis of 50 young Vancouverites (ages 16-22). The author in his brief *Notes on the pronunciation of Canadian English as spoken in Vancouver, B.C.* has separate entries for the raised and unraised diphthongs /aw/ and /ay/ (23-24). No further discussion is provided in this source; Gregg only mentions that in the older generation’s speech “wide divergences often occur”, while it is not the case for the younger people who are eager “to conform with their contemporaries” (1957:20) and thus have more uniform patterns of their pronunciation.

The next available data on Canadian Raising in Vancouver come from recordings conducted in 1979-1984 for a large-scale *Survey of Vancouver English (SVEN)* and their

impressionistic analysis (see details about *SVEN* in Chapter 1). Gregg (2004) and Murdoch (2004) show, based on their work on the *SVEN* corpus, that Canadian Raising was robust in this location in the given period. Gregg (2004:41) states that both variables in a prevoiceless environment were raised “in almost every case – age, sex, socio-economic group through the full range of speech-styles.” He goes on to state that the speech in Vancouver “is in every way typical of what we called General Canadian English” (2004:43). Murdoch (2004:222, 227) shows as well that the traditional pattern of raising in the prevoiceless environment is present and none of the social factors correlate with the diphthongs – raising is almost invariably present in all age groups and social classes, as well as across speech styles, with the exception of /ay/ that shows signs of possible change away from raising via the process of lexical diffusion. Murdock thus disagrees with Chambers and Hardwick’s findings on /aw/ (1986:36), who, based on the impressionistic analysis of the data collected in Vancouver in 1983, found signs of an apparent time change of /aw/ away from raising: the youngest female participants in their study produced about half of the unraised /aw/ tokens in the traditional environment that triggers raising. Chambers and Hardwick (1986:33-34) also found a large amount of fronting of the onset of /aw/ in the elsewhere environment among youngest females. Younger males, and males overall, produced in the prevoiceless environment more “rounding” of /aw/, which can be roughly understood as backing, as suggested by Boberg (2008:140).

While the studies cited above used impressionistic analysis, the advances of computerized processing allowed subsequent studies of Canadian Raising to rely more on instrumental analysis or on the combination of the two. In the 1990s, the data for *The Atlas of North American English* (Labov et al. 2006) were collected across the U.S. and Canada, so chronologically, the next available data on Canadian Raising in BC is situated in the next decade after Chambers and Hardwick’s study (1986). The data of *ANAE* were subjected to computerized spectrographic and linear predictive coding (LPC) analysis (2006:36). For all vowels, including diphthongs, a single point of measurement was selected that represented the best measure of the vowel quality. The authors explain that for diphthongs, in most cases “an actual measurement of the glide target was not necessary” since their quality was captured with a code included in the comments to each nuclear measurement (2006:37).

Canadian Raising is one of the important features that helps define the isogloss for Inland Canada in *ANAE*. The authors establish an important threshold that separates the regions with raised and unraised diphthongs: for Canadian Raising to be present, the distance between raised and unraised allophones of /aw/ and /ay/ must be above 60Hz (2006:221). Based on this threshold, Inland Canada is defined in *ANAE* as having both diphthongs raised, while Vancouver is not included in this isogloss since it is marked as having only /aw/ raising, but not /ay/ (2006:222). Fronting of the diphthongs in either raised or unraised position is not discussed in *ANAE*.

The methodology of *ANAE* was replicated in Boberg's large-scale project *Phonetics of Canadian English* (data collected in 1999-2005). Based on instrumental analysis of interview data with 86 undergraduate students from across the country, Boberg found a robust presence of Canadian Raising not only in Inland Canada, but in other provinces as well, which led him to call Canadian Raising "a largely uniform feature of Canadian English" (2008:139). British Columbia was represented by 12 speakers, 8 females and 4 males. In British Columbia, the mean F1 distance between raised and unraised /aw/ (123 Hz) is well beyond 60Hz threshold established by *ANAE*, though Boberg does mention a possible weakening of Canadian Raising in this location, at least for /aw/: for three out of eight participants from BC, F1 difference between raised and unraised allophones of /aw/ was below the 60Hz threshold (2008:140). As for the other diphthong, Boberg reports that the pattern for raised /ay/ is much more uniform across Canada as there were no statistically significant regional differences for /ay/ in contrast with /aw/ (2010:204).

In addition to raising, fronting is an important diagnostic feature that plays a role in distinguishing regions within the country: Boberg found that Western Canada, and BC in particular, has significantly further back position of the raised /aw/ compared to other regions in Canada. Boberg states that the isogloss for F2 of raised /aw/ splits the Inland Canada region established in *ANAE* into two parts that have about 100Hz difference in fronting (2010:205): Ontario with F2 above 1750Hz and the Prairies and BC with F2 below 1650Hz.

Subsequent studies of British Columbia and Vancouver confirmed that Canadian Raising is present and robust in this location: Rosenfelder (2007, data collected in 2004

in Victoria), Sadlier-Brown (2012, data collected in 2009), Pappas and Jeffrey (2013, data collected in 2009-2010), and Swan (2016, data collected in 2014).

Rosenfelder (2007) analyzed data from 39 speakers from Victoria instrumentally and reported the presence of raising of both diphthongs in prevoiceless environments, as well as a strong tendency to front both of them (283).

Sadlier-Brown (2012) interviewed 23 Vancouver teens and adults and found, based on the instrumental analysis of the word list data, that overall these speakers maintained raising of both prevoiceless allophones and continued to advance fronting (540). The author also described a number of “weaker raisers” in her corpus which goes in line with the previous findings on “non-raisers” in Vancouver and BC (Chambers & Hardwick 1986, Rosenfelder 2007, Boberg 2008). For speakers without a significant difference in raised and unraised environments, it’s not only smaller raising of [awT], but also greater raising of [aw] responsible for this “weak” raising (537-8). Based on this finding, Sadlier-Brown suggests a possible weakening on Canadian Raising in Vancouver since the traditional conditioning environment seems to have a weak effect on some of the speakers (540). The author also reports the evidence of apparent-time fronting for both raised allophones, similar to what Rosenfelder (2007) reported for Victoria but in contrast with Boberg (2008, 2010) who reported that in Western Canada, both raised allophones are positioned towards the back.

Pappas and Jeffrey (2013), on the basis of instrumental analysis of speech of 23 speakers from Vancouver and Victoria (data collected in 2009-2010), confirmed the presence of Canadian Raising in Vancouver. All speakers in their study (12/12) raise /ay/ and 7 of the 12 raise /aw/ in prevoiceless environment (where raising is understood as an F1 difference between raised and unraised allophones above the threshold of 60Hz) (40). As for the movement in the horizontal plane, Pappas and Jeffrey’s results contrast those of Sadlier-Brown (2012) and align with Boberg (2008, 2010): the authors did not find much fronting of either of the raised allophones in their corpus, with F2 for both below 1600Hz.

The most recent confirmation of the presence of Canadian Raising in Vancouver comes from Swan’s (2016) study of cross-border differences of English spoken in Vancouver and Seattle (data collected in 2014). Swan instrumentally examined the

measurements for the both diphthongs in 19 young Vancouverites (10 females, 9 males). For both /aw/ and /ay/, Swan found raising among all speakers, but especially among women and younger speakers for /aw/, while prevoiceless /ay/ is raised similarly by all speakers (193, 216). Raised /ay/ is also uniformly fronted by all speakers (215), while F2 results for /aw/ are less uniform as there is greater variation between speakers and age groups leading Swan to suggest that “/aw/ raising is also accompanied by a degree of fronting” (193). Overall, Swan’s results for the fronting are less conclusive than those for raising. The author reports that while fronting is present, “it may be subject to greater variation between speakers and speaker subgroups than F1” (193).

To sum up the findings for Vancouver and British Columbia, the recent studies confirm the presence of Canadian Raising of both diphthongs, not only of /aw/ as was established in *ANAE* (2006). At the same time, many of the authors suggest the weakening of this pattern reflected in apparent-time differences. There is also no consensus regarding horizontal movement of the raised allophones, with some authors reporting fronting (Roselfelder 2007, Sadlier-Brown 2012, Swan 2016), and others backing (Boberg 2010, Pappas & Jeffrey 2013).

Ethnic groups participation in Canadian Raising

As was mentioned before, the data for Vancouver and British Columbia were only collected from the recordings of White speakers with Anglo-Celtic heritage (see detailed discussion of such methodological choices in the literature review chapter). This holds true for Canada overall, as well. To my knowledge, the only study of Canadian Raising that included non-Anglo groups in Canada is Boberg (2004, 2010) who looked at Anglophones in Montreal with Jewish and Italian heritage. His main finding concerning these ethnic groups is that they differ in the degree of participation in Canadian Raising: Jewish speakers raise prevoiceless /aw/ similar to British-heritage speakers, while Italians do not (2010:150). The opposite is true for /ay/: Italians and British similarly raise it in prevoiceless environments, while Jewish speakers have the smallest distance between raised and unraised allophones (219). Interestingly, Jewish speakers front both raised allophones much more than others (220).

Data and methods of analysis

The words that contained /aw/ and /ay/ allophones analyzed in this chapter come from the word list read by the participants. There were 940 tokens including the following:

- 223 of /aw/: cow, foul, loud, proud, sour
- 180 of /awT/: doubt, house, shout, south
- 312 of /ay/: file, rider, side, sign, tide, tie, tire
- 225 of /ayT/: fight, sight, spice, tight, writer

Single-point nuclear measurements of F1 and F2 were taken following steps described in the methods section. Since the current interest is only in the degree of raising, no measurements of the off-glide were conducted. This approach to measurements replicates the one employed in *The Atlas of North American English* (Labov et al. 2006), as well as that in *Phonetics of Canadian English* (Boberg 2010). The resulting values were normalized following the same projects (the details are described in the Methods section).

Mean formant values were calculated for each allophone for all speakers, as well as for ethnic groups and gender groups. The relevant categories were plotted using the *ggplot* package in R (Wickham 2016), the graphs and tables inspected for patterns which were interpreted in light of previous research. Where necessary, t-tests were conducted to check if the results were statistically significant.

Linear mixed effects regression analyses were conducted with the statistical software package R (R Core Team, 2018) using 'lmer' function in the package *lme4* (Bates et al. 2015) to determine the significance of the effect of ethnicity and gender on the phonetic measures (F1 and F2 values). Four separate sets of models were constructed, one for F1 and F2 of each raised allophone. The fixed effects for all sets included gender, ethnicity and the interaction between gender and ethnicity. The random effects included speaker and word as intercepts.

5.1.2. Results

Overall pattern of Canadian Raising in Vancouver

To confirm that Canadian Raising is present in Vancouver, the data were examined against the definition provided in *ANAE* (Labov et al. 2006). F1 difference between raised and unraised allophones for all speakers was calculated and plotted (Table 22 and Figure 13). For both allophones, the difference in F1 between raised and unraised allophones is much above the 60Hz threshold established in *ANAE* (2006:221). Figure 13 visualizes the difference in Hz in each pair; in both cases, the threshold requirement is met. The mean difference between raised and unraised allophones for all speakers is slightly larger for /aw/-/awT/ pair (126.8 Hz) compared to /ay/-/ayT/ pair (117.7 Hz)

The results of the Welch's Two Sample t-tests⁷ confirm that the difference in F1 values of raised and unraised allophones of both /ay/ and /aw/ is statistically significant:

/aw/-/awT/: $t = 11.126$, $df = 86$, $p < 0.001$;

/ay/-/ayT/: $t = 12.247$, $df = 83$, $p < 0.001$.

Table 22 **F1 difference in raised-unraised pairs of /aw/ and /ay/**

	Mean difference between raised and unraised allophones	Std Dev	Raisers (out of the total number of speakers)
/aw/	126.8 Hz	58	40/45
/ay/	117.7 Hz	47	41/45

This finding confirms the presence of /aw/ raising in Vancouver reported in *ANAE*, as well as in Boberg (2010). As for /ay/ raising, which was not attested in *ANAE* (2006:222) for this location, the current study findings align with a number of later studies that unanimously reported raised /ay/ in Vancouver (Boberg 2010, Sadlier-Brown 2012, Pappas & Jeffrey 2013, Swan 2016).

⁷ Welch's t-test is reported to be a robust and preferred alternative to other t-tests in social sciences (Delacre et al. 2017)

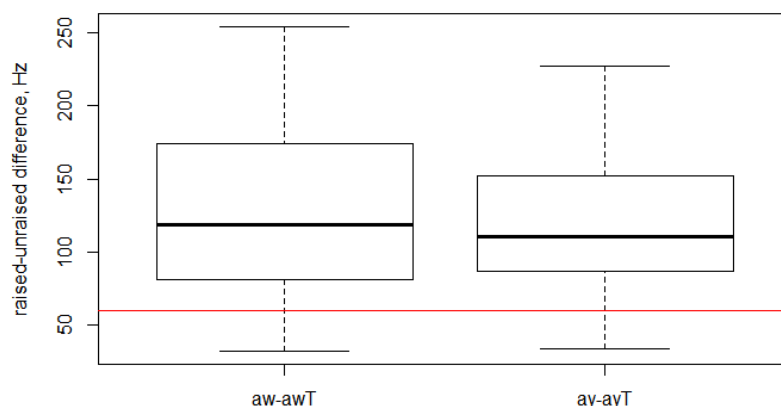


Figure 13 F1 difference in the pairs aw-awT (left) and ay-ayT (right) (60 Hz for raising threshold is shown in red)

In the current sample, all but one speaker raised at least one allophone, that is, 44/45 speakers participate in raising of at least one allophone, and most of the speakers raised both. Similarly to previous studies, there are a few non-raisers in the current sample as well: Table 22 above shows that 5 speakers for /aw/ and 4 speakers for /ay/ did not reach the threshold of 60 Hz difference between their raised and unraised allophones.

Non-raisers of /aw/ comprise 11% of all speakers in the current study which is less prominent than in the previous studies: Boberg reported 37.5% of non-raisers (2008:140), Sadlier-Brown 35% (2012:536) and Pappas and Jeffrey 41% (2013:40). For /ay/, I found that 8% of the total number of speakers were non-raisers, which is comparable to Sadlier-Brown's results (9%, 2012:536), while Pappas and Jeffrey report that *all* Vancouver speakers in their sample raise /ay/ (2013:40). No data on non-raisers of /ay/ is present in Boberg's publications (2008, 2010).

Based on this finding, it appears that more Vancouver speakers than before are involved in raising of /aw/, while raising of /ay/ is at a similar rate as was reported before. While previous studies suggested a possible weakening of Canadian Raising in Vancouver (Chambers & Hardwick 1986, Sadlier-Brown 2012), the current study does not find a confirmation to it.

Vowel space

Figure 14 below represents the location of the diphthongs in the vowel space delimited by the highest most front and most back vowels, /iy/ and /uwl/. The nuclei of the unraised diphthongs /aw/ and /ay/ are slightly higher and more retracted than low central /æ/. Their counterparts in the pre-voiceless condition are visibly raised. As for the horizontal plane, /awT/ is located almost exactly above /aw/, while for /ayT/, there is a noticeable fronting compared to /ay/. The graph also shows the thresholds established by Boberg (2010) for the two of several features, raising and fronting of /awT/, that allow to further divide Inland Canada as established in *ANAE* (Labov et al. 2006:222) into several regions. The dotted red line on the graph shows a 750 Hz threshold for F1 of raised /awT/ that distinguishes Canadian regions, while the dotted blue line is a 1650 Hz threshold for F2 of raised /awT/ that separates Western Canada from Ontario (Boberg 2010:205).

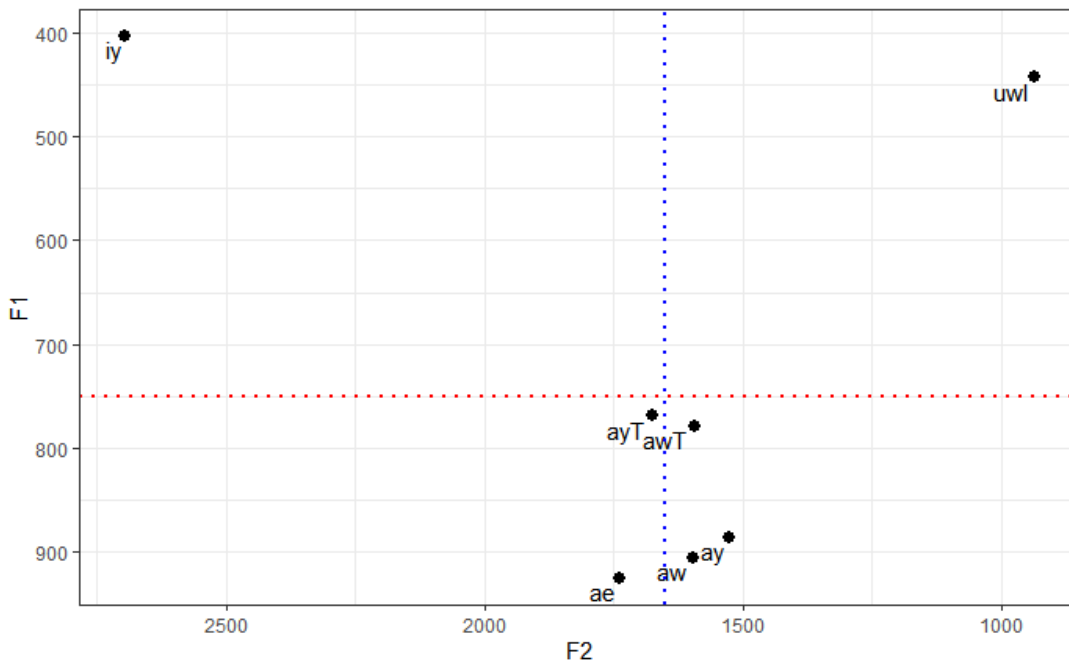


Figure 14 Raised and unraised allophones of /aw/ and /ay/ in the vowel space (dotted horizontal red line is a 750 Hz threshold for F1 of raised /aw/; dotted vertical blue line is a 1650 Hz threshold for F2 of fronted /awT/)

Table 23 below presents the numeric values for the raised and unraised diphthongs. The mean normalized value of F1 of /awT/ across all speakers in the current study is 778.9 Hz (*SD* 69) which is larger than Boberg's value of 736 Hz for British Columbia (2010:204), so contrary to his finding for BC, my data show that the raised

/awT/ falls short of meeting the 750 Hz threshold. However, there are two caveats to be discussed here. First, the current data show that unraised /aw/ is lower in the vowel space than was shown in Boberg (2010:145): the mean F1 value for /aw/ in the current study is 906 Hz, while in Canada mean was 874 Hz as reported by Boberg (2010). A higher position of the unraised diphthong naturally leads to a higher position of the raised diphthong at a similar degree of raising. Second, as will be clear from a later discussion, one of the ethnic groups had a higher F1 value for raised /awT/ which pulled the group mean away from the threshold. Thus, while technically this threshold of 750 Hz for raised /awT/ is not met, I argue that it can be considered marginally met.

Table 23 Mean F1 and F2 values for raised and unraised diphthongs

	<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>
aw	905.7	76.6	1597.9	136.4
awT	778.9	69	1593.8	156.2
ay	886.2	78.5	1526.9	120
ayT	768.8	57.8	1676.4	154.2

As for fronting, Boberg states that the isogloss for F2 of raised /awT/ splits the Inland Canada region established in *ANAE* into two parts that have about a 100Hz difference in fronting: Ontario with F2 above 1750 Hz, and the Prairies and BC with F2 below 1650 Hz (2010:205). Thus, compared to other regions in Canada, Western Canada, and BC in particular, has a significantly further back position of the raised /aw/, according to the author. The current study confirms this: the overall mean value for F2 of raised /awT/ is 1593.8 Hz which puts this allophone even further back compared to BC value of 1636 Hz reported by Boberg (2010:204).

Labov et al. (2006) did not find /ay/ raising in Vancouver (defined in terms of a 60 Hz difference) which was the reason to exclude this city from the Canadian Raising isogloss in *ANAE* (2006:222). Boberg (2010) reports that /ay/ raising is present in Canada overall (2010:151) and is relatively uniform as shown by the absence of the statistically significant regional differences for raised /ay/ (204). He shows that the fronting of /ay/ is more pronounced than raising, that is, while the difference in height between raised and unraised allophones is 110 Hz, the difference in fronting is more than double that: 229 Hz (2008:139). The current study confirms more fronting than raising for /ay/, though the difference is not as large as the one reported in Boberg. The

difference in F1 between raised and unraised /ay/ in the current study is 117.4 Hz, while difference in F2 is 149.5 Hz.

To sum up, as an aggregate, Vancouver speakers exhibit raising of both allophones and fronting of [ayT]. The findings are generally in line with previous research in this location (Boberg 2010, Sadlier-Brown 2012, Pappas & Jeffrey 2013), though some details vary.

To check for the effect of gender and heritage, a set of mixed effects models was conducted in R with F1 and F2 of the raised diphthongs as the dependent variables and heritage and gender as independent variables. A visual inspection of residual plots did not reveal any deviations from homoscedasticity or normality. The results showed that there is no interaction of heritage and gender for either F1 or F2 of /awT/ and /ayT/. As a separate main effect, gender approaches significance as a predictor for F1 of /awT/ and F2 of /ayT/, while heritage is a significant predictor of F2 of /awT/ only (Table 24). The following sections will address these social factors in turn.

Table 24 Mixed effects results for gender and heritage influence on F1 and F2 of raised diphthongs /awT/ and /ayT/ (boldfaced value is significant)

	/awT/		/ayT/	
	F1	F2	F1	F2
gender	$F(1, 44) = 2.85, p = 0.09$	$F(1, 44) = 0.1, p = 0.75$	$F(1, 44) = 1.36, p = 0.25$	$F(1, 44) = 3.02, p = 0.08$
heritage	$F(2, 44) = 1.22, p = 0.3$	$F(2, 44) = 8.2, p = 0.0009$	$F(2, 44) = 0.73, p = 0.48$	$F(2, 44) = 1.41, p = 0.25$
interaction of heritage and gender	$F(2, 44) = 0.67, p = 0.51$	$F(2, 44) = 0.46, p = 0.63$	$F(2, 44) = 1.49, p = 0.23$	$F(2, 44) = 0.88, p = 0.42$

The effect of gender

Previous research provides somewhat contradictory evidence regarding the effect of gender. In Vancouver, Gregg (2004:42), Boberg (2010:210), and Sadlier-Brown (2012:537) attested no gender differences in raising of the pre-voiceless diphthongs. However, in several other studies, the researchers report the effect of gender to be present or significant. Chambers and Hardwick (1986:36) found that the youngest females in their Vancouver study had the highest non-raising indices of /awT/ compared to males in the same age group and speakers of both genders in the older age groups, so females were leading the trend away from /awT/ raising in that period. The opposite

was found in the most recent study in Vancouver by Swan (2016) who reports that males have less difference between their raised and unraised allophones, which is significantly different from females. The younger females (ages 18 to 25, comparable to the age of the participants in the current study) have a greater distance between their raised and unraised allophones compared to males (2016:189).

The current findings align with previous studies that reported no statistically significant effect of gender on raising of /awT/ and /ayT/ in the sample of Vancouver speakers. The difference in F1 is less than 5 Hz for both pairs of raised/unraised diphthongs (Table 25): for females, the difference between /aw/ and /awT/ is 128 Hz, and for males, it is 125 Hz. Similarly, F1 difference for /ay/ and /ayT/ is 119 Hz for females and 114 Hz for males. Figure 15 shows that the configuration is very similar for three out of four allophones: females have a slightly lower position of the vowel /aw/, /ay/ and /awT/ compared to males, and horizontally, they are located almost directly on top of each other.

Table 25 Mean F1 and F2 values for males and females; difference between raised and unraised diphthongs

	unraised diphthong					raised diphthong					F1 difference
		<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>		<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>	
Female	aw	914	81	1596	147	awT	787	72	1593	153	128
Male	aw	885	62	1599	109	awT	761	58	1594	164	125
Female	ay	892	81	1526	125	ayT	773	62	1692	163	119
Male	ay	873	71	1526	109	ayT	759	46	1640	126	114

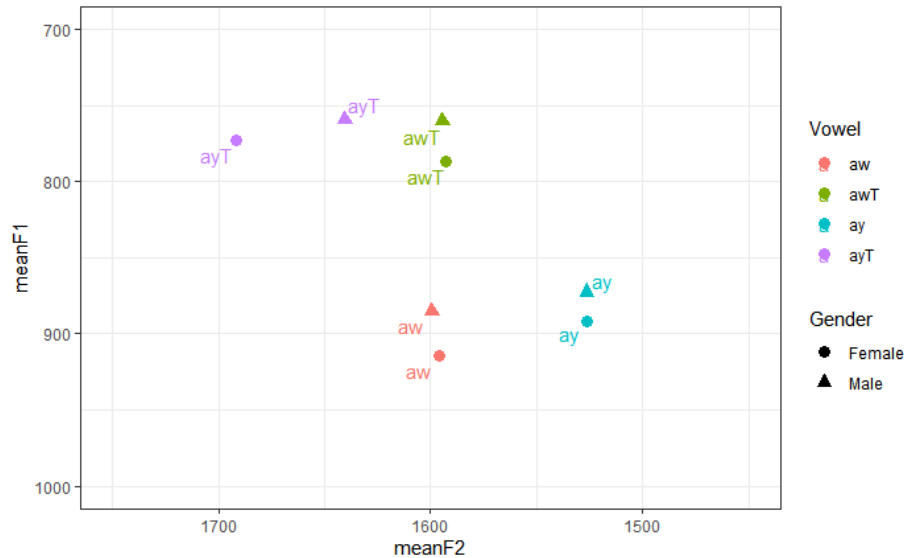


Figure 15 Canadian Raising in gender groups

In the F2 dimension, the only prominent difference is visible in the fronting of the raised /ayT/, with females having a more front allophone than males, with a 51 Hz difference. This was the only value that was approaching significance in the statistical test: $F(1, 44) = 3.02$, $p = 0.08$, that is, males and females have a marginally significant difference in the F2 of /ayT/, while no such difference was found for any other measure. Finally, while Chambers and Hardwick (1986) found that young males in Vancouver produced more backed /awT/, which they call “rounding” (38), no such tendency was found in the current data: F2 of /awT/ is almost identical for males and females.

In terms of non-raising, in the current study, both males and females belong to this category (non-raisers: 2 males, 3 females; weak raisers (difference between raised and unraised allophones <65Hz): 1 male, 2 females). Sadlier-Brown reports that most of her non-raisers are females, similar to Chambers and Hardwick (1986:36) who found that non-raising of /awT/ in Vancouver is advanced in their youngest female group. My findings show that the non-raisers are represented by both genders.

To sum up, while there are some differences between males and females in terms of raising of the diphthongs as seen in Figure 15, the analysis showed that none of them is statistically significant, which means that males and females overall produce these diphthongs similarly. The closest to being significant is the F2 difference between the raised /ayT/ in males and females, with females having a more front realization of this diphthong than males. Given previous findings on the social meaning of the raised

/ayT/ variant, it is important to look into who uses this most advanced variant, which will be done in the last part of the study.

The effect of heritage

Table 26 below presents the mean normalized values for the three ethnic groups and F1 difference between raised and unraised allophones. All three ethnic groups participate in the raising of both allophones as they have a considerable distance between raised and unraised nuclei. The British/Mixed European group shows a difference of 131 Hz between /aw/ and /awT/ and 128 Hz between /ay/ and /ayT/. For Chinese, the same pairs produce the difference of 139 Hz and 108 Hz; and for South Asians, 114 Hz and 117 Hz, respectively.

Among the three ethnic groups, British/Mixed Europeans are the closest to Boberg's 750 Hz isogloss value for raised /aw/: their mean F1 value is 767 Hz, followed by Chinese at 773 Hz, followed by South Asians at 793 Hz. The average F1 value for all 45 speakers is 779 Hz (Table 26 above), so it is clear that the South Asian group with their higher F1 value pull the group mean away from the threshold.

Table 26 Mean F1 and F2 values (Standard Deviation in parenthesis) for raised and unraised allophones; difference between raised and unraised allophones in F1

	British/Mixed European		Cantonese		South Asian	
	M (F1)	M (F2)	M (F1)	M (F2)	M (F1)	M (F2)
aw	898 (86)	1581 (123)	912(82)	1563 (125)	907 (62)	1641 (145)
awT	767 (76)	1620 (130)	773 (65)	1509 (135)	793 (63)	1642 (165)
F1 aw - awT	131	-	139	-	114	-
ay	887 (87)	1520 (89)	881 (76)	1531 (110)	890 (73)	1529 (146)
ayT	759 (51)	1668 (137)	773 (59)	1650 (122)	773 (61)	1705 (185)
F1 ay - ayT	128	-	108		117	-

As for the 1650 Hz threshold for fronted /awT/, all speakers remain beyond this threshold, with South Asians having the closest to the threshold value of 1642 Hz, British/Mixed Europeans slightly more back at 1620 Hz, and Chinese very far back at 1509 Hz. In Vancouver English, /awT/ remains backed, consistent with what was described before for Western Canada (Boberg 2010:204).

Figure 16 below shows the relative position of the allophones in the vowel space for each heritage group. Both raised allophones /awT/ and /ayT/ are similarly positioned in the vertical space for the three ethnic groups; however, there appears to be quite a large difference between the South Asian and Chinese groups in the horizontal dimension, with South Asians having both raised /awT/ and /ayT/ more front, and the Chinese more back, especially /awT/. Of the three groups, British/Mixed Europeans raise their /ayT/ and /awT/ to the highest degree; as for F2, their value is more or less in between two other groups for /ayT/, while for /awT/, both British/Mixed Europeans and South Asians are more up front, and Chinese are further back in their raised /awT/ diphthong.

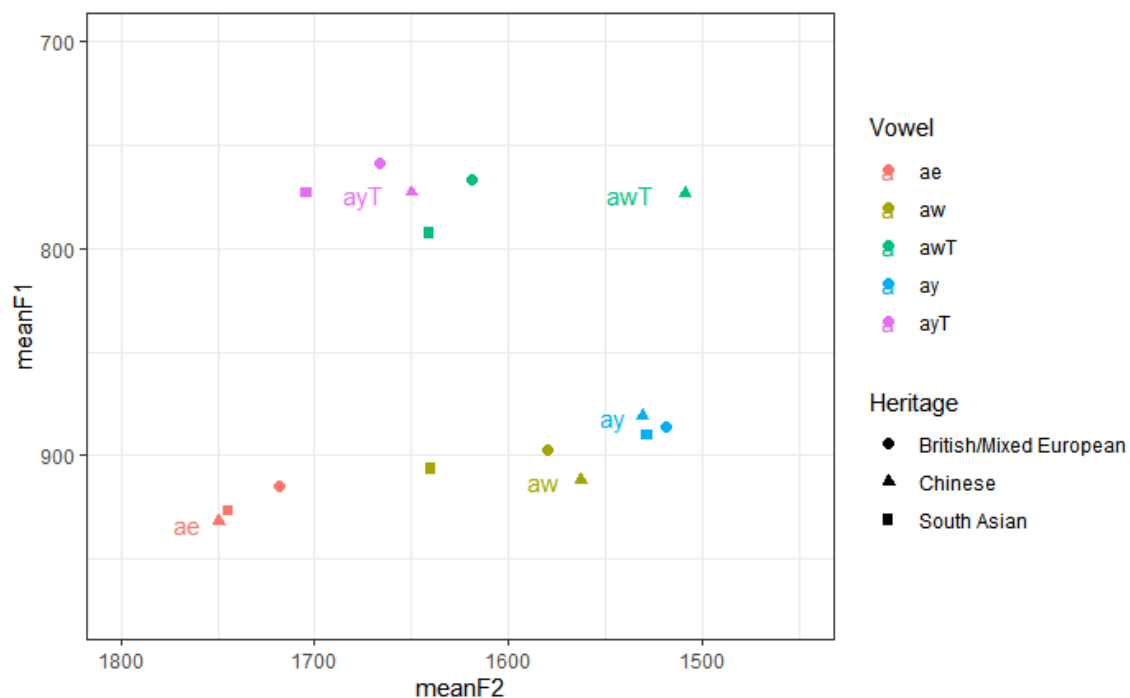


Figure 16 Canadian Raising by ethnic group

Boxplots for raised/unraised differences in Figure 17 below allow for a comparison from a different standpoint. With respect to the ANAE threshold of a 60 Hz difference between raised and unraised allophones (Labov et al. 2006:222), in all three groups, the majority of speakers are beyond this threshold, that is, have both prevoiced allophones raised. There are two non-raisers in the British/Mixed European group and three in the South Asian group for /awT/. As for /ayT/, two speakers from the British/Mixed European group do not raise it, compared to 1 Chinese non-raiser and 1 South-Asian non-raiser (Table 27).

Table 27 Non-raisers by ethnic group (based on 60 Hz threshold)

	British/Mixed European	Cantonese	South Asian	Total
Non-raisers of awT	2/14	0/14	3/17	5/45
Non-raisers of ayT	2/14	1/14	1/17	4/45

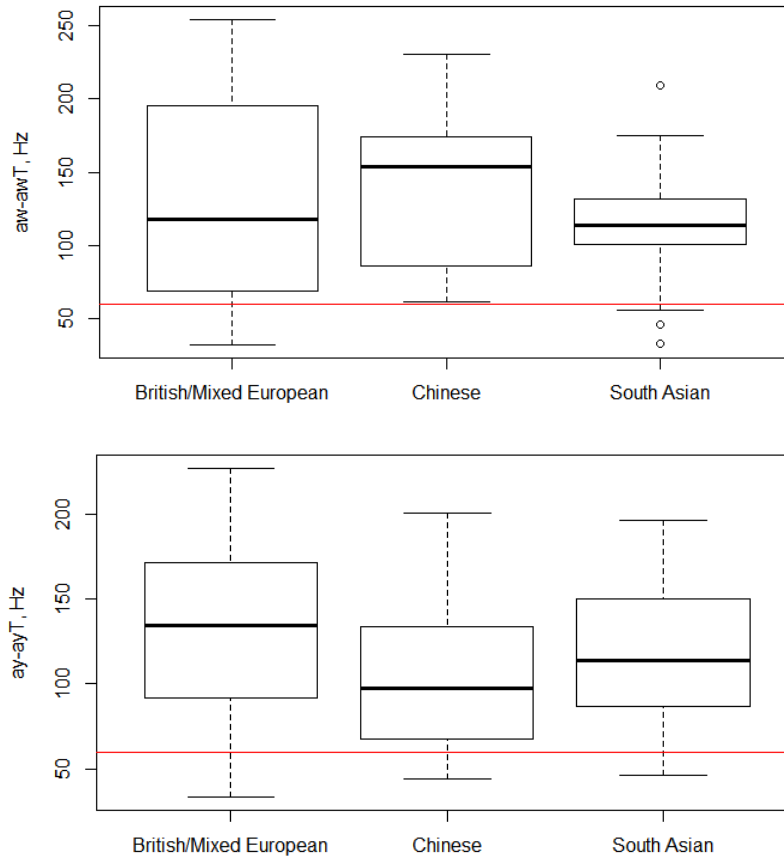


Figure 17 F1 difference in the pairs aw-awT (top) and ay-ayT (bottom) plotted by ethnic groups (red line is 60 Hz threshold for raising)

The whiskers of the boxplots for the British/Mixed European group goes farther than that of Chinese and South Asians for /awT/. It means that this group has some extreme raisers /awT/, as well as extreme non-raisers. The two non-White groups have a smaller spread of the data; South Asians are particularly consistent in their raising of /awT/, with the exception of three outliers: 50% of their data falls roughly between 100 Hz and 130 Hz, in contrast to the British/Mixed European group for which 50% of the data falls between roughly 75 Hz and 190 Hz. Chinese are peculiar in that their median is very high, at around 155 Hz, meaning that half of the speakers in this group have a larger difference of at least 155 Hz between raised and unraised allophones. This group

also has no non-raisers, so all speakers have a difference of at least 60 Hz between raised and unraised allophones.

For the other pair, /ay/ - /ayT/, the range is again the largest in the British/Mixed European group which means that there are speakers who are extreme raisers and those who raise much less, while in the other two groups, the spread of values is smaller, meaning that there is less extreme variation within them, including non-raisers. The British/Mixed European group has two non-raisers, while each of the other groups has one. The median is the lowest in the Chinese group meaning that half of the speakers produced a difference of 100 Hz or less between raised and unraised allophones, which is smaller than the same measure for South Asians (125 Hz) and especially British/Mixed Europeans. The latter have the largest median of around 145 Hz meaning that half of the speakers produced a difference of 145 Hz or more between raised /ayT/ and unraised /ay/.

To sum up, all three heritage groups clearly participate in raising of both allophones as they demonstrate adherence to the thresholds, as well as considerable difference between raised and unraised allophones. Non-raisers do not belong to any particular group. Despite these similarities, the visual inspection suggested some interesting differences which I will address via statistical analysis.

The first question to address is if the position of the raised allophones /awT/ and /ayT/ in the vowel space differs significantly depending on the heritage. Table 28 repeats that results of the statistical analysis given above for heritage. The only measure that showed statistically significant effect of heritage was the F2 of /awT/: $F(2, 44) = 8.2, p = 0.0009$.

Table 28 Mixed effects results for heritage influence on F1 and F2 of raised diphthongs /awT/ and /ayT/ (boldfaced value is significant)

	/awT/		/ayT/	
	F1	F2	F1	F2
heritage	$F(2, 44) = 1.22, p = 0.3$	$F(2, 44) = 8.2, p = 0.0009$	$F(2, 44) = 0.73, p = 0.48$	$F(2, 44) = 1.41, p = 0.25$

A pair-wise Tukey HSD comparison showed that the F2 of /awT/ of the Chinese group ($M = 1509, SD = 135$) differs significantly from F2 of /awT/ of British/Mixed European ($p = 0.013$) and from F2 of /awT/ of South Asians ($p = 0.0016$). At the same

time, British/Mixed Europeans ($M = 1620$, $SD = 130$) and South Asians ($M = 1642$, $SD = 165$) do not differ from each other ($p = 0.81$). Figure 16 above shows that for both South Asians and British/Mixed Europeans, the raised /awT/ is more towards front, while Chinese have their raised /awT/ further back.

The second question to answer is if the degree of raising, that is, distance between raised and unraised allophones, is affected by heritage. A pair-wise Tukey HSD comparison showed that the distance between the F1 of /aw/ and the F1 of /awT/ is not significantly different for Chinese ($M = 139$) and British/Mixed Europeans ($M = 131$) at $p = 0.9$, neither for Chinese ($M = 139$) and South Asians ($M = 114$) at $p = 0.45$, nor for South Asians ($M = 114$) and British/Mixed Europeans ($M = 131$) at $p = 0.7$. The same test for /ayT/ provided similar results: the distance between F1 of /ay/ and F1 of /ayT/ is not significantly different for Chinese ($M = 108$) and British/Mixed Europeans ($M = 128$) at $p = 0.5$, neither for Chinese ($M = 108$) and South Asians ($M = 117$) at $p = 0.86$, nor for South Asians ($M = 117$) and British/Mixed Europeans ($M = 128$) at $p = 0.8$.

To sum up, for the current sample of speakers, heritage is not a significant predictor of raising. In other words, speakers from all three ethnic groups pattern similarly in regard to raising of both /ayT/ and /awT/. One difference was discovered in terms of horizontal space, where the Chinese group has a significantly more backed /awT/ compared to two other groups.

5.1.3. Summary

The results of the study show that Canadian Raising has a robust presence in Vancouver English. Both raised allophones are significantly higher in the vowel space than their unraised counterparts and beyond the established in the literature threshold of 60 Hz for distance between raised and unraised allophones. Gender was found to be only marginally influencing F2 of /ayT/ with females having a slightly more fronted variant than males. As for heritage, we only see its effect on the F2 of /awT/, with the Chinese group having a much backer realization compared to South Asians and British/Mixed Europeans. In regard to the raising of /awT/ and /ayT/, all three ethnic groups show a similar pattern.

5.2. The fronting of back vowels

The fronting of back vowels is a phenomenon attested worldwide (MacLagan et al. 2009, Mesthrie 2010, Baranowski 2017, Jansen 2017, Cheshire et al. 2011).

Canadian English shares the fronting of /ow/ and /uw/ with many varieties of English across the world, and the fronting of /aw/ with many North American dialects. This change in progress appears to be correlated with heritage in some peculiar ways, as shown in previous research. Because the fronting of back vowels follows a similar trajectory in Vancouver as in other locations, as will be discussed below, it allows us to really focus on the correlations with social factors, gender and heritage, hence the decision to devote a separate section to this change in progress which is not unique to this particular location.

5.2.1. Background

This section will focus on three vowels defined by Labov as back upgliding vowels located traditionally in the back of the vowel space: low /aw/, mid /ow/ and high /uw/ (1994:163). Numerous studies have attested movement for all three of them within the subsystem of back upgliding vowels towards the front of the vowel space ([+back] to [-back]) in a number of varieties of English worldwide. Movement of the back vowels does not appear to comprise any kind of chain shift, and neither is it structurally connected to any other vowel shifts.⁸ At the same time, it has been described in a number of studies that if a dialect has /uw/ fronting, there is also at least some /ow/ centralization present (Labov 1994:208, Labov et al. 2006:145). Several Canadian studies found that the fronting of /ow/ and /uw/ seems to be correlated (Roeder et al. 2018:101, Boberg 2019:99), but such connections are still tentative and have not been explained structurally.

The findings consistently show that the fronting of /uw/ occurs more after coronal consonants than in other environments (Labov et al. 2006:153), while for /ow/ and /aw/, the effect of the coronal onset is much weaker (ibid. 157, 160). The fronting of /uw/ is suggested to have started in the environment following coronals due to the co-

⁸ While Labov discusses the fronting of back vowels as Principle III of vowel shift, it is described as such in the context of the *chain shift* (1994:176). It is not quite clear if or how it can be applicable in this case, so I will leave this for future investigation.

articulatory effect, where the articulatory gesture associated with coronals pulls the tongue body forward, while in other environments this change occurs later. This dynamic allows us to track how different social groups participate in this change (social class and ethnic group in Baranowski 2017:304; heritage groups in Umbal 2019:22), as well as to judge how far the change is from completion which is signalled by fronting in the contexts that usually inhibit it (Harrington et al. 2012). As for /ow/, the coronal vs. non-coronal preceding segment has been shown to be somewhat relevant, but less than that for /uw/; checked vs. free context is another division that proved to influence the fronting of /ow/ (Labov 2001:476).

While the preceding context creates a continuum of realizations from back to front for both /ow/ and /uw/, there are also very clear allophonic splits for all three of the originally back vowels. For /ow/ and /uw/, a following liquid strongly blocks centralization (Boberg 2010:151), to the extent that the upper right corner of the vowel space is now delimited by a pre-liquid allophone /owl/, not /uw/ as in more conservative dialects of English. A following liquid has even been shown to cancel the effect of the preceding coronal which normally promotes /uw/-fronting (Hall-Lew 2009:175). The pre-lateral allophone /owl/ remains in the back of the vowel space, as well, and is well separated from /ow/ in other environments. For /aw/, the most fronted allophone is the pre-nasal one which is also often raised to a lower-mid position (Labov et al. 2006:157); in pre-voiceless environments, /aw/ is often raised, as described in the previous section on Canadian Raising.

The fronting of back vowels has been in progress in many varieties of English world-wide: outside of North America, the fronting of /ow/ and/or /uw/ has been described in New Zealand (Maclagan et al. 2009), South Africa (Mesthrie 2010), and a number of U.K. dialects (Manchester in Baranowski 2017, Carlisle in Jansen 2017, London in Cheshire et al. 2011). In North America, all three back vowels have been shown to undergo moving from the back towards the front or central area of the vowel space in many of the regional dialects. The fronting of /uw/ and centralization of /ow/ is one of the “continental trends affecting many North American varieties,” according to Boberg (2008:361), though /uw/ is considerably more advanced compared to /ow/. Similarly, /aw/ is realized as more central or even fronted in many North American dialects except for the U.S. North where it remains back (Labov et al. 2006:17). The fronting of back vowels plays a crucial role in differentiating dialects of North American

English as represented in *ANAE*: the strong fronting of /ow/ and /aw/ accounts for the major split of North American English into the dialects with two fronted vowels (U.S. Midland and Southeast) and those with less advanced fronting (U.S. North, West, and Canada) (Labov et al. 2006:147).

A large number of studies have described different aspects of /ow/- and /uw/- fronting in recent years in the American West, e.g., in California (Hall-Lew 2009, Kennedy & Grama 2012), Oregon (Becker et al. 2016), and Washington (Wassink 2016). However, the Canadian West remains underdescribed in this respect, except for its regional characteristics in Boberg's *PCE* project (2010). In contrast to the abundance of studies of the fronting of /ow/ and /uw/ in the U.S., in Canada, it is /aw/ that received more attention starting with Chamber's (1981) and Chambers and Hardwick's (1986) discussion about its fronting.

As for the origin in Canadian English, Boberg (2017) reports on the basis of the archival data that /uw/- and /ow/-fronting was barely present in the speakers born between about 1885 and 1900, with both vowels remaining in their conservative position: upper-back /uw/ and uncanceled /ow/ (390). Unfortunately, there are not enough historical data to deduce the position of /aw/ in the same time period with certainty (388). As for the progress of this change in Canada, Boberg (2011) found age correlation of /ow/ and /uw/ with young speakers who have more advanced values which means that the fronting of /ow/ and /uw/ is a change in progress. At the same time, no such correlation was found with the fronting of /aw/ which suggests that this variable is more stable (24). Sadlier-Brown (2012) similarly found only marginal differences between older and younger speakers' fronting of /aw/ in Vancouver.

As for instrumental measurements for these back vowels, Inland Canada was first described in *ANAE* to have a "conservative /ow/" with F2 of less than 1100 Hz, as well as a "conservative /aw/" with F2 less than 1550 Hz, so the nuclei for both remained in the back (Labov et al. 2006:223). As for /uw/, *ANAE* suggested that Canada aligned with the rest of the U.S. in having fronted /uw/ after coronals, with F2 of more than 1500 Hz (154).

A later study by Boberg (2010) showed that all three vowels in Canadian English had more fronting than had been attested in *ANAE*: Boberg described for Canadian

English overall a “moderate centralization” of /ow/ with F2 of 1291 Hz (148), some fronting of /aw/ with F2 of 1604 Hz (149), and advanced fronting of /uw/ with F2 of 1720 Hz (151). Region was found to be marginally significant in the fronting of /ow/ and strongly significant in the fronting of /uw/, while no such effect was attested for the fronting of /aw/ (211). While the fronting of /aw/ is similar across Canada, the fronting of /uw/ and /ow/ is important for differentiating BC with its more advanced values from the Prairies where both vowels have more conservative position in the back (Boberg 2010:206).

Sociolinguistic studies on the fronting of back vowels both in North America and elsewhere have described several correlations with social factors, such as gender, education, social class, style, affiliation with particular social groups, and ethnicity. Since the fronting of back vowels is not the only focus of this study, I will restrict the literature review only to research that is directly relevant to the current work.

As for /aw/, the only aspect of social meaning than has been discussed in the Canadian literature is the connection of the /aw/-fronting with American speech, so that young Canadians were hypothesized to “Americanize” by adopting the more fronted variant of this diphthong (Chambers 1981, Chambers & Hardwick 1986). Indeed, in the U.S., the fronting of /aw/ is quite wide-spread and does not constitute a recognizable part of any one regional accent (this refers to fronting, without accompanying raising or monophthongization that do occur in only few dialects). Frazer (1987) in his study of subjective evaluations of phonological variables in the U.S. Midland and Northern cities found some negative reaction to fronted /aw/, despite the fact that the fronting was on the increase in the urban areas at that time period. At the same time, Labov (2001) notes that this variable “is not at a high level of conscious social awareness, and is rarely a subject of social commentary,” though he also mentions some signs of middle-class speakers starting to disfavor this variant (187).

While /aw/ is relatively below the level of awareness, the opposite is true of both /ow/ and /uw/: numerous studies suggest that they are evaluated by the speech community, though details of such evaluations vary somewhat depending on location and group in question. There are some complex patterns of interaction of the fronting of /uw/ and /ow/ in different phonological contexts with several social factors, such as gender, ethnicity and social class. The overall picture that emerges is that fronted

variants of these two vowels appear to be connected to higher social status groups and/or White speakers.

The fronting of both /uw/ and /ow/ in the U.S. has been one of the key features of “Valley girl” speech style (Hinton et al. 1987). Slobe (2018) describes this persona that emerged in mass culture in the 1980-90s to be “associated with cosmopolitanism, consumerism, whiteness, and middle to upper-middle class US culture” (543). “Valley girl” portrayal in mass media, including mock performances, often draws on the typical speech features: uptalk, vocal fry and exaggerated articulation of the vowel participating in the California Vowel Shift, including the fronting of back vowels. A male counterpart of the “Valley girl” is the “Surfer dude,” with a very fronted /uw/ in the word *dude*. Eckert mentions the speech of both of these personae as part of the trend to distinguish California from the rest of the U.S. as “casual, fun-loving, affluent, free, and white” (2018:171). Because Canada shares the media space with the U.S., there is no doubt that this speech style and its associations are well known here, as well.

Outside of California and “Valley girl” speech style, fronted variants of /ow/ and /uw/ have been described to be associated with higher status groups or social classes. Labov notes that in Philadelphia, fronted /ow/ became “associated with middle-class norms” (2001:187). Similarly, Fridland (2001) showed that in the South, /ow/-fronting is perceived as a prestige norm, and Baranowski (2008) reported that this change had been brought into South Carolina by the highest status groups from the South. His more recent study reports similar results for the U.K., as well: /ow/-fronting in Manchester is directly correlated with social class, with the highest class showing most fronting (2017:316). As for /uw/-fronting, the connection with social class is much less prominent in the data from the U.K. Baranowski reported no effect of social class on /uw/-fronting in Manchester, except for fronting before /l/ where he found that lower social classes lead fronting in this context that generally inhibits it (2017:334). In the U.S. studies, some positive correlation with social class has been described in South Carolina: Baranowski reports that higher social classes have more fronted /uw/ compared to lower ones (2008:536). Overall, /uw/-fronting appears to be so wide-spread in North America that it is not socially marked in any special way compared to the U.K.

Moving on to ethnicity which is the focus of the current work, a number of studies examined fronting of /ow/ and /uw/ in non-Anglo heritage groups. Overall, because

fronting of /uw/ and /ow/ is so wide-spread, it appears that currently, all ethnic groups comprising modern urban speech communities participate in it, at least to some extent. An additional point of interest that emerges from the literature is the degree of advancement of fronting in different phonological contexts in addition to presence of fronting or absence thereof. For example, in Manchester, Baranowski (2017) found significantly less fronting of /ow/ by both non-White groups, Pakistani and Black Caribbean, compared to the White speakers (330). However, /uw/-fronting is quite advanced for all groups: White, Black Caribbean and Pakistani speakers have an F2 of /uw/ of around 2000 Hz (308). What's interesting though is that only Black Caribbean speakers have advanced fronting of /uw/ before /l/, which is the context that generally inhibits fronting. The author explains this by the connection of ethnicity with class and residential patterns (recall that it's the lowest social class that also had more fronting of /uwl/, as was mentioned above). This and other studies suggest that the fronting of back vowels, as well as fronting in particular phonological contexts, presents complex and intricate patterns that can be related to and possibly explained by the social dynamics of the speech community.

In the U.S. studies of ethnicity and back vowels, research by Graff et al. (1986) found in a matched guise experiment that instrumental fronting of back vowels /aw/ and /ow/ in the speech of African Americans made listeners think they heard White speakers. Subsequent perception experiments confirm that fronted vowels are associated with European American speech (Thomas 2007:463). Thomas (2007) reviews a number of studies that report much weaker fronting of back vowels in African Americans compared to European Americans in different areas of the U.S. (459, 463). Regional patterns influence fronting by non-White speakers: Coggshall and Becker (2009) found that in New York City, African Americans have less fronting of /ow/ than White speakers who have about a 100 Hz more advanced /ow/, while these two groups are similar in keeping /uw/ in the back as this vowel has more conservative back position in New York City (2009:113); similarly, both European Americans and African Americans moderately front /aw/ with about 85 Hz difference for less advanced realization by African Americans (114). Finally, the degree of interaction between speakers matters: Labov (2014) reports that African Americans in Philadelphia do not follow the mainstream pattern of fronting of /aw/ and /ow/, and their back upgliding vowels remain more to the back (6). The author explains that children growing up in African American neighborhoods have little to no

personal contact with speakers of mainstream variety (16). Residential segregation leads to African American children acquiring the patterns of speech of those around them, which is particularly clear in their adopting neither White Philadelphia short-*a* system, nor fronting of back vowels (18).

Another non-White group that has attracted the attention of researchers in the U.S. is LatinX. Thomas (1993) found that only Mexican Americans from upper middle class front /ow/ which is typical of Anglo speech in San Antonio, while other Mexican Americans lack /ow/-fronting. Thomas (2001) looked at several locations across Texas and North Carolina and found that Mexican Americans did not have /aw/, /ow/, and /uw/ fronting, except for some middle-class speakers with this heritage. Fought (1999) found that participation in /uw/-fronting by Latinos “reflects the intersection of conflicting social norms in the community” (19). The author showed that fronted /uw/ had different associations for Chicano males and females in Los Angeles: for males, more fronting was correlated with higher social class, while for females, with non-gang status.

What emerges from these findings is that while White speakers participate in fronting of back vowels throughout the U.S., and African Americans and Latino speakers do so at a slower pace, while also showing different patterns of correlation with other social factors.

More recently, researchers have worked to represent different heritage groups in the speech communities, for example, Wassink (2016) compared the vowel systems of several ethnic groups in Washington state. The author reports considerable differences in /uw/ fronting among some of them: Caucasian speakers and speakers of Japanese heritage fronted /uw/ similarly (95), while African Americans, Mexican Americans and speakers from the Yakama nation did not participate in this change (93-97).

Other studies in the U.S. looked specifically at Asian Americans. Hall-Lew (2009) conducted a study with European Americans and Asian Americans (Chinese, Japanese, Filipino and mixed) in San Francisco. The author reported that both Asian Americans and European Americans participated in fronting of both /uw/ and /ow/ in California; for /uw/, neither post-coronal, nor elsewhere context had any significant effect of heritage. For /ow/, Hall-Lew reports a correlation with age among Asian Americans, but not European Americans which may mean that the latter have stabilized, while the former

are still actively participating in /ow/-fronting. Similarly, Wong (2014) found that in New York City, Chinese participate in the community change to front /uw/. In her sample of 35 2nd generation Chinese speakers, more fronted vowels were produced in post-coronal contexts, compared to non-coronal context, which is consistent with the pattern of New Yorkers with European heritage (211). The author notes a lot of inter-speaker variation, for example, a few of the youngest speakers do front /uw/ in non-coronal environment. There is also a lot of variability for post-coronal /uw/, with some speakers being extremely conservative, and some much more advanced (212).

Overall, it appears that Asian Americans, and in particular Chinese, are more readily participating in the fronting of /uw/ and /ow/ compared to other ethnic groups in the U.S. Still, the data are quite scarce, and so the current study will add to the growing body of knowledge on ethnic group participation in the fronting of back vowels.

Studies of fronting in Vancouver and BC

Because /aw/ is generally studied separately from /ow/ and /uw/, while those two are most often described together, I will start here in this order, as well, going from findings on /aw/ in Vancouver to those on /ow/ and /uw/.

Gregg (1957) reported that his 16-22 year-old Vancouver speakers only had backed /aw/ nucleus, so it was transcribed as /aw/ (24). Thirty years later, Chambers and Hardwick (1986) reported some fronting of the nucleus of /aw/ in their older age group who would be the youth from Gregg's study, as well as even more advanced fronting of unraised /aw/ in their younger speakers and females (34). Fronting was described as a tendency for "Americanization" of Canadian speech, that is, approximating "the standard of the adjacent American speech" (41). A later study by Rosenfelder (2007) set in Victoria reported that fronting was "wide-spread," but no environment was favored for /aw/, that is, there was no difference in fronting in the elsewhere environment from that in the pre-voiceless environment. This finding aligns with an earlier one from the same location: Hung et al. (1993) reported similar fronting in all environments in Victoria. Rosenfelder (2007) reported that the fronting of /aw/ in Victoria was completed as no gender or age differences were obtained and concluded that /aw/ at that time was "predominantly realized as fronted" (283).

In *ANAE*, Vancouver was not included in the isogloss area for a “conservative /aw/” with an F2 less than 1550 Hz which means that it had more fronted values for the F2 of /aw/ (Map 15.7). A later study by Boberg (2010:149, 203) showed that Canadian English overall had some fronting of /aw/ with an F2 of around 1600 Hz with no significant effect of region which means that BC could be described to have at least 1600 Hz in the F2 of /aw/. A later study by Boberg (2011) reports no age effect on the F2 of /aw/ across Canada which suggests this change is nearing completion or completed, similar to previous findings from Victoria (Rosenfelder 2007). This finding is confirmed by a later study from Vancouver: Sadlier-Brown (2012) found that age differences for /aw/ fronting were only approaching significance, with teens having marginally more fronted nuclei than adults (538). The author conducted t-tests to see how different fronted /aw/ was from the vowel of similar height, /æ/, and found that /æ/ remained significantly more fronted than /aw/ (543). So, while there was still room in the vowel space for /aw/ to front, it appeared that the change was nearing completion if not completed at the time. Comparing speakers from Vancouver and Seattle, Sadlier-Brown concluded that in contrast to previous treatment as Americanization, “fronting may be better characterized as an (almost) pan-continental process, applying regardless of regional variation in diphthongal height” (546). While all these authors agree on the advanced fronting of /aw/, another study from the same decade provides slightly more conservative data for /aw/-fronting: Pappas and Jeffrey report that the F2 of unraised /aw/ is 1468 Hz (*SD* 75), almost 200 Hz more towards the back of the vowel space than /æ/ which has an F2 of 1677 (*SD* 85) (2013:40-42). Overall though, the data are quite unanimous in this respect.

There are considerably fewer descriptions of /uw/ and /ow/ in the Vancouver and BC area and they are more recent, compared to that of /aw/. Among the earlier data for BC is Gregg’s (1957) description on the basis of his sample of 16-22 year-old Vancouverites: /uw/ is described as a “close back vowel, generally tense, long and non-diphthongal” (23). The example provided by the author for this entry, *pool* and *food*, suggest that there was little differentiation of pre-lateral and elsewhere contexts at that time. As for /ow/, Gregg describes the nucleus as “half-close back rounded vowel [o] ... [as in] *bow* [bou], *boat* [bout]...” (23).

Fifty years after that first brief description, fronting of both /ow/ and /uw/ progressed greatly. In *ANAE*, Vancouver is marked on the map to have an F2 of at least 1550 Hz for /uw/, similar to the rest of Canada and some parts of the U.S. (Labov et al.

2006:154), which puts it in the middle of the vowel space. As for /ow/, Vancouver, as reported in *ANAE*, had a value of an F2 of more than 1100 Hz as it was excluded from the “conservative /ow/” isogloss of Inland Canada with an F2 of less than 1100 Hz (223). A later study by Boberg (2010) showed more fronting for both vowels in Canada overall than had been attested in *ANAE*, as well as some regional differentiation. F2 of /uw/ had a marginally significant effect of region, with British Columbia being one of the most advanced areas across the country with an F2 of more than 1800 Hz. F2 of /ow/ showed a strong effect of region, with British Columbia once again having an advanced value of more than 1300 Hz (2010:211). Boberg (2011:22, 24) reported a significant age effect on F2 of /ow/ and /uw/, with young speakers having more advanced values, which means that fronting of /ow/ and /uw/ was a change in progress at that time. Younger women in BC were found to have /uw/ more fronted than /æ/ which serves as a measure of considerable fronting.

More recently, no studies reported the status of the fronting of back vowels in Vancouver, while there is one publication from Victoria: Roeder et al. (2018:100) found that both /ow/ and /uw/ are fronting over apparent time in Victoria, and /ow/ is also lowering.

To sum up, based on previous research, Vancouver English can be described to have an advanced fronted /uw/ and a centralized /ow/, while /aw/ is only moderately fronted and remains behind /æ/ in F2.

Ethnic group participation in back vowel fronting in Canada

As with other variables covered in this study, non-Anglo groups in Canada have received hardly any coverage in regard to fronting of back vowels. Boberg’s (2005) Montreal study reported some data on Italian and Jewish speakers in that location. Most recently, Hoffman reported some findings on fronting in 2nd generation immigrants in Toronto at a conference presentation (2016) and Umbal (2019) wrote an unpublished paper on fronting in 2nd generation Filipinos in Toronto. Clearly, there are gaps to be filled in this area.

Boberg (2010:220) found that in Montreal, Jewish speakers had significantly fronted /aw/ compared to both British and Italian heritage speakers. All three groups differed in the degree of raising of the /awn/ allophone: Jewish speakers pronounced it

most raised, British had a moderate raise, and Italians did not raise it whatsoever. Italian speakers similarly did not participate in /uw/ fronting, while both British and Jewish speakers did so (2010:221). As for /ow/ fronting, Jewish speakers “set the model for more fronted vowels; the Anglos appear to be following their lead” (Boberg 2014:68).

Hoffman reported in her conference presentation (2016) that in Toronto, young Portuguese, Chinese and to a lesser extent Italians participate in /uw/-fronting similar to Anglo speakers. With /ow/-fronting, it is young Portuguese who lead the change, followed by Anglos, with young Chinese lagging behind. Young Italians have the least advanced realizations of /ow/.

Umbal (2019) examined /uw/-fronting in Filipinos in Toronto and found that they participate in this change on par with Anglo speakers and abide by the same articulatory constraints. Interestingly, there is a difference in post-coronal contexts where Filipinos have more /uw/-fronting than Anglos.

Based on the literature review, the tasks at hand are:

- to describe the current state of fronting of back vowels in Vancouver in order to update a decade-old description of Vancouver English (Boberg 2010)
- to examine participation of the ethnic groups in fronting in order to add to our knowledge on it overall in Canada, as well as to get some preliminary insights (though the data is very limited) on how these ethnic groups may react differently to phonological environments influencing fronting (cf. Wong 2014, Fridland & Barlett 2006, Baranowski 2017, Umbal 2019).

Data and methods of analysis

For the present analysis, a total of 1165 tokens were obtained from the word list including the following:

- 223 of /aw/: cow, foul, loud, proud, sour
- 133 of /awn/: down, gown, town
- 269 of /ow/: boat, coat, code, go, stone, toe
- 135 of /owl/: bold, cold, stole
- 270 of /uw/: non-coronal: boots, food; coronal: do, soon, too, tooth

- 135 of /uwl/: cool, fool, tool

The measurements and normalization methods are identical to that of other parts of this study. The analysis includes descriptive and inferential statistical analyses that were conducted in R (R Core team 2018).

5.2.2. Results

Starting with the overall results for Vancouver English, fronting of all three back vowels is present in this community. Figure 18 below shows the position of the three vowels and their allophones in the vowel space. The thresholds for fronting marked by dotted lines are adhered to in the case of /aw/ and /ow/ and almost met in the case of /uw/. Table 29 provides the numeric values for F1 and F2 of all vowels, including /Tuw/ - post-coronal environment for /uw/, in addition to /uw/ that includes both post-coronal and elsewhere environment. In the following sections, the overall results will be presented for /aw/, /ow/ and /uw/, in this order, followed by the discussion of gender and heritage effects.

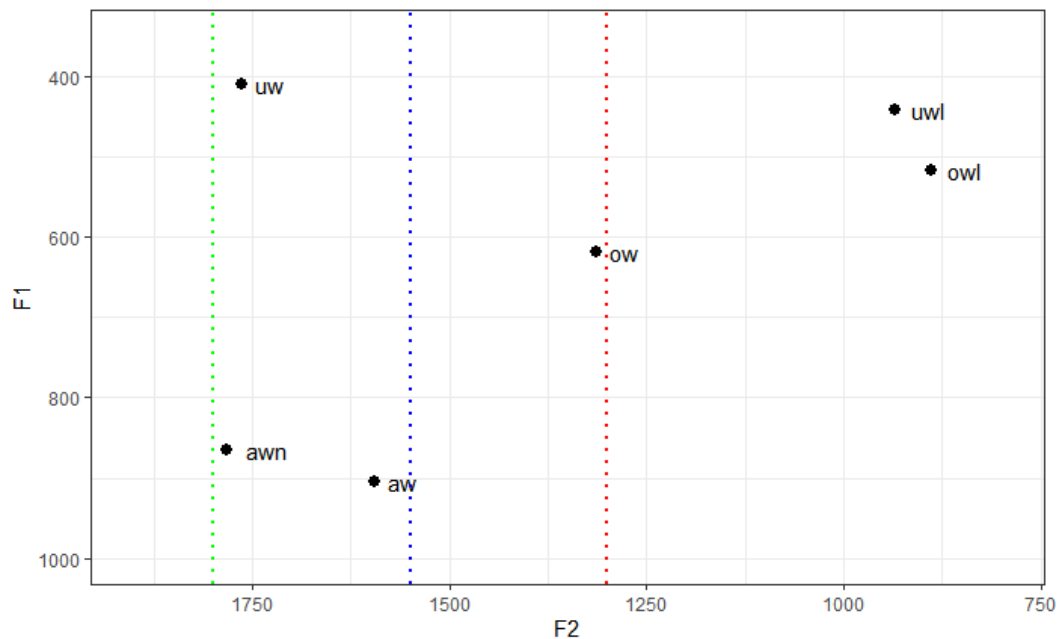


Figure 18 Fronting of back vowels in Vancouver English (thresholds: green dotted line is 1800 Hz threshold for fronted /uw/, blue dotted line is 1550 Hz threshold for fronted /aw/, red dotted line is 1300 Hz threshold for centralized /ow/)

Table 29 Mean F1 and F2 values and SD for back vowels in Vancouver English, 45 speakers

Vowel	M (F1)	SD	M (F2)	SD
aw	904	76	1596	136
awn	865	99	1783	151
ow	618	65	1314	141
owl	518	50	889	83
uw	411	43	1764	297
uwl	443	43	935	111
Tuw	413	46	1889	260

/aw/-fronting

In ANAE, a threshold of 1550 Hz of the F2 of unraised /aw/ was established to describe Inland Canada with a “conservative back /aw/” (Labov et al. 2006:221) compared to some of the U.S. regions where /aw/ was very fronted. Boberg provides a value of 1604 Hz for Canada as a whole with no regional variation present (2010:148), which is slightly above the threshold for the conservative position suggested by Labov et al. (2006). In my study, the overall mean value for the F2 of unraised /aw/ across all 45 speakers is 1596 Hz which is 46 Hz more than the established less than 1550 Hz threshold for conservative back /aw/, so moderate fronting is definitely present, in contrast with a smaller value of 1468 Hz for the F2 of /aw/ reported previously in Vancouver by Pappas and Jeffrey (2013:40). Following Sadlier-Brown (2012:538), I compared the relative position of /aw/ and /æ/ in the horizontal dimension. The results of the t-test suggest that /æ/ remains significantly more front than unraised /aw/ ($t = 7.43$, $df = 87.9$, $p < 0.001$), that is, there is more space for the nucleus of the diphthong to move forward. In the absence of apparent time data, I cannot judge the progression of change, but the results for gender presented below show almost identical position of /aw/ for males and females in F2 which may mean the change may be nearing completion.

As for the pre-nasal allophone of /aw/, it is slightly higher than non-pre-nasal /aw/ (the F1 of /awN/ is 865 Hz, while the F1 of /aw/ is 904 Hz, the difference of about 40 Hz) and much more fronted than /aw/ in the elsewhere condition (the F2 of /awn/ is 1783 Hz, while the F2 of /aw/ is 1596 Hz, the difference of about 110 Hz). Fronting and raising in this environment is attested in many North American dialects, so Vancouver English appears to align with general trend in this respect.

/ow/-fronting

Moving on to /ow/, it is described to have a much smaller fronting range compared to /uw/ because of the shape of the acoustic space: Labov et al. (2006:155) suggest the maximum possible fronting of 1400 Hz for /ow/ compared to 2200 Hz for /uw/. In *ANAE*, the authors divide the degree of fronting of /ow/ into five levels, from the lowest of less than 1100 Hz in F2 to the highest of around 1400 Hz in F2 (Labov et al. 2006:157). Vancouver is marked on the map to have moderate to strong fronting, 1300 to 1400 Hz (158). For Canada, Boberg's (2010) threshold for centralized /ow/ is more than 1300 Hz; according to the author, BC is one of the most advanced areas for centralized /ow/ (2010:206). In the current study, /ow/ with its value of 1314 Hz for F2 meets the established threshold for centralization.

As for the preceding context, for /ow/ the effect has been shown to be much weaker compared to /uw/. In particular, post-coronal context does not usually promote fronting, as it greatly does with /uw/ (Labov et al. 2006:155). My findings confirm this fact: other than pre-lateral environment that strongly inhibits fronting (the mean F2 value for /ow/ is 889 Hz), no other context appear to exert any particular influence: the distribution of /ow/ in different environments is diffuse over the range from 1225 to 1350 Hz in F2, without any particular clustering.

/uw/-fronting

Overall, the F2 value for the /uw/ vowel for all speakers in the current study is 1764 Hz, which is 36 Hz short of meeting the threshold established by Boberg (2010) based on his analysis of regional variation. The author reported that BC adhered to this threshold (204) and had more advanced values of /uw/ than neighboring Prairies where F2 was reported to be as low as 1657 Hz (204). In fact, together with southern Ontario and Toronto, Boberg named BC one of the most advanced areas for the fronting of /uw/.

Another measure of /uw/-fronting is a so-called "index of phonetic innovation" proposed by Boberg (2011). It is calculated by subtracting the F2 of /uw/ from that of /æ/ (22). For BC, the author reports an index of -100 Hz which means that /uw/ is 100 Hz fronter than /æ/ in the horizontal dimension. I did not find such a large difference: this index is only -28 Hz in the current study, based on the data from all speakers. However, there are some differences in the position of both /æ/ and /uw/ in the three ethnic

groups; in particular, isolating the data from British/Mixed Europeans bumps the index to -56 Hz. Thus, /uw/ in the current study is slightly less fronted than previously reported; however, it is definitely at least moderately fronted, especially in some environments.

For /uw/, there is an important influence of the preceding environment on the degree of fronting. In the current study, the strong effect of the preceding segment for /uw/ is the same as was reported in Labov et al. (2006:153) and Boberg (2010:152): much more fronting after coronals, and less so after non-coronals (Figure 19). For the coronal onsets, *ANAE* proposes any value less than 1550 Hz in F2 as a conservative value, and more than 2000 Hz as extreme fronting. Vancouver is shown on the map to have a value of more than 1550 Hz for coronal onsets (Labov et al. 2006:154). In the current study, F2 of /uw/ in post-coronal context is 1889 Hz which puts it in a quite fronted position, with *do* showing the most extreme fronting (2202 Hz in F2).

For non-coronal onsets, Labov et al. propose two thresholds: an F2 of less than 1200 Hz for a conservative realization of /uw/ and an F2 of more than 1550 Hz for a strongly fronted realization of /uw/ after non-coronals. Vancouver is described in *ANAE* to have “only moderate fronting of /uw/ after non-coronals” (155). Figure 19 shows fronting in this context with a mean of 1512 Hz in F2, which means moderate to strong fronting of /uw/ in the non-coronal environment.

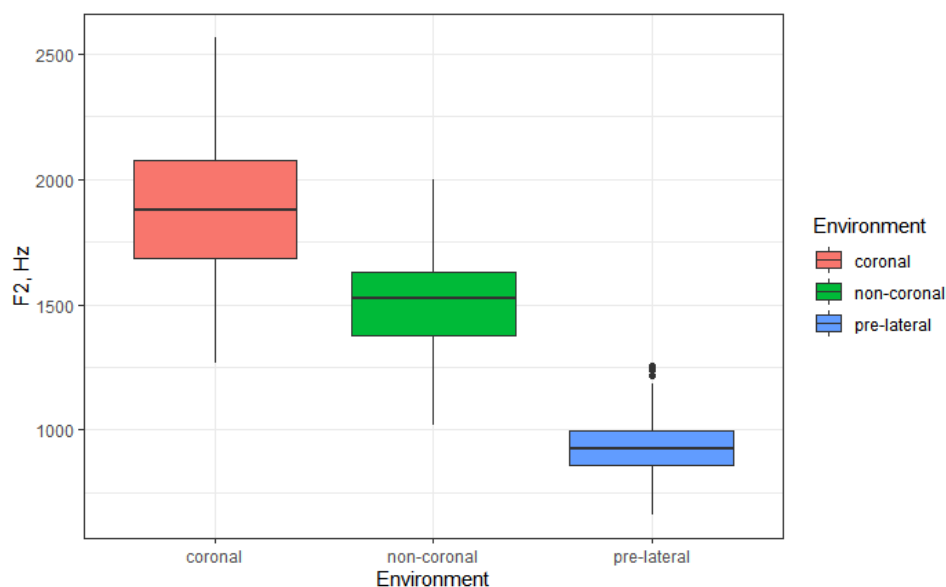


Figure 19 Fronting of /uw/ in different phonological contexts

Finally, Figure 19 also shows that a following liquid strongly inhibits fronting: mean F2 of /uw/ is 935 Hz. Because some of the previous studies found that the non-White groups may have a different degree of fronting in these environments, this topic will be discussed more below, in the section on heritage effect. The presence of outliers in pre-lateral contexts, also discussed below, may signal the incipient change towards fronting in this context as well, as suggested by Labov (2001:488).

A set of mixed effects models was developed to check for the effect of heritage and gender on the degree of fronting of /aw/, /ow/ and /uw/ and their allophones, as well as the interaction between these gender and heritage. The visual inspection of residual plots did not reveal any deviations from homoscedasticity or normality. The results are presented below in Table 30. There was no statistically significant interaction of heritage and gender for any of the variables. When separate main effects of gender and heritage were considered, gender was found to have a statistically significant effect on the F2 of allophones: /awn/, /owl/, and /uw/. Heritage was found to be a statistically significant predictor of fronting of /aw/ and /ow/, as well as for the /uw/ allophone. The following sections will consider these results in details.

Table 30 Mixed effects results for gender and heritage influence on F2 of fronting of vowels /aw/, /ow/ and /uw/ and allophones (boldfaced value is significant, boldfaced italics is marginally significant)

	/aw/	/awn/	/ow/	/owl/	/uw/ (all contexts)	/Tuw/ (only post-coronal)	/uwl/
gender	$F(1, 44) = 0.07, p = 0.8$	$F(1, 42) = \mathbf{6.5, p = 0.01}$	$F(1, 44) = \mathbf{3.45, p = 0.07}$	$F(1, 44) = \mathbf{6.01, p = 0.02}$	$F(1, 44) = 0.23, p = 0.63$	$F(1, 44) = 0.92, p = 0.34$	$F(1, 44) = \mathbf{7.66, p = 0.008}$
heritage	$F(2, 44) = \mathbf{3.8, p = 0.03}$	$F(2, 42) = 1.83, p = 0.17$	$F(2, 44) = \mathbf{6.07, p = 0.0046}$	$F(2, 44) = 0.21, p = 0.81$	$F(2, 44) = 0.5, p = 0.6$	$F(2, 44) = 2.45, p = 0.098$	$F(2, 44) = 4.43, p = 0.017$
interaction of heritage and gender	$F(2, 44) = 0.52, p = 0.6$	$F(2, 42) = 0.07, p = 0.93$	$F(2, 44) = 0.11, p = 0.89$	$F(2, 44) = 0.42, p = 0.66$	$F(2, 44) = 0.7, p = 0.5$	$F(2, 44) = 0.22, p = 0.8$	$F(2, 44) = 1.9, p = 0.16$

The effect of gender

Figure 20 below, based on the values in Table 31, shows the position of the three back vowels and their allophones. It is clear that the difference in F2 of /uw/ and /aw/ between males and females is small, which is confirmed by the lack of statistical

significance in Table 30 above. Both males and females fall short of the threshold of 1800 Hz for fronted /uw/, just like they both surpass 1550 Hz threshold for fronted /aw/. These results partially align with previous ones: Chambers and Hardwick (1986:32) reported that females in Vancouver were leading fronting of /aw/, but in Boberg's description of Canadian English, he did not find gender effect on /aw/-fronting. Boberg did find that females fronted /uw/ more than males in Canadian English overall (2010:203, 210), but more recent studies in Toronto (Hoffman 2016) and Victoria (Roeder et al. 2018) showed no gender effect. It appears that more recent studies of Canadian English, including the current one, agree that there is no gender effect for /aw/- and /uw/-fronting, with both males and females fronting these vowels similarly.

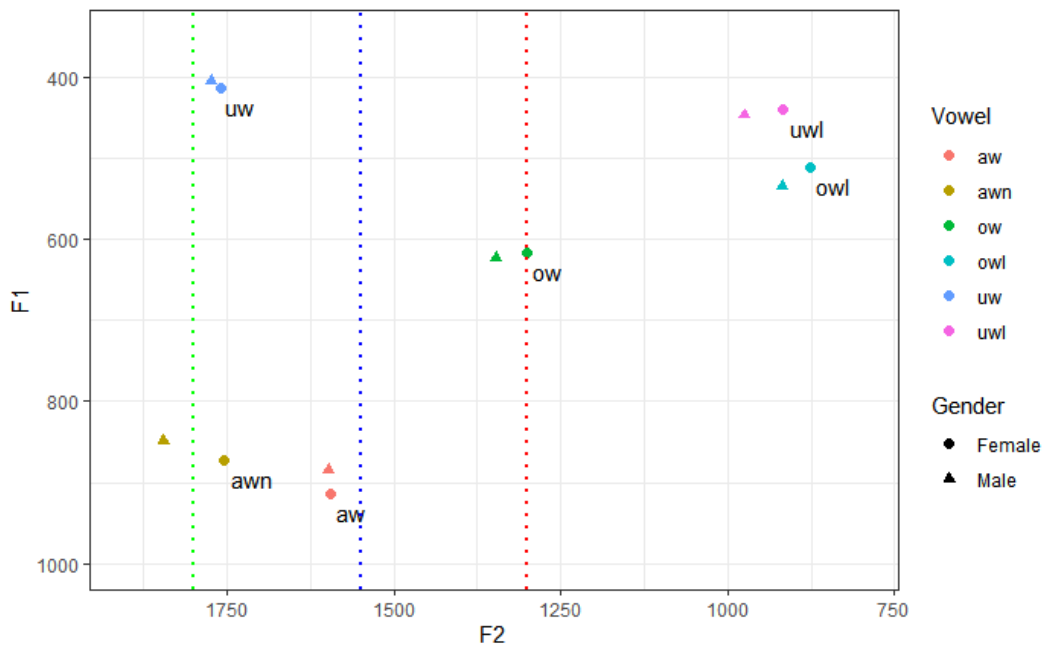


Figure 20 Fronting of back vowels by gender; vertical lines are established thresholds for fronting (1800 Hz for /uw/, 1550 Hz for /aw/, and 1300 Hz for /ow/)

Table 31 Fronting of back vowels by gender: Mean F1 and F2 values and SD

	Females				Males			
	<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>	<i>M</i> (F1)	<i>SD</i>	<i>M</i> (F2)	<i>SD</i>
aw	914	81	1595	148	885	62	1598	109
awn	874	102	1755	150	849	94	1846	138
ow	617	70	1300	144	624	55	1348	130
owl	511	56	877	84	535	28	919	76
uw	413	44	1760	306	406	42	1774	280
uwl	441	45	917	112	448	40	976	100
Tuw	416	46	1881	273	407	45	1908	232

There is a difference of 48 Hz in the F2 of /ow/ that is marginally significant ($p = 0.07$), with males having slightly more fronted values compared to females. This small gender effect does not align with previous studies in the U.S. that showed that females are expected to have at least a little more /ow/-fronting than males (Labov 2001, Baranowski 2008, Hall-Lew 2009); however, a study from the U.K. found that males have higher F2 values for /ow/ vowel (though in general fronting of this vowel is blocked by its monophthongization in Carlisle English, Jansen 2017:15). For Canada, Boberg (2010:211) reported no gender effect for the fronting of /ow/ overall, Hoffman (2016) found that in Toronto, females front /ow/ more than males, while Roeder et al. (2018) reported again no gender effect for /ow/ fronting in Victoria.

Moving on to the allophones, Figure 20 shows that males produce a lower and more fronted pre-lateral allophone /owl/ than females. The result for the effect of gender on F2 of this allophone is significant ($F(1, 44) = 6.01, p = 0.02$): males have their /owl/ 42 Hz fronter than females, taken as a group. To my knowledge, previous research has not addressed gender differences in /owl/ allophone. I can suggest that the development here parallels that of /uwl/ discussed below, where position to the back is more standard and may have some connection to higher prestige groups, but this is purely speculative. Labov (2001:494) notes in passing in this respect: “one cannot rule out the possibility that the increasing retraction of vowels before /l/ is driven by socially motivated projection, a negative evaluation of the fronting of pre-lateral /uw/ and /ow/.” Females, being generally more sensitive to social evaluation, would then be naturally avoiding fronting of /owl/.

Labov et al. (2006:163) report, based on the statistical tests results for gender, education, and age, that males, older people and those with lower education front /uw/ more. The authors suggest that the fronting of /uw/ in North America “has received a certain amount of social stigma, although this effect has not risen in social consciousness to the level of a stereotype.” Similarly, Baranowski (2017) explains the gender effect in fronting of /uw/ in his Manchester sample by social stratification: women, according to the author, align themselves with higher prestige groups and refrain from using the form associated with lower classes (316), while men have a higher rate of /uw/-fronting, similar to a higher rate of alveolar *-ing* pronunciation. It is not clear at this point if fronting in pre-lateral contexts that usually inhibits fronting has any connection with social prestige in Canada, but I can speculate that it is the case, similar to /ow/-fronting discussed above. Another possible explanation for fronting in pre-lateral contexts is provided by Fridland (2008:445): the progression of /uw/-fronting leads to the situation when “tokens begin to cluster toward the new target, regardless of consonantal context.” It may be the case that the data in the current study shows the next stage of /uw/-fronting where it spreads to all contexts. One last point worth mentioning is that some authors propose that in some dialects, there is a lack of distinction between dark and light realizations of /l/ which may lead to fronting (Baranowski 2017:316, Fridland & Bartlett 2006:19), but I will not discuss it further since it goes far beyond the scope of the current work.

The effect of heritage

The values for heritage groups are presented in Table 32 below and visualized in Figure 21. Results of the mixed effects tests presented earlier (Table 30) showed that there is a significant effect of heritage on fronting of /aw/ and /ow/, as well as a marginal effect in post-coronal consonants, and no effect of heritage on fronting of /uw/ and other allophones. A series of tests were conducted to expose the source of variation; the results are discussed in the appropriate sections below. Table 32 contains the results for heritage effect on F2, as well as similarities and differences among the ethnic groups based on Tukey HSD tests discussed later.

While all three heritage groups have their /aw/ fronted beyond the threshold of 1550 Hz, there is a statistically significant difference among them. A pair-wise Tukey test revealed that South Asians ($M = 1639$, $SD = 146$) differ significantly from both Chinese

($p = 0.001$) and British/Mixed Europeans ($p = 0.015$), while Chinese ($M = 1561$, $SD = 125$) and British/Mixed Europeans ($M = 1579$, $SD = 124$) do not differ from each other ($p = 0.69$). South Asians have the most fronted /aw/ among all three groups.

Table 32 Fronting of back vowels by heritage: mean F1 and F2 values and SD

	British/Mixed European		Chinese		South Asian		significant heritage effect on F2	differences based on Tukey HSD
	<i>M</i> (F1)	<i>M</i> (F2)	<i>M</i> (F1)	<i>M</i> (F2)	<i>M</i> (F1)	<i>M</i> (F2)		
aw	897 (86)	1579 (124)	911 (83)	1561 (125)	906 (63)	1639 (146)	$F(2, 44) = 3.8, p = 0.03$	SA ≠ (Br, Ch)
awn	879 (103)	1739 (137)	867 (124)	1803 (140)	853 (71)	1805 (166)	--	--
ow	627 (70)	1377 (130)	618 (54)	1269 (141)	613 (70)	1302 (134)	$F(2, 44) = 6.07, p = 0.0046$	Br ≠ (Ch, SA)
owl	514 (55)	895 (87)	540 (43)	893 (90)	504 (46)	883 (76)	--	--
uw	403 (43)	1775 (286)	422 (44)	1743 (261)	409 (40)	1773 (336)	--	--
uwl	428 (38)	979 (93)	464 (44)	910 (99)	438 (41)	921 (126)	$F(2, 44) = 4.43, p = 0.017$	Br ≠ (Ch, SA)
Tuw	403 (47)	1884 (270)	425 (45)	1850 (218)	411 (45)	1926 (282)	$F(2, 44) = 2.45, p = 0.098$	not found

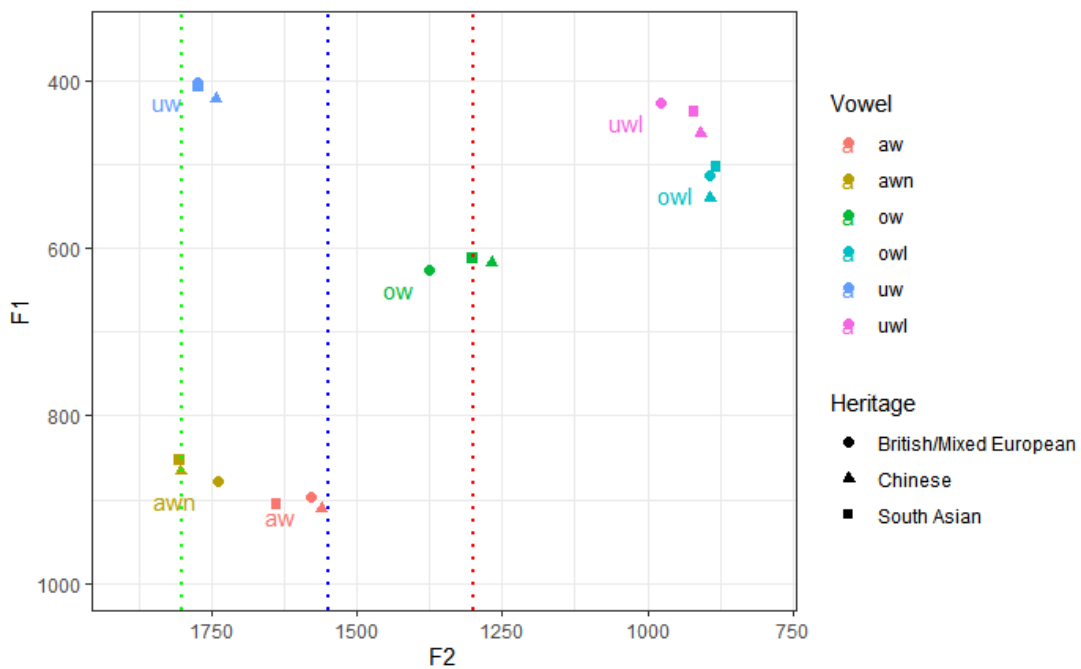


Figure 21 Fronting of back vowels and allophones by heritage

The next vowel, /ow/, also has one group leading and two being behind, but in this case, it is British/Mixed Europeans who strongly front /ow/ compared to two other groups. The results of the Tukey HSD test show that F2 of /ow/ of British/Mixed Europeans ($M = 1377$, $SD = 130$) is significantly different from that of Chinese ($p < 0.0001$) and South Asians ($p = 0.0006$). At the same time, F2 of /ow/ of Chinese ($M = 1269$, $SD = 141$) is not that different from the same measure of South Asians ($M = 1302$, $SD = 134$), $p = 0.2$. This result is interesting given some of the previous findings. Hall-Lew (2009:192) found no statistically significant effect of heritage on fronting of /ow/, with Asian Americans and European Americans fronting similarly. At the same time, a number of previous studies with other ethnic groups showed that it is the White speakers who exhibit more fronting of /ow/ (Thomas 2007, Baranowski 2017). This is the pattern observed in the current study, as well.

Figure 21 shows that the three ethnic groups have their /uw/ quite close together: South Asian and British/Mixed European groups overlap, and Chinese is slightly lower and backer, by around 30 Hz. No statistically significant effect of heritage was found for the fronting of /uw/, similar to what was reported by Hall-Lew (2009) and Wong (2014) who found no differences between Asian Americans and European Americans in fronting of /uw/, as well as by Hoffman (2016) and Umbal (2019) for non-White speakers of Canadian English.

At the same time, it is clear from Figure 21 that the three groups differ in their realization of /uwl/: British/Mixed Europeans have the most fronted realization, while Chinese and South Asians are similarly positioned to the back. A pair-wise Tukey HSD comparison showed that the F2 of British/Mixed Europeans ($M = 979$, $SD = 93$) differs significantly from that of Chinese ($M = 910$, $SD = 99$) at $p = 0.01$ and South Asians ($M = 921$, $SD = 126$) at $p = 0.03$, while Chinese and South Asians are not different from each other ($p = 0.86$). British/Mixed Europeans have the most advanced fronting among the three groups in the pre-lateral context that usually inhibits fronting.

It is appropriate to reference here Fridland and Bartlett (2006) who found that European Americans had slightly more advanced /uw/-fronting in the environments that usually inhibit it, such as prelateral, among others, compared to African Americans (13). The authors suggest that the weakening of environmental effects for European Americans may be an indication that they are more advanced in this change in progress.

I can hypothesize that British/Mixed Europeans in Vancouver are more advanced in fronting of /uw/, judging not by the actual position of /uw/ for which I did not find any heritage effect, but by the position of /uwl/ which is more advanced for this group, as well as for the Chinese and South Asian males who follow their lead, while females from these two non-White groups maintain the strict back position of this allophone.

Because mixed effects suggested only a marginally significant effect of heritage on the fronting of /uw/ in post-coronal context ($F(2, 44) = 2.45, p = 0.098$), a Tukey HSD did not show any differences among the ethnic groups. To facilitate the discussion of this variant, I plotted the values for the three heritage groups as a boxplot (Figure 22). It is clear that all speakers in the current sample show the robust phonological conditioning according to the well-described patterns: post-coronal context produces most fronted variants for all three ethnic groups, while following non-coronals, there is less fronting of /uw/. There are slight differences for /uw/ in post-coronal context: South Asians have the highest mean ($M = 1926, SD = 282$), followed by British ($M = 1884, SD = 270$), while Chinese have the lowest value ($M = 1850, SD = 218$). Hall-Lew (2009) reported no effect of heritage on the fronting of /uw/ in post-coronal context (187) in her sample of Asian and European Americans in San Francisco. However, Umbal (2019) found that in Toronto, Filipino Canadians front /uw/ more than Anglos in this context.

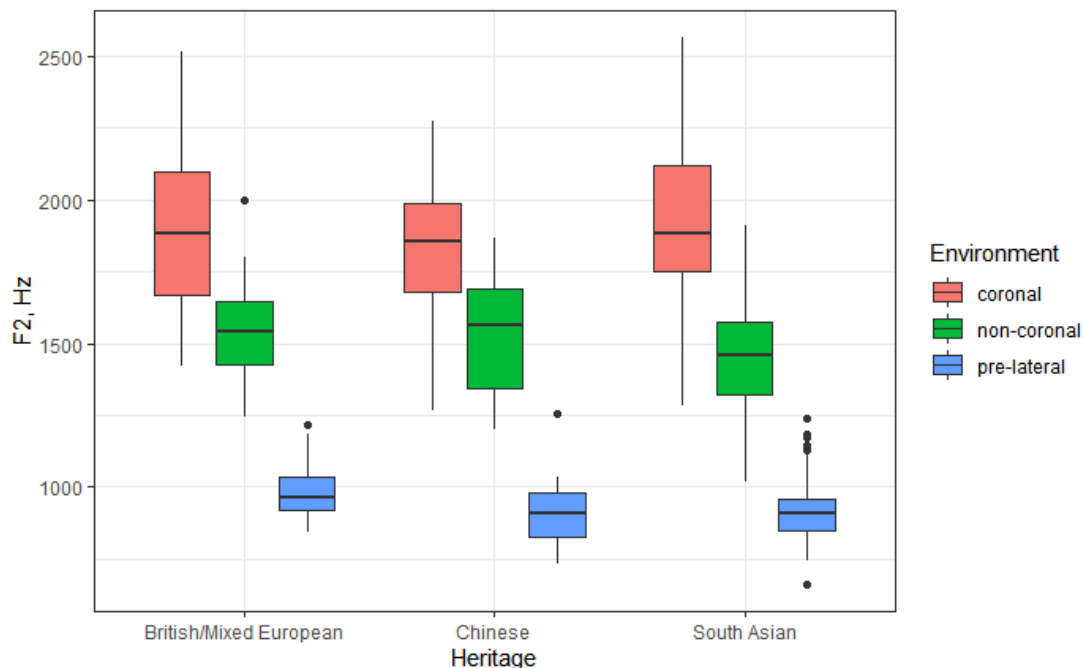


Figure 22 Heritage and phonological environment for /uw/

One last thing I would like to point out in Figure 22 is the pre-lateral context that produced non-fronted variants for all three groups, though there is a slightly noticeable difference towards more fronted /uwl/ in British/Mixed Europeans. The South Asian group have the lowest values in this context; however, there are many outliers in this group who skew the mean F2 (920 Hz) of pre-lateral /uw/ positively above the median (906 Hz). Labov (2001) describes such positive skewness as a first step of the fronting when he discusses fronting in non-coronal contexts: “Fronting begins with a group of outliers which skew the distribution heavily in the direction of change” (488). Wong found similar skewness in non-coronal contexts in her New York Chinese heritage speakers which she explains as a possible early sign of change towards a fronted variant, which, as a reminder, in New York City has not been traditionally fronted (2014:213). It may be the case that South Asians as a group are starting to advance their pre-lateral variant of /uw/.

5.2.3. Summary

The results presented above show that fronting of all three back vowels, /aw/, /ow/ and /uw/ occurs in Vancouver. No interaction of heritage and gender was found. The allophones /awn/, /owl/, and /uwl/ showed a statistically significant gender effect, with males having more advanced variants of these allophones than females. The vowels /aw/ and /ow/, as well as the /uwl/ (pre-lateral) allophone showed a statistically significant heritage effect. For /aw/, South Asians had more advanced values than the two other groups. For /ow/ and /uwl/, British/Mixed Europeans were the most advanced of the three groups. Despite these differences, all three ethnic groups mostly adhere to the established thresholds for fronting. Similarly, all speakers have the same order of phonological constraints, with pre-nasal /awn/ being fronter and more raised than /aw/, and with following /l/ inhibiting fronting for both /ow/ and /uw/. The discovered differences may signal different stages of progression of the changes in the back vowels in Canadian English.

Chapter 6.

Labelling ethnicity in Metro Vancouver

6.1. From ethnic orientation to bicultural identity orientation

This chapter discusses the themes that emerged during the qualitative analysis of the interview data. The main focus is on the participants' self-representation in regard to their heritage which has been termed ethnic orientation (Noels 2014) or bicultural identity orientation (Comănanu et al. 2018). The following will explain the background and transition in terminology use.

At the stage of the study design and in the beginning of data collection, the intention was to investigate to what extent participants affiliated with their heritage culture and group them according to their so-called "ethnic orientation," as described in previous work (Hoffman & Walker 2010, Nagy et al. 2014). The goal was to quantify these data following approaches described previously (i.e., assign a score of 1 to 3 depending on the expressed affiliation, where 1 denotes more tendency towards Canadian culture and values, and 3 more affiliation with the heritage culture and values). The resulting values for each speaker could be used in statistical modelling to investigate to what extent the degree of affiliation with one's heritage influences the linguistic behavior. As data collection progressed, it became clear that, first, none of the participants affiliated exclusively with their heritage culture, which is natural for second-generation immigrants who grew up here (the majority of the participants with the highest degree of affiliation to Chinese culture in Toronto are 1st generation immigrants in Hoffman and Walker 2010). The three-strand categorization into Canadian, hyphenated Canadian and "ethnic" (Chinese or South Asian) as was done in previous research was reduced to two categories, Canadian and hyphenated Canadian, with much less contrast between them.

Second, within each of these two categories, there was a lot of ambiguity and gray areas. Participants from the non-White groups who chose the label "Canadian" explained this choice either by factual information (being born here) or by contrasting Canadian values to non-Western values, or by a host of other reasons that are not even

directly comparable as some of them have to do with facts and others with emotions or feelings. The hyphenated term that some participants preferred also concealed a variety of situations: for some, there exists one identity with two parts blended or merged, while for others, there are two separate identities.

A third point related to the previous one is that a number of participants mentioned situational variability where one or the other identity “comes out” in a particular context. It became clear that instead of being opposites, “Canadian” and “hyphenated Canadian” are on a spectrum with a lot of in-between values. All this made it impossible to apply the methodology described in previous work, that is, to quantify the results of the qualitative analysis.

In search of a framework that would help me describe the identities of the participants, I conducted an extensive literature search in the fields of social psychology and cultural psychology, and finally came across a recent study by Comănanu et al. (2018) that focused on the exact same population, young people in Canada who grew up in immigrant families, and examined the exact same issue: how these people think of themselves in terms of affiliating with their heritage group. This study synthesized many previous social psychological studies and offered a comprehensive framework that combined many previously described categories (hybrid identity, monocultural identity, situational variability, etc.). They termed their framework “bicultural identity orientation,” and the term “identity orientation” seemed to reflect the trends in the data better than “ethnic orientation” because in many cases, ethnicity as defined by blood or race is much less relevant for these young people than the social identity that in some cases has a heritage component to it.

This chapter contains three sections where participants from each of the ethnic groups (British/Mixed European, Chinese, and South Asian) are described based on the interview data. The description in each case starts with some factual information elicited during the interviews, including the countries of origin of the participants’ parents, the languages these young people speak and were exposed to, the neighborhoods where they live and the schools they attended. The aim of these background sections is not to provide an exhaustive description of each participant’s life story, but rather to paint a broad picture of life circumstances for these three ethnic groups residing in Metro Vancouver. For the general history of settlement, residential patterns and population

trends of these groups the reader can refer to the introduction chapter of this dissertation. After the background is laid out, the main focus of each section shifts to the description of identity orientation of the participants and the different themes related to it. The chapter ends with a summary of the findings and the discussion of several important factors that may have an effect on the formation of the identity orientation of the participants.

6.2. British/Mixed Europeans in Metro Vancouver

6.2.1. Demographic data on British/Mixed European Canadians

Because of the deep connection of the discipline with dialectology, every sociolinguistic study aims to find informants who represent the true speakers of a local variety (Labov 1984, Milroy 1987). In colonial situations, the “founder effect” appears, whereby the first colonizers have a greater influence on the outcome of the language development and change in a given place compared to later arrivals (Mufwene 2001, Trudgill 2006). The usual assumption in North America is that the “founding population” are people of Caucasian background and Anglo-Celtic origin (though it may not be stated directly in these terms). Given the immigration history of the continent, this assumption is reasonable: during the colonization period, both United States and Canada were initially populated by people of Anglo-Celtic descent who arrived from the British Isles (Boberg 2010).

To ensure comparability with previous research based on such a population, the intention in this study was to find speakers whose grandparents were both from the British Isles. However, it became clear very soon that this goal was unattainable: in their emails, potential candidates self-identified as “Anglo-Canadians” while reporting that their grandparents were from different parts of continental Europe in addition to the British Isles. Several participants did not know their grandparents’ country of origin, just saying they were “Caucasian.” Out of 14 participants with “White” heritage included in this study, only one said that *both* of their grandparents immigrated from Great Britain. It was surprising to realize that the largest city of British Columbia is not that British after all. The numbers from the recent Census confirm this: in 2016, only about 6% of Vancouver CMA residents reported single a ethnic origin traced back to the British Isles,

with about 25% of the total population listing the British Isles as *one of* their places of origin (Statistics Canada 2017).

With a single national origin being unattainable, I made a decision to define a “true” speaker of the local variety of English as a person who self-identifies as “Anglo-Canadian” or “Caucasian,” who was born in Metro Vancouver to parents who were also born locally, and who was raised in Metro Vancouver without leaving it for any considerable amount of time. The group was given the name “British/Mixed European” to clearly reflect their origin (both continental Europe and the British Isles). Table 33 provides data on the speakers’ generation status and the countries of origin of their grandparents.

Table 33 Ethnic background of participants in the British/Mixed European group (3rd gen: both parents born in Canada; 2.5 gen: one parent came to Canada as a child or pre-teen)

speaker’s ethnic background	countries of origin of grandmother and grandfather (as named by participants)	generation status	number of speakers
British	UK – UK	3 rd gen	1
British/mixed European	Scotland – Denmark Germany/Sweden – Italy/Ireland Croatia – Ireland Italy/Scotland – England/Norway Germany/Ireland – Scotland/US	3 rd gen	5
Mixed European	Germany – ? (“Caucasian”) Ireland/South Africa – ? (“Caucasian”) Ireland – Russia Germany – Sweden/Finland	3 rd gen	4
Mixed European	Australia – Latvia Portugal – Portugal Australia – ? (“many generation Canadian”)	2.5 gen	3
Mixed European/South Asian	Sweden/France – India	3 rd gen	1
		Total	14

The diversity of backgrounds of young people who answered the call to participate in a study of “Anglo-Canadians” shows that this label has a very broad meaning, with most straightforward the association with Caucasian race and a status as a native speaker of English. Hall-Lew (2010) and Wagner (2013) discuss how in the U.S., the construction of Whiteness leads to an erasure of the internal differences in

such diverse group. To a large extent, I found it in Vancouver, as well. Very few of the speakers still identified to any extent with their heritage country presenting themselves simply as a White Canadian, as will be discussed later on.

Before going into the discussion of the participants' identity, it is important to situate them in Metro Vancouver through the analysis of their answers to my questions about their neighborhoods and schools. In terms of the residential patterns, about half of the participants grew up in predominantly White municipalities or neighborhoods (Maple Ridge, Abbotsford, Cloverdale, Langley, New Westminster), while the other half reported growing up in very diverse areas (Burnaby, Surrey, Richmond, West Vancouver) (Table 34 below). All speakers at the time of data collection continued to reside with their families in their family homes. Most of the participants stayed in the same neighborhoods since their childhood, but one moved to a more White neighborhood, and one to a more mixed one. One person noted that their neighborhood changed over the years to become more diverse. Overall, the participants reside across Metro Vancouver, some in traditionally more White neighborhoods, and others in diverse neighborhoods, which aligns with the statistical data on this group presented in the introduction.

Table 34 Demographic data for the British/Mixed European group

	neighborhood in early childhood	neighborhood in teen years	high school	friends
Anna	more White (Surrey)	same, became more mixed	NA	diverse
Beth	mixed, Asian (Richmond)	mostly White (Burkeville)	mostly non-White	White
Cindy	White (Maple Ridge)	White (Pitt Meadows)	mostly White (French immersion)	White
Donna	mixed (West Vancouver)	same	less than half White	mostly White
Emma	mixed (North Surrey)	same	about one third White	NA
Fiona	White (Langley)	same	'very Asian'	mostly White
Gemma	mixed (Surrey)	same	about one third White	diverse
Holly	White (Abbotsford)	same	mostly White	NA
Iris	White (Cloverdale)	same	mostly White (French immersion)	mostly White
Jane	White (New West)	same	mixed	White
Austin	White (Langley)	same	mostly White	White
Ben	White (Newton)	same	mixed	diverse
Chris	White (New West)	same	mostly White	White

Dylan	White (Victoria)	mixed, White and Chinese (Burnaby)	mostly White (French immersion)	NA
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Not surprisingly, speakers who reside in traditionally White municipalities (Cloverdale, Abbotsford, Langley) reported their schools to be predominantly White. Similarly, French immersion schools had mostly White students.

While about half of the participants in this group went to “mostly White” schools, the other half reported attending a very diverse school or a school that was dominated by one non-White ethnic group. Potentially related to schools and neighborhoods are social circles of the participants, however, there are some gaps in the data in this regard as some participants avoided discussing their friends in terms of their ethnicity. Overall, about half of the participant reported that their friends are all or mostly White, while several others said that their social circles are diverse. There are different combinations of these three factors: Fiona grew up in a White neighborhood, went to a “very Asian” school, and maintains mostly White network; both Donna and Gemma grew up in diverse neighborhoods and went to mixed schools, but Donna reports to have mostly White friends, while Gemma maintains mixed social circle.

One more relevant issue is proficiency in other languages. As is relatively normal among White North Americans, the majority of the participants in this group are monolingual English speakers. Two speakers speak their heritage languages (German and Portuguese), and four can speak French they acquired in schools, though these participants noted that they hardly have any opportunity to speak it after graduating from school.

6.2.2. Identity orientation of British/Mixed European Canadians

In the U.S., the construction of pan-ethnic White identity often means erasure of individual’s heritage history (Wagner 2013, Hall-Lew 2010). The current study shows similar results for young Canadians. Heritage emerged as meaningful only for two speakers who maintain close connections with it and speak the ancestral languages (German and Portuguese). For others, identity can be described as monocultural, with some knowledge of the heritage, but little to no affiliation with it. Being “just Canadian” replaced being hyphenated Canadian for these young people, but the meaning of this

terms can be hard to pinpoint. Beth, whose grandparents are of German and English origin, says:

Beth: Well considering I'm a hundred percent Canadian, so- Yeah. I'm pretty much Canadian.

For this participant, no explanation is needed as being Canadian is somehow obvious. The majority of participants in this group do not consider themselves to be a member of some particular ethnic group, essentially equating the Caucasian race with being Canadian. Being Caucasian is in turn associated with Europe, as the following quote illustrate:

Ben: Like when I was in high school, some people would say, like, You're not White. You're Portuguese. Portugal is in Europe! What else can I be? Uh I say that I'm the same kind of White as like Italian people or Greek people.

In addition to White European roots, being raised in Canadian culture emerges as an important theme. The following quote is from a participant with mixed heritage, whose biological father is South Asian, but she was raised by her Anglo-Canadian mother with Swedish/French roots. This young woman thinks of herself as “solely Canadian,” and she explains what shaped her self-identification:

Anna: I've always identified myself as solely Canadian. Just because my background is so mixed, and I've never actually travelled to the places where I'm from, like everything that I know is Canadian, you know, I grew up- I grew up in Canada, I grew up here. Um- Sometimes I- I love hearing about- the stories that my family has, but- I don't- I don't identify myself as, you know, that.

What we see here is the dissociation with ancestral groups which was mentioned by several other participants, as well. While usually definitions of ethnic identity involve association with a reference group, White people seem to choose the opposite strategy to depict this indefinite “Whiteness.” Bell (1999) writes about construction of Pakeha (White) identity in New Zealand: “...we tend to be identified by default, by what we are not rather than what we are . . . not Maori, not Polynesian, not Australian, not British, not European” (539).

The same motive of dissociation is heard in the words of Jane, who also provides a definition of Canadian culture (her grandparents have roots in Scandinavia and Germany):

Jane: I feel very Canadian, like I feel like um- I identify very strongly with like the culture here which is like a multicultural mix of people, um that being said I also like talking to my grandparents, I- it's nice to know like where they've come from and so like I- I- when people ask me, like, Oh, like, where are your grandparents from or things like that, I'd say, like, they're Swedish or German, like I'm proud of them, where they came from, but I definitely identify as a Canadian, I wouldn't say that I'm- Oh I'm Swedish or I'm German cos I'm not from there.

The Canadian culture that Jane identifies with, in her words, is “a multicultural mix of people.” She acknowledges her roots and respects them, but she does not feel any personal connection to the countries where her ancestors came from and, as the interview data revealed, does not speak the heritage languages.

The dissociation motive also takes a different form in the interview data: several participants position themselves in the opposition to newcomers, thus reflecting the idea of the “founder population.” Iris, talking about her White neighborhood, says the following:

Iris: ... everybody in my neighborhood was just, you know, Canadian, there weren't any like immigrants...

When I asked for clarification, she repeated that everyone was “fairly Canadian” and only after another request about the meaning of that, she said they were Caucasian, which implies that by “immigrants” she means non-White people. A similar opposition of White and non-White is clear in the words of another participant. Talking about being able to try all the world cuisines in Vancouver, Donna says:

Donna: ...we definitely wouldn't have any of that stuff without like all these immigrants here, and it's just- like I think it adds to the culture and I think it adds to the community.

She refers to diversity as a positive thing beneficial for the community, but still the phrase “these immigrants” presents a clear case of “othering.”

The equation of “Canadian” with Whiteness and “immigrant” with non-Whiteness was clearly present in many interviews, but often it was not directly stated for obvious reasons. One aspect that was discussed openly was English proficiency that clearly distinguishes newcomers from the established population. Holly, who lived all her life in the predominantly White exurb of Abbotsford, mentioned language-related challenges of working as a retail clerk on the border with Surrey:

Holly: The most challenging part of working in that part of town in Abbotsford was- um you deal with a lot of East Indian people who don't speak English, and that was rough. Um-

I: So how would you-

Holly: I honestly just- like, Excuse me? Sorry, what did you say? Like- um- they also are different, too, in the way that they ask for things and sometimes not as polite, so I found that kinda frustrating.

Differences in language were coupled with differences in manners and the degree of politeness, as is clear from this quote. Another speaker mentioned that she is “annoyed” with the public signs in Richmond where many businesses only use Chinese in their signage:

Beth: ...a lot of signs now are- especially in Richmond, are Chinese first and maybe English. And I was like, Well- if you gonna do that, you need to do it with French, cause if it's in French, I'm okay, cause you know, national language, all good. ... Like I'm all for like- if it's like fifty-fifty, you know, I'm all for embracing culture and learning about other cultures, like a little bit. But I also think that if you want to live in your home country, just stay in your home country.

The annoyance with the language leads to negative commentary about immigrants' choices of a home country. The overt attitude expressed by her in the phrase “I'm all for embracing culture and learning about other cultures” gets qualified “like a little bit” which shows the covert attitude more. The language of signage was a hot topic of public debates in the recent past in Metro Vancouver, with some Canadians saying they don't feel welcome in business areas in Richmond where they cannot understand any signs. The perceived hostility is also heard in the words of the following speaker who feels uncomfortable when she hears languages other than English around:

Iris: At university, I hear a lot of more people talking in different languages all the time, and it's really cool. But sometimes I'm just like, I have no idea what you're saying, you may be talking about me, and I have no idea.

Yet another issue of cross-cultural communication is brought up by Emma: she talks about being addressed by a non-speaker of English and feeling upset about not being able to help her:

Emma: I had a woman come up to me, and I think she was speaking Korean, and she only spoke Korean, and she was asking for help. And I was like, I'd love to help you, but I can't understand you [laughs] which is sad, cause I like helping people and I guess it's not always the best

thing to not be able to communicate with people in your own community.

Emma laments this fragmentation of the community because of the language barrier, but she expresses very progressive views on multilingualism in contrast to some other participants who insisted that newcomers must all speak English:

Emma: I feel like I'd like to learn languages more than insisting that other people learn languages, I don't have a problem with that. I know that like some of my grandparents do with their like old-timey unintentional racist ways [laughs], I'm like, No grandpa, you can't say that anymore [laughs]. But I don't know, I don't feel like it's just up to other people to learn English. I feel like we should be also learning other languages.

Emma concludes that she likes “how we promote multiculturalism more than the melting pot [in contrast to the U.S.].” This attitude was present in many interviews, though, as some of the quotes above show, at times the proclaimed approval of diversity concealed some negative feelings about some aspects of it.

The majority of the speakers in this group expressed monocultural orientation, but for two of them, it is less straightforward than for others. These two speakers self-identified as Anglo-Canadians at the recruitment stage, but during the interviews, they talked about an important role heritage plays in their life. These two speakers, Ben and Chris, will be discussed as an illustration of contextual variability of identity.

Ben was born in Canada, and so was his mom in a large family of Portuguese immigrants, while his dad immigrated to Canada from Portugal with his family at a very early age. Both his parents grew up here; they met and got married in Canada. At the same time, their families retained a lot of the heritage cultures that Ben was immersed in through his grandparents. In this case, the fact that both parents shared heritage and had their extended families close by helped them to keep the culture and language alive for their son:

Ben: One of my grandpas, he didn't speak any English at all, he only spoke Portuguese. Um and so like we ate Portuguese food. My parents would speak to their parents in Portuguese. When I was a little kid, I couldn't speak Portuguese at all, um I knew like a few words. Eventually I learned it as a teenager, so now I talk to my grandparents in Portuguese. ... There's pictures of Portugal, like pictures of villages they are from on the walls, and I've been there, and they'll talk about, you know, our relatives in Portugal, they talk on the phone with so and so.

At the same time, in the younger generation of his large extended family, Ben is the only one who speaks Portuguese, though all of these young people grew up in a similar environment:

Ben: So it's kind of falling on my shoulders, kind of- once I started learning Portuguese, it was like, Okay, Ben is the one. He's the chosen one [laughs]. That's right. So it's kind of like- There's not a lot of Portuguese cos- because we're European, we fairly easily assimilated into broader English speaking culture. And there's not a huge population of Portuguese...

Here Ben directly talks about easy assimilation to Canadian culture because of being of European origin, as well as an issue of not having a large community of Portuguese locally, which also promotes assimilation to the mainstream culture. Describing his identity, Ben introduces the idea of contextual variability:

Ben: ...we've always had like the dual thing, like we know where our ancestors are from, but we also know that we live here, and so like when I speak to people from Portugal, even though my blood is the same as their blood, I'm just like really different because I'm Canadian. I'm a Canadian Portuguese person. I'm a Canadian of Portuguese ancestry, whereas they're like Portuguese Portuguese. I speak like- like my grandparents speak, like I speak like a farmer from nineteen fifty. And they speak like modern person [laughs].

Ben rephrases his self-identification three times, moving from “I’m Canadian” to “I’m a Canadian Portuguese person” to “I’m a Canadian of Portuguese ancestry,” so hyphenated term was introduced as a more representative alternative to just “Canadian,” but then abandoned for the sake of a less committed term that separated him from his ancestry. Importantly, this alternation is triggered by the context of a conversation with a “real” Portuguese.

Another speaker who described similar contextual variability is Chris. This participant’s mother is of German origin and Chris claims to have a strong German identity. He has studied German for many years and achieved a good level of proficiency, visited his extended family in Germany several times and even spent several months there working in the recent past. Here is what he says about his identity:

Chris: I'm culturally connected but not quite one of them. So if I go there, I'm Canadian, but if I'm here, I'm part German.

I: So if I would ask you, Are you Canadian? What would you say?

Chris: Well- I suppose in Canada, I would- I sometimes say Canadian German or sometimes I just say Canadian.

The life circumstances of these two speakers allowed them to retain partially their heritage ethnic identity, as well as to master German and Portuguese, though they note limited domains of use locally. Both of them state that proficiency in their heritage languages is an important link connecting them to their heritage. In case of other people, surely there are personal circumstances that resulted in their total assimilation and loss of heritage, but one can't help noticing the undelivered promise of the official multicultural policy of Canada: to "facilitate the acquisition, retention and use of all languages that contribute to the multicultural heritage of Canada" (Canadian Multiculturalism Act 1988: 5.1(f)). Such facilitation is obviously only possible when there is a desire to keep connected to the heritage, and why this is not the case for the majority of people in this group should be a topic of a separate study.

6.2.3. Summary

White Canadians who have been settling in this area since the second part of the 19th century remain the majority in British Columbia and comprise about half the population of Metro Vancouver. Municipalities differ in the proportion of this group to the total population: it is higher in the smaller or remote cities of White Rock, Abbotsford or Bowen Island, and lower in larger municipalities like Coquitlam or Vancouver proper. The participants recruited for this study also reside throughout Metro Vancouver, though about half of them in neighborhoods that traditionally have more White people.

Despite its beginning as predominantly British province and city, today, only a small fraction of population of Metro Vancouver traces their origin back exclusively to the British Isles. The majority of White people in Metro Vancouver have mixed origin: their grandparents or great-grandparents came from different countries of continental Europe in addition to the United Kingdom. This trend is clearly seen in the participants in this study, and the term coined for this group is "British/Mixed European." Despite various origins, all of them self-identify as Anglo-Canadians or White Canadians, a process that has been described in the literature as the construction of Whiteness through an erasure of the internal differences (Wagner 2013). Most of the participants have monocultural identity orientation with little to no affiliation with their heritage, with the exception of two

who still retain connection and speak heritage languages. These two speakers reported to experience situational variability in the way they feel about their identity.

The next sections of this chapter will focus on two non-White groups, Chinese Canadians and South Asian Canadians, in this order.

6.3. Chinese Canadians in Metro Vancouver

Canadians with Chinese heritage comprise one of the three largest visible minority groups in Canada, together with South Asians and Blacks (Statistics Canada 2018). Researchers define four distinct periods of Chinese immigration in Canada: the period of exploration, the period of restricted immigration, the period of state liberalization, and the period of economic immigration (Li & Lee 2005:645). The Chinese settlement started in the Canadian West and is an important part of the history of both British Columbia and Canada overall. Today, according to Statistics Canada (2017), Chinese account for around 20.6% of Metro Vancouver population. The details of the settlement history and residential patterns are provided in the Introduction above, and current focus is on the interview data that taps into the identity orientation of the young Chinese Canadians.

6.3.1. Demographic data on Chinese Canadian participants

General information

Out of a larger number of young people with Chinese heritage who were interviewed for this study, only those with Cantonese as their heritage language were selected for the data analysis, which resulted in 14 participants in this group. Table 35 below provides an overview of their demographic data. Starting with the country of origin, it is Hong Kong for both parents (seven speakers), China (Guangdong province) for both parents (five speakers), or a mix of Hong Kong and China for the remaining two speakers. In most cases, both parents immigrated as adults (11 out of 14). Two speakers' fathers came to Canada as teenagers, and both parents of one speaker immigrated when they were in high school with their families. All of the parents in this group are thus 1st generation immigrants, as defined by Statistics Canada (2017), but the few parents who came here earlier do differ from the rest of the group in the level of English proficiency and higher educational attainment.

12 out of 14 participants in this group were born in Metro Vancouver and are thus 2nd generation immigrants, according to the official definition (Statistics Canada 2017). Two participants were born outside of Canada, but because they came here at a very young age (1.5 and 2 years old), they were deemed to fit the requirements of the study. All of the participants lived their whole lives in Metro Vancouver with their families and continued to do so at the time of the data collection.

Table 35 Demographic data for Chinese Canadians

speaker	mother	father	neighborhood in childhood	neighborhood in teen years	high school	friends
Kelly	HK	HK	Coquitlam, mostly Asian neighborhood	Same	Mostly Asian (Chinese and Korean)	Multiethnic
Lola	China	China	Vancouver, multiethnic neighborhood	2 years in Langley, White neighborhood; Vancouver, multiethnic neighborhood	Mostly Chinese in Vancouver for last 3 years of high school	More Chinese friends
Mandy	HK	HK	Vancouver, traditionally White neighborhood	Same, more Asian families moving in	NA	A lot of Chinese friends, but also multiethnic
Nancy	China	China	Vancouver, multiethnic/Chinese neighborhood	Surrey at 15	South Asian dominated	Diverse, more Asians
Opra	China	HK	Vancouver, multiethnic/Asian neighborhood	Same	Half Asian (Chinese and Korean), half White	Mostly White or Chinese
Polly	HK	HK	Vancouver, Asian neighborhood	Same	Mostly Asian	Mostly Chinese
Quincy	China	China	Vancouver, Asian neighborhood (Chinese and Filipino)	Same	Very Asian-dominated (Chinese, Vietnamese, Filipino)	Multiethnic
Rosa	HK	China	Burnaby, multiethnic neighborhood	Same	Very diverse	"All Asian"
Sally	HK	HK	Burnaby, Asian/Chinese neighborhood	Same	Very Asian	Multiethnic

speaker	mother	father	neighborhood in childhood	neighborhood in teen years	high school	friends
Elliot	China	China	Vancouver, half multiethnic, half Asian neighborhood	Vancouver, White neighborhood	Multiethnic, large number of Asians (Chinese and Vietnamese)	Multiethnic
Finn	HK	HK	Coquitlam, multiethnic neighborhood	Same	Mixed (40% Asian, 40% Caucasian, 20% diverse)	"They are all Asians pretty much"
Gary	China	China	Coquitlam, Chinese and White neighborhood	Same	Chinese dominated	Mostly Asian friends
Henry	HK	HK	Coquitlam, multiethnic neighborhood	Same	Mostly Italians and Filipino (Catholic school)	Multiethnic
Irving	HK	HK	Burnaby, Asian/Chinese neighborhood	Same	Very multiethnic	Multiethnic

In terms of the socio-economic status of the families, about half of them can be described as a working class with parents holding manual or service jobs like store clerk, bakery or laundry facility worker, while the other half is upper working or middle class, with parents owning their own small businesses (restaurants, beauty salon) or holding skilled jobs (accountant, pharmacist, social worker). Many of the parents in this group completed secondary education, some only have primary education, and very few hold university degrees from their home country. A few parents who attended post-secondary institutions in Canada are those who arrived here earlier in life and graduated from a Canadian high school.

In terms of housing, several families live in apartments, but most own houses that they share with some extended family members, most often grandparents. Patterns of settlement vary: three families live in Burnaby, four in Coquitlam, one in Surrey (moved recently from Strathcona), and others in different parts of Vancouver proper: Joyce-Collingwood, Renfrew, Kerrisdale, and East Vancouver. Interestingly, none of the participants lives in Richmond, the most Chinese neighborhood of Vancouver CMA. Most of the participants talked about their neighborhood as being mixed, but often Asian

dominated – Koreans, Vietnamese, and Filipinos were named along with Chinese as the largest non-White groups. Some of the areas where participants reside have more established immigrant population, e.g., Victoria and 41st Ave or Strathcona in Vancouver, Metrotown area in Burnaby, while other areas only recently saw an influx of recent immigrants, like Kerrisdale in Vancouver; this is an interesting reflection of the history of settlement that was described earlier. Several participants mentioned that their neighborhood had Chinese stores, markets, and restaurants, as well as offered services in Cantonese, which made it unnecessary for their older relatives to learn English.

About half of all participants have some extended family in Metro Vancouver area, including grandparents, aunts and uncles, and cousins. The other half do not have any relatives here as they all still live in China or Hong Kong. These families maintain close contact with the source countries. Eight participants said they visited many times and three that they went back once. Parents and grandparents visit China and Hong Kong frequently, as well, even if the majority of their extended family left those countries. One participant who said they never visited explained it by a considerable price of the international trips that her family cannot afford.

As a follow-up to a question about visits, I asked if these young people would consider going back to their heritage countries for work in the future. One of them said definitely yes, while the rest said that while they enjoy visiting these fast-developing bustling countries, they would not want to live there for a number of reasons, such as high competition for resources among locals, overcrowding and environmental issues. In contrast, they commented that Vancouver is clean and friendly, but very slow-paced, or, as Elliot said, “a good place to like retire or something.”

Schools and friendships

Because social networks were not the focus of the current study, only few questions from the interviews probe those areas, and some participants did not want to elaborate on their high school experience or chose not to talk about their friends in terms of their ethnicity (see summary in Table 35 above).

Ethnic composition of high schools that the participants attended varies, but in all cases, there is a large student population of Asians. It is difficult to compare across the speakers because they talked about their schools in different ways, for example, some

said that their school was “half Asian,” others that it was “Asian-dominated” or “mostly Asian” – it is impossible to tell if these labels describe similar situations in schools. Three speakers have markedly different high school experiences because they had to change school: Lola spent two years in a White Langley school before coming back to a diverse Vancouver school, Nancy’s family moved from Strathcona (more Chinese neighborhood) to Surrey (more South Asian neighborhood), with the schools’ population changing accordingly, and Henry’s parents enrolled him into a private Catholic school with mostly Filipino and Italian students, but in the same neighborhood as his previous school. According to all three of those speakers, they did not fit into their new schools, and while Henry stayed in the same area and maintained connections with his friends from the previous school, for Nancy and Lola, it was a traumatic experience. Nancy talks about experiencing “a culture shock” in the new school that was predominantly South Asian. She grew up in Strathcona area where there is a large sector of established Chinese families and had never before closely encountered a different culture:

Nancy: When I first moved here [Surrey], I guess I had a culture shock cos um I didn't know the cultural background here. When- when I moved here, I first found out that Punjabi was a language, there was- different ethnicities from India and Pakistan and all the Eastern cultures I think you'd say. And um it was really weird I think because from my old school and um my- my neighborhood, everyone would be able to speak my language. I speak Cantonese by the way. And um it was just really weird because I- I just walked in and I- I didn't know how to pronounce half of people's names and I couldn't remember half of them either, it was really hard. And I tried to talk to some people, but they seemed really uh into their own cultural groups as well, so just- they're just like Oh it's that really tall Chinese girl, I'm just- and then they'd say something in Punjabi, and I'm like I don't know that language. I don't know what you're saying.

Nancy talked about being feeling isolated and not accepted as she was one of the very few non-South Asian students there. She in the end found friends in some international students from various countries who were also not accepted by the majority.

Lola’s experience is similarly challenging. Her family moved to Langley when she and her twin sister were in Grade 8, and then returned to Vancouver two years later. She recalls it being “quite stressful” as she felt unrooted after spending all her previous life in the same neighborhood and attending the same school:

Lola: ... um so it was quite tough to move to an entirely different uh uh community uh we weren't familiar at all. And the demographics at

Langley was quite different from Vancouver, because Vancouver has more Asians, Chinese people, so I felt kind of better here, closer to my own people, if you will. Uh Langley, it's more Caucasian, there's more White people, so then we were the minority, whereas it's kind of flipped back here. Um so, well, not too much, but we still just felt kind of out of place, I guess, so... But we assimilated [laughs], pretty well I guess, so afterwards it wasn't too bad I guess, but we just got used to it, nothing you could do about it, right, so...

Lola notes later than having a twin sister made this experience easier for her as they became very close during those two years in a Langley school. Their return to Vancouver for the last years of high school was a positive experience as they moved back to a more diverse school and neighborhood.

With the exception of these three participants, everyone else recalls their school years as great times. Many participants specifically mentioned the diversity of their schools and neighborhoods and said that it shaped their world views. For example, this is how Rosa talks about school influencing her attitudes and opinions:

Rosa: ...um with that school, there were even more different like cultures, so I grew up not be- like to learn not to be racist I guess. Cos it was just not seen like that. Yeah so then um I really enjoyed high school cos it's like I got to learn about different- like a lot of different cultures, and like you would see a lot of different people, so I'm not really judgemental of anyone cos I was just used to it.

Several other participants said similar things, so being exposed to diversity in school years seems to be really beneficial for these young people. At the same time, being accepting of and tolerant to other cultures does not necessarily mean establishing personal connections. Several participants in this group noted that in high school, they would hang out more with other second-generation Chinese or other Asians rather than with Caucasians. Finn provided an insight on the chronology of a racial divide in his multiethnic high school in Coquitlam:

Finn: ...when I was younger, it was really mixed, like Asians, Caucasians, they would all like interact together and like I had lots of Caucasian friends and like we would just like- I don't remember exactly what we talked about, but it just seemed to be like, you know it's just like little kids' things, like TV shows, maybe like we just played together, toys... But as I grew older, like primary school it was still fine, intermediate school is fine, middle school I can feel it starting, like it was like segregation, like it was also because I think middle school, Grade eight, was when a lot of the international kids arrived or like more like FOBY kids.

I: FOB - fresh off the boat?

Finn: Yeah more like- like Asianized kids. So then there would be segregation was starting to happen, like Asians would hang out more with Asians, and Caucasians would hang out more with Caucasians. Like there would still be interactions and like there would be mixed groups as well, but the majority was pretty split ethnicity-wise. ... Like we weren't like racist or anything, it was just kind of a natural split. And we were like still like friends, it just wasn't like- like mixed hang-outs were just more rare.

Several other participants similarly talked about friendship groups in high school often being formed around ethnicity; however, some of them noted that it's not the ethnicity itself, but rather classes people took together, or similar hobbies or interests, that had a bit of the racial differentiation, for example, Chinese students were more likely to play badminton while White students preferred soccer. Some people also noted that friendship circles are often formed and maintained since elementary school, and it's hard for newcomers to enter them. The largest divide that several students mentioned, similar to Finn above, existed between the Canadian-born Chinese and recent newcomers from China and Hong Kong:

Elliot: It- it was kinda mostly by race, yeah. Like or not- not just by race, but like- cos there was like the immigrant kids, like for example the kids that came from China or like Hong Kong, they would kinda like stick to each other and then like we wouldn't really- like the- the born-here Asian kids wouldn't really interact with them much, and like they wouldn't interact with us either.

Such fragmentation of high school community noted by several participant is something that definitely deserves more attention of educators and researchers.

Finally, in regard to their current social circles, most people in this group reported being friends with Asian or Chinese people, and some said their multiethnic friends (Table 35 above). Many of the participants maintain high school friendships because they continue living in the same neighborhoods.

Languages

All participants grew up speaking Cantonese as their first language and all reported having been exposed to it through relatives, traditional activities, and mass media (Chinese TV and radio). Because all speakers in this group continue living with their parents, they keep using and being exposed to Cantonese that in most cases

remains the only language their older relatives, both parents and grandparents, can speak (Table 36).

Table 36 Languages in Chinese Canadian group

speaker	Fluency and literacy in Cantonese	Chinese school	Parents speak English?	ESL classes
Kelly	Fluent in family domain Some literacy	Yes	A little	NA
Lola	Very fluent in family and work domain, Good literacy	Yes	"they don't really know English I guess"	NA
Mandy	Fluent in family domain No literacy	No	Yes	NA
Nancy	Fluent in family and community domains No literacy	NA	"they know very basic English."	yes
Opra	Fluent in family domain Some literacy	Yes	Dad is fluent, mom knows some	NA
Polly	Fluent in family domain Some literacy	Yes, Mandarin	"like day-to-day stuff, they can understand, they can communicate well enough"	NA
Quincy	Fluent in family domain Some literacy	No	"Dad doesn't know English, mom speaks a little"	NA
Rosa	Fluent in family domain Some literacy	Yes	Dad speaks fluently, mom speaks "broken English"	yes
Sally	Some use in family domain, at work Perception better than production Some literacy	Yes, Mandarin	Fluent speakers of English	no
Elliot	Fluent in family domain Some literacy	yes, Cantonese, then Mandarin	"my dad's English is like still pretty bad, and my mom's English is like on a level where she can interact with people and like get through daily life."	yes
Finn	Fluent in family and friendship domains No literacy	yes	Dad is fluent in English, mom not so much	yes
Gary	Fluent in family and friendship domains Perception better than production Little literacy	yes	Basic knowledge of English	yes
Henry	Fluent in family domain Some literacy	yes	Working knowledge of English	yes
Irving	Some fluency Perception better than production No literacy	no	"with my parents I always speak English. But they speak like, hybrid of both English and Cantonese to me."	NA

All families have Cantonese as their main language of interaction. Four speakers said that both of their parents know only very “basic” English, and for other four speakers, only one parent speaks English somewhat fluently, while the other hardly at all. Six other sets of parents speak English or at least “can communicate well enough,” as one participant put it. This situation is possible in Metro Vancouver because neighborhoods with large Chinese population often offer jobs and services that do not require knowledge of English:

Polly: I think just cos where we live is sort of like a- within a Chinese community, so um mostly they just- mostly speak in Cantonese, yeah.

Lack of English proficiency played a crucial role in the career trajectory of several of immigrant parents, according to the participants. One speaker in particular described the downward social mobility that her father experienced: he graduated from a university in China, but had to work unskilled job after coming to Canada:

Nancy: ...He just came from China and not many people- like would hire him because he didn't know English, even though he had such a w- big background, he could be like an accountant or like a businessman, but...

This unfortunately is still a sad reality for many immigrants who are unable to integrate into the local labor market because of the language issues or because their credentials are devalued in North America (Sano et al. 2015:64). One interesting consequence here is that children in Chinese and South Asian families in Canada were found to experience upward mobility more likely than their peers from White families (Sano et al. 2015, Reitz et al. 2011, Abada & Tenkorang 2009).

One last important observation the participant in this group is that they all are bilingual in English and Cantonese. All 14 speakers reported speaking Cantonese as their first and only language in their childhood to their primary caregivers (in many cases, grandparents). Currently, all 14 participants regularly speak Cantonese to older relatives. 12 of them speak only Cantonese to their parents, while two speak English to their parents who reply in a mix of Cantonese and English (these two young people said that their perception skills in Cantonese are better than their production skills). Ten participants attended Chinese school, either Cantonese or Mandarin, with a mixed success: one said she can read and write quite well, seven reported some ability to read and write, and two said they can't read or write despite being enrolled in Chinese school.

Several participants also took either Cantonese or Mandarin as a language class in high school or during their first year of university.

For most participants, the use of Cantonese is currently restricted to family domain, particularly when talking to older relatives, and at university where they spend the majority of their time, English is the only language they use. Several participants, however, mentioned using Cantonese at work to talk to customers and colleagues, and a few said they may sometimes speak Cantonese to their friends and neighbors. Interestingly, those participants who have siblings reported speaking only English to them.

All participants in this group self-identified as native speakers of English at the recruitment stage. While the age of more regular English acquisition in this group corresponds to starting pre-school programs or kindergarten (4-5 years old), many participants reported that their parents made them watch American and Canadian TV shows to learn English when they were younger; they were also exposed to English in the community and via older siblings who were already enrolled in school. Six participants mentioned attending ESL classes in elementary school, but most of the participants said they just picked English up from peers, older siblings who were already attending school, and from TV:

Sally: I didn't take any classes, it was just like once I started like going to school, and then like being exposed to like, I guess, the outside world, then I started speaking more English.

Speaking two languages and being born to immigrant parents is what all the participants in this group have in common. However, there is also some intra-group variation in social characteristics and backgrounds that probably influenced how these young people talked about their heritage, which is the focus of the next section.

6.3.2. Identity orientation of Chinese Canadians

As previous research shows, there is a considerable variation in the degree to which young people with immigrant backgrounds affiliate with their heritage (Sano et al. 2015, Karachaliou et al. 2018, Zhang & Noels 2013). The current study shows similar results. Among 14 participants, eight chose the hyphenated label (Chinese-Canadian), saying that their identity is comprised of two parts. Interestingly, none of the participant

spoke of these two parts as being two distinct identities, separate but complementary. Rather, what emerges is a hybrid identity with a different degree and form of integration, for example, nested or layered identity for some speakers or two halves comprising one whole for others (Comănanu et al. 2018). Four people in this group chose monocultural identity orientation naming themselves Canadians. The reasons they provided are more or less similar: being born and growing up in Canada, and holding a Canadian passport. Interestingly, one speaker chose “Chinese” as her main identification based solely on the phenotypical characteristics, though later she mentioned CBC (Canadian-born Chinese) as another possible term to use. Finally, two speakers noted the contextual variability where they would choose one or the other term depending on the situation. I did not find any cases of conflicted identity orientation among these participants. The following sections will describe findings on each of these categories, starting with monocultural orientation because the explanations participants provided for naming themselves exclusively Canadian are similar to those participants provided to account for the Canadian part of hyphenated identity, which will be discussed next.

Monocultural orientation

Four participants out of the 14 chose the term “Canadian” to describe their main identity orientation, and one participant repeatedly named herself “Chinese,” though she also introduced a term “CBC” (Canadian-born Chinese). This participant was the only one in this group who talked about phenotypical characteristics being the single defining feature of her identity. Four others who said they are Canadians first and foremost mentioned being born in Canada as the main ground for such identification. They also provided interesting explanations about other aspects of this monocultural identification, in particular, their dissociation with other Chinese-heritage people in Metro Vancouver. The life stories of these people are quite different and it is surprising how similar opinions can grow out of such different circumstances.

Elliot is very well familiar with Asian and Western cultures both locally and abroad. He spent his early years in a diverse neighborhood in Vancouver but as a pre-teen moved to an area with more White people. He is a fluent speaker of Cantonese and has been exposed to the traditional culture fully in his household, though he mentions that now it is “kinda loose, very loose.” As a young adult, Elliot travelled to several Asian countries and makes some interesting comparisons of China and Taiwan, describing

people in China as “more harsh, some would say rude.” He says that he first experienced a culture shock, but quickly got used to the norms of behavior there and now understands it better: “to their standards, it might be like normal.” Elliot was even able to pass as a local in China in brief encounters with strangers. Knowledge of the heritage culture does not directly translate into feeling belonging to it though, as is clear from his words:

Elliot: I guess... Canadian? Mor- more leaning towards the Canadian side. Because like... like I know about like all- I know all the- I'm familiar with all like Chinese culture and stuff, but I'm more like accustomed to Canadian culture.

In addition to being more accustomed to or familiar with Canadian culture, which was also mentioned by several other participants, Elliot talks about dissociating from other Chinese heritage people in Vancouver. He presents them as belonging to either of the two categories:

Elliot: ...there's like this like Canadian culture and then there's like Asian culture, and like um usually people are more affiliated with one than the other, but I feel like- I'm like more in between, so like it's difficult- more difficult for me to like make friends with like I guess like really-really White-washed kids, and like really-really like Asian kids...

Being “in-between” two cultures for others would mean hyphenated identity, but not for Elliot. It is interesting to speculate what contributes to it more: is it his growing up in a more White neighborhood? Is it his international travels to Asia and close familiarity with authentic Chinese culture? Or maybe some other factors not discussed during the interview?

Another speaker with a very different life story similarly talked about dissociation with his heritage group. Henry grew up in an area with very diverse population: in his Coquitlam neighborhood, he was surrounded by “White kids, like any kids,” and his elementary and middle schools were very diverse. For last years of high school, however, he went to a private Catholic school with “a lot more like White people.” Based on his own observation in schools and in the community, Henry, very similar to Elliot above, talked about two distinct groupings of Chinese who “hang out together, do the same things”: those “fresh off the boat kinda thing” and those “who are born here.” Henry said that he does not belong to either one of these groups:

Henry: Um and so- it's one of those things where I don't feel like I fit in, like if- if you put me in the Fraser Valley, like those guys, um I won't fit in there, but then you throw me into like- like the groups in like Burnaby whatever, I won't feel like I identify there either. And I actually told my buddy about this, cos he's kinda like me, um same thing, and um it's like yeah, we don't really fit anywhere in a sense.

"Guys in the Fraser Valley" refers here to the children of established immigrants who were born and raised here, while "groups in Burnaby" are the most recent immigrants, often high school kids who are sent to Canada by their parents to graduate from high school. Though technically Henry was born and raised here like "guys in the Fraser Valley," he does not feel affiliated with them, maybe because they are too "White-washed". Henry speaks fluent Cantonese, visits Hong Kong every three years and lives with his parents who maintain more or less traditional lifestyle, though he does mention that it is "a bit of a mix" of both cultures, for example, both Christmas and Chinese New Year are equally celebrated in his family. So, while there is enough "Chinese" in his life, he does not want to take on the label "Chinese Canadian," probably in order to avoid being associated with either of the groups he describes. "Canadian" then is a good choice because he grew up among Canadians of diverse ethnic backgrounds, and ethnicity was never an issue or even a thing to notice. Henry directly talks about the influence of the diverse environment during his formative years, to the extent that he did not even think of himself in terms of ethnicity until more recently:

Henry: See, it [neighborhood] was pretty multiethnic and even in like- uh in school it was- they stressed this whole diversity part. Um that's a good thing about them or whatever, like they stressed it a lot, um and so we never really um really cared. ... Um I didn't really like noticed like being Asian until like past couple years.

The combination of these factors, in addition to being "born here," leads Henry to name himself "just Canadian."

Another participant, Nancy, who said about herself "Oh, my parents are Chinese, but I'm born here," talked about her parents' influence on her opinion:

Nancy: ...my parents told us [Nancy and her brother] not to tell people like what our ethnicity is, because if we went out and said we were Chinese, a lot of- a lot of people would just talk to us in that language instead of speaking English. ... And that kind of irritates me and my brother, because it's like- Oh like, I'm sorry that you don't speak the native language, but um- please don't use me as a translator [laughs].

Nancy wants to avoid being intruded on by other Chinese, and uses the term “Canadian” to conceal her ethnic background. One interesting part of her story is that Nancy maintains a multicultural social circle which started after a pretty traumatic experience of changing high schools which was already mentioned in the section on schools above. Her family moved from a Vancouver neighborhood with a high proportion of Chinese to Surrey, and she transferred to a school heavily dominated by South Asian students. Nancy describes being one of few non-South Asians. She was referred to as “that really tall Chinese girl” and completely excluded from local social interactions. She ended up joining a group of other local minorities that included students of various non-South Asian ethnicities. Belonging to a diverse minority group among the South Asian majority may have also contributed to her affiliating more with multiethnic label “Canadian” rather than specific, but limiting (or even stigmatizing) “Chinese-Canadian.”

While schools dominated by one ethnic group may be a harsh experience, as exemplified by Nancy and some other participants in this study, the diverse schools are usually a very positive experience. Many participants who went to multiethnic schools praised the way their schools handled diversity, and several explicitly noted that their world views were formed by their school’s policies on multiculturalism and tolerance. Irving notes that in a multiethnic private school he attended up to Grade 10, there was a lot of emphasis on “family environment, so everyone’s friends with everyone.” Going to an equally diverse public school for the last years of high school, however, he noticed that “most people ... kind of grouped based on like cultural background,” which confirms observations of some other participants about a racial split in high school, as was described above, in the section on schools. While both of the schools Irving attended were diverse, he grew up in a Chinese-dominated neighborhood in Burnaby, and he still speaks Cantonese to his grandparents and other older relatives. Answering my question about his ethnic orientation, he alludes to the “birth right” first, but then also justifies his answer comparing it to a similar answer given by White Canadians:

Irving: I would say a Canadian first, cause I- I am born here, um, but I always think it's important to uh- know, get to know your- your culture, and where you came from so, um, yeah, but I would say Canadian. Cause I always have this uh- weird thing, it's like, when, if you ask most people, they'll be like, Where are you from? It's like even though you're born here, and then you'll say, Canadian and they'll say, No, where are you really from, and then you say, Okay yeah my parents... Hong Kong and Chinese. But then if you ask the same person, like a Caucasian person, they'll just be like, Canadian. Or like, Canadian White, but that

doesn't- Like, you're not Indigenous, you're not Aboriginal, so you can't say that, cause there's a- very big uh- double standard in that, I guess. They never say Irish-Canadian or Scottish-Canadian. So, if they can say just Canadian, I can, too. Cause I'm born here.

Just like many other participants, Irving does not deny his heritage by choosing monocultural orientation; on the contrary, he explicitly states the importance of knowing the heritage. Interestingly, Irving is the only speaker who mentioned the stereotypical question “But where are *really* from?” often posed by White Canadians to non-White Canadians, though this situation has been criticized and parodied in the social media a lot lately. Overall then, being born locally sounds like an overt reason for naming himself “Canadian,” while being stereotyped and “othered” by White people may be one of the covert reasons.

Finally, one participant presents a very unique case of monocultural identity orientation. Opra refers to the phenotype as the main reason for answering the question about her ethnic orientation. In this quote, she describes a hypothetical conversation with other people (“them”):

Opra: I'm like, I'm Chinese, and they'll like, Oh no no no, you are CBC, I'm like, OK. I just learned that like a couple like months ago. I'm like, What is that? And then they are like, Oh Canadian-born Chinese. Oh yeah, yeah. Yeah I'm that then. But I would just say, I'm Chinese. Cos like, I mean like, you look at me, if I'm not talking to you, you are looking at me, you probably think I'm Chinese, right?

Interestingly, she was the only one out of 14 participants who mentioned directly the phenotypical features as a defining factor. This characterization, as she explains, originates in her family. Her dad, though he came to Canada as a pre-teen and went through the education system here, insists on keeping the heritage language and culture active in the family. Opra has three younger sisters, and one of them is quite removed from her heritage, which is why their dad reiterates that they are Chinese over everything else:

Opra: My dad always says like to my second sister... cause she thinks so, she is Canadian. And then she... My dad's like, Oh well no you are Chinese. You are Chinese Canadian, but like you don't... you shouldn't say like, Oh I'm Canadian, like. Well, I mean you are but like... when people- when people look at you, they gonna think you are Chinese.

Opra grew up being constantly reminded of being Chinese in her family. This is an interesting contrast to Henry cited above who said that he “didn't really noticed being

Asian” until more recently, and to Nancy whose parents explicitly told her not to name her ethnicity to others.

Another factor that may play a role in Opra’s identity orientation is the composition of her private high school which had about half White and half Asian students, mostly Chinese and some Koreans. Opra clearly belonged to the Asian part of the student population, though she distinguishes herself and her Asian friends born here from the international students who came to graduate from high school in Canada:

Opra: They're really smart, like they already have a good foundation in like let's say math or something, and I feel like it's- it was really unfair for like people like me, cos like yeah okay I'm Asian, too, but like I didn't grow up in Asia, and like the math system or like the science system, whatever, like, they are ahead, they are like way ahead.

Being Asian and Chinese is a given in her situation and she talks about it, while being Canadian may be just implied and doesn’t need to be named. She did mention in the quote above being a CBC, Canadian-born Chinese, a term that she accepted but did not choose to present as her main orientation. Interestingly, this term was hardly ever mentioned in the interviews with participants in this heritage group, and why that’s the case can be investigated in future work.

The participants cited in this section have different backgrounds and life stories, and the fact that they all chose monocultural identity orientation shows that the same term “Canadian” can have a different meaning for different people.

Hybrid identity orientation

More than half participants in this group (eight out of 14) used a hyphenated term to describe their identity. When asked to elaborate, they provided many different, though at times overlapping, reasons. One noteworthy theme that emerged is knowledge of and connection to heritage culture as the ground for having a Chinese part in their identity. As for the Canadian part, the reasons were more factual: being born in Canada, holding a Canadian passport and citizenship. The following case studies illustrate hybrid identity orientation.

Both of Sally’s parents came to Canada earlier than the majority of parents in this group. They immigrated in their teen years to graduate from high school in Canada and go on to get college degrees. Sally’s parents speak English fluently and hold

professional jobs working with English-speaking clients. Sally grew up with a lot of extended family nearby speaking Cantonese to older relatives and a mix of Cantonese and English to her parents. Currently, she sometimes uses Cantonese to talk to Chinese customers at the large chain grocery store where she works as a cashier, but overall, she describes her Cantonese as “not fluent.” Sally grew up in a predominantly Chinese neighborhood in Burnaby and went to a school with a high proportion of Asian kids. In terms of sticking to traditional values, she describes some changes in her family over the years, but it’s hard for her to find the exact words:

Sally: It used to be more, uh, like they used- it used to be more, not strict but like, we used to do it [adhere to traditional values], it seemed more, like, uh I don't know how to describe it but we- it was more like-

I: Involved?

Sally: No, it was just, I don't know the word for it, but we used to do it when I was little. It just seemed to be more like, you kinda, you like- you should do it, is like- as I got older it didn't, it was more lax...

Sally later compares her family with more recent immigrants as describes them as more traditional than her parents.

Sally explained her identity to emerge as a result of a formative process, with a Chinese core being established early in her life and Canadian “layers” appearing later:

Sally: I would identify as both. Because a lot of it has been, kind of, instilled in me like when I was little so that part- like I feel that part is Chinese, because like, before I started speaking a lot of English it was- like everything was Cantonese, and then- well I don't remember a lot of it, but like I feel like all that stuff that was instilled in me, like traditions, like cultures, or like stories, that stuff, that- that's Chinese. And then the rest of it is Canadian.

For Sally, the identity is nested or layered and it is impossible to separate two aspects of it. Culture plays a central role in the formation of her identity, despite the fact that her parents spent the majority of their lives in Canada and are probably relatively assimilated to Canadian culture.

Several other participants in this group similarly noted blending of the two cultures and a weakening of the traditional Chinese culture in their families. For example, Lola, talking about her family observing traditional Chinese holidays, notes:

Lola: And then Chinese New Year itself, it takes place through several days, if not weeks, I- I can't really remember well, but uh it's a long, um uh- a long holiday, full of joyous celebrations, I guess. But now being blended into the English kind of culture, I guess it's- it's been kind of blurred with us anyways...

Lola sounds slightly detached when describing Chinese New Year. The happiness of the occasion is something that is not quite felt, as is clear from her phrase “full of joyous celebrations, I guess.” She also notes that it is “now being blended” into the Western culture, so it is not as traditional as before. Despite this evidence of weakening of the traditional culture, Lola is one of the most involved with her heritage. She attended Chinese school for many years and can read and write in addition to being a fluent speaker of Cantonese. Lola visits Hong Kong regularly and refers to China as a place “where our homeland is, or our ancestor's houses are.” Lola overtly expressed very positive attitudes to her heritage and culture, which was unique for both non-White groups:

Lola: I-I love my culture, my um ethnic background, I love- love my family back in Hong Kong and we try to maintain close ties, I really like the culture there, yeah.

Talking about her high school years, she mentions that compared to a predominantly White school in Langley where she spent two years, her high school in Vancouver had more Chinese students which made her feel better because she was “closer to my own people.” Given all these details, it is not surprising that she chooses a hyphenated term to describe her identity:

Lola: For sure Chinese-Canadian. Yeah. If you take... it- it won't work if you take either part out. Because I- I identify equally as both. If you- if you just call me Canadian, sure, I'll accept it, but I'll be like, What? Well, I am also Chinese, too. But if you call me Chinese, I'd say No I'm also Canadian because I was born here, I have a Canadian passport, and I think it's equal parts.

In this quote, Lola appeals to facts to prove her “Canadianness” (“I have a Canadian passport”), while her belonging to Chinese heritage is based on feelings (“I love my culture, my ethnic background”).

Another participant who chose the hyphenated term to describe his identity, Finn, also talks about culture, but in this case it's the actually the “weakness” of the Canadian culture. Finn grew up in a mixed neighborhood in Coquitlam, though his family never

interacted much with the neighbors which he regrets and alludes to the idea of a “really interactive neighborhood” present in the Western culture. He went to a mixed private school where all kids were friends regardless of the race in elementary and middle school, but he mentions the segregation along the ethnic line happening later in high school (see section on schools above). Finn doesn’t have any relatives in Canada except for his parents and a sister, but his family visits Hong Kong very frequently. His Cantonese is fluent and remains his home language, though he speaks English with his older sister. He also speaks Cantonese in his church and with co-workers and customers in the large chain grocery store where he works. Here is how he explains his choice of identity orientation:

Finn: I think clearly Canadian-Chinese. But I think that itself is like- it has a very weak meaning cos I feel like Canadian culture is very weak, because there is no history part- it's very weak, so it feels more like... it's mostly Chinese culture, but then diluted into like Westernized mix, that's how I'd describe it.

Later in the interview, Finn provides a little anecdote to illustrate another aspect of this identity orientation. He recalls that his Chinese friend started crying when she heard the national anthem of China, while he himself does not have “that kind of connection with the Canadian anthem.” He says that he doesn’t have “a deep sense of belonging” to Canada compared to what his friend feels towards China. He concludes that the Canadian part of the hyphenated term would be appropriate mostly “on a geographical level and like a historical level as well, like that’s where I was born,” while Chinese part of his identity has to do with being exposed to language and culture when growing up.

In all cases described so far, family features as a prominent factor. Indeed, cultural socialization of the immigrant children is crucially dependent of the family, according to previous research (Chakawa & Hoglund 2016). Interview data show that the extent to which participants’ families maintain their traditions varies a lot, which is undoubtedly an important factor in forming the identity of these young people.

Rosa lived with a large joint family until her mid-teens, and though they have separate households now, all the relatives meet at least once a week for a dinner and TV night, as well as for all major holidays. She is fluent in Cantonese which has always been the home language because, as she puts it, “my parents didn't want me to forget any Chinese.” Cantonese is the language the extended family on her mom’s side use,

though she mentions that her dad's family prefers English as they are more "White-washed." Rosa directly names "family matters" as a reason for her choosing hybrid identity orientation, while being born here as a reason to be named Canadian, as many other participants mentioned:

Rosa: I think I would say I'm Chinese Canadian, cos like I'm very in touch with like my family matters and everything, so for me it's like Yes I am Canadian, like if- If I didn't have to be specific, then yes I would say Yes I'm Canadian cos I was born here. But other than that yeah, I would probably be in the middle.

Mandy talks about the traditional Chinese culture being "ingrained into the family" where her dad carries a lot of traditional values. Mandy speaks fluent Cantonese and visits Hong Kong every year, but otherwise is well-integrated into the Canadian culture and society, hence her choice of the hyphenated "Chinese-Canadian" identification.

Other speakers, when talking about their parents, often used phrases like "being typical Chinese, they do..." or "don't do...":

Quincy: Um my parents are kind of like typical Chinese, but then they are very lenient in a way, so then they don't really... have... quite an opinion on it [choice of degree], other than, "Just go to school."

Quincy, as many other participants, notes that while her parents insist on getting a higher education for the sake of having a good job in the future, they are not particular about a career path. Some of the participants mentioned jokingly the prevailing assumption in the wider community about the Chinese parents wanting their kids to be lawyers and doctors, however, their personal stories do not support this judgement. Several participants also mentioned studying music for years in the past because their parents insisted on it, which is again another stereotypical thing that Asian parents do.

In terms of following traditions and observing holidays, these families can be described on a continuum, from maintaining a traditional Chinese life style to being quite relaxed about it. Lola says the following:

Lola: For sure we still maintain the Chinese way of life. I guess we always follow the practices and traditions like the holidays or whichever date Chinese New Year, that kind of stuff. So, we still follow the Chinese culture. Cooking as well, cos my mom does the cooking, so we always eat rice with vegetables, whatever.

Preference for Chinese food appears to be the most consistent ethnic characteristic of all families, to the extent that one speaker, when asked about the meaning of “White-washed,” explains:

Quincy: White-washed is like if a Chinese person were like more into eating like burgers and fries, like Westernized food, as compared to like dim sum. And they're like only speaking English.

Food choices and language are two defining characteristics that allow Quincy to categorize someone as “White-washed.” In her own family, the preferred food is Chinese and the home language is Cantonese with parents and English with siblings. When asked about her identity orientation, she says:

Quincy: Mmmm Chinese-Canadian. Yeah, I think.

I: How do you define that?

Quincy: Mmm someone who speaks fluent Chinese and is like- pretty into their roots. Yeah, has an interest in their roots.

Later on, Quincy mentions that being a Canadian is defined by having a Canadian passport and growing up locally (she herself grew up in a Chinese-dominated area of Vancouver and went to high school with lots of Asian kids, though most of them were “White-washed,” according to her).

Another participant who chose a hyphenated label, Gary, also mentions being born in Canada as the justification of the part of the term “Chinese-Canadian.” Regarding the other part, he says the following:

Gary: I want to keep the culture, uh culturally, right, I also want to-like, I still want to know like where my family kind of came from and so kind of keep the traditions.

Gary, as many other participants in this group, was enrolled in a Chinese school by his parents in his pre-teen years, which, according to him, didn't produce the desired results. However, in his last years of high school, he voluntarily returned to Chinese school because he felt the need to connect to his heritage culture. This is an interesting trajectory; several other participants mentioned that while attending Chinese school in early years didn't teach them anything, later in life (in high school or first years of post-secondary), they chose to study the language.

While Chinese food still has a very strong presence in all families, several of the participants said that more traditional life styles have changed towards more Western, and while all families still celebrate Chinese New Year, it is often the only traditional holiday participants could refer to:

I: Do you guys in your family follow some Chinese traditions, you know, celebrate Chinese New Year?

Kelly: Yeah umm the big ones. Chinese New Years. [pause] Oh probably that's the only one that we do celebrate now.

Often such celebrations exist in an “abridged” form, for example, one participant said they only do “just the first day and the last day” of Chinese New Year (Elliot).

Overall, the most common theme in this group of participants is knowledge of the heritage culture manifested in speaking the language, preferring Chinese food, and, to a smaller degree, following the traditions or at least knowing them. Compared to this practice-based explanation of the “Chinese” part of the term, the “Canadian” part is simply factual where being born in Canada and having a Canadian passport was named as the main reason.

Alternation

Two of the participants in this group talked about the situational variability they have regarding their identity. Kelly, who came to Canada as a one and a half year-old with her parents, overall describes her family as fairly assimilated. She refers to her parents as “lenient,” though they did put her in a music class for ten years, which she herself describes as a stereotypical thing Chinese parents do. The only traditional holiday their family celebrates is the Chinese New Year, and she notes that they used to celebrate it “in more detail,” but now “not anymore because nobody has time to.” Regarding two other factors that came up many times in other interviews, food and language, Kelly does not quite follow the rest of the participants: she dislikes traditional food, and though she speaks Cantonese with her grandparents and sometimes parents, she refers to it in a very particular way saying that “I was forced to speak Cantonese” because her grandma was her caregiver in the first years of her life. Kelly seems to distinguish herself from other Chinese immigrants as is clear from the following quote:

Kelly: Especially because of the economy now, a lot of um mainland Chinese people are buying houses, so a lot of them don't speak a word

of English. So yeah, kind of frustrating because you know they are supposed to learn English to be here.

The way she describes her alternating identity is very peculiar:

Kelly1: I would say [pause] Chinese Canadian, but it really depends on who I am with. So if I am in a majority of- [pause] of Caucasians, I would say I'm Chinese cause... minority. But when I was in Hong Kong, I saw this Caucasian guy, I was like, Oh hey, I'm- I'm technically Canadian, well not technically Canadian, but I'm technically White, too [laughs].

The situational context in the first hypothetical scenario looks like “self versus others” where White majority in Canada is opposed to Asian minority. In the second scenario, recalling an actual event, Kelly uses very peculiar phrasing: she calls herself “technically White” which may mean the degree of affiliation with the White Canadian culture.

A different aspect of the situational context is illustrated by another speaker, Rosa, whose case was described above in the section on hyphenated identity. Rosa said that the motivating factor for her is a desire to “fit in”:

Rosa: If I were in a group of um Asians, so I would say I'm Chinese but- and then if I were like surrounded by like Canadian people, then I would say I'm Canadian as well. Just because it's like- I think it's like a social thing where I wanna fit it, so yeah.

This provides an interesting point of comparison with Kelly's words above. Kelly talks about being Chinese among Caucasians in Canada, but “technically White” among other Chinese in Hong Kong, while Rosa talks about being Canadian among other Canadians (probably meaning multiethnic Canadians) and being Chinese among other Chinese. It appears that the situational alternation can take very different forms for different people, which should definitely be explored more in the future.

6.3.3. Summary

People of Chinese heritage are the largest visible minority group in Metro Vancouver (Statistics Canada 2017) whose history of immigration dates back to the mid-18th century. They have played a very important role in the development of British Columbia since its establishment, and continue to be a major economic, demographic and cultural force shaping the area. The participants of this study illustrate the recent large wave of immigration from China and Hong Kong that started in the 1980-s. The

group of parents is heterogeneous in terms of their education and occupation, with most families described as working, upper working, or middle class. All of the families are well-established in Metro Vancouver, with both parents working and children attending colleges and universities. Most of the families own their own house, and all of the participants in this study continue living there with their parents and siblings. Grandparents, who were named in several cases the main caregivers of the young children, more often live separately now, though most of the families maintain connections with extended families locally and have family gatherings on a regular basis. Such arrangements promote the use of heritage language: 12 out of 14 participants reported Cantonese as their main family language with the older relatives, partially due to the fact that many parents in this group do not speak English fluently enough. Many participants attended Chinese school at some point in their lives, though a few of them reported good literacy.

When replying to my questions about their ethnic orientation, many of the Chinese heritage participants described their identity as hyphenated or hybrid, while several chose monocultural identity orientation saying they are Canadian first and foremost. One speaker preferred to refer to herself as Chinese because of the phenotypical characteristics, and two others mentioned alternation, where they feel differently depending on the context or the interlocutor.

6.4. South Asian Canadians in Metro Vancouver

South Asians in Canada are one of the three largest visible minority groups, the two others being Chinese and Blacks (Statistics Canada 2018), and in Metro Vancouver, South Asians account for almost 12% of the total population (Statistics Canada 2017). Tran et al. (2005:21), based on the official definitions, describe a South Asian as “any person who reports an ethnicity associated with the southern part of Asia or who self-identifies as part of the South Asian visible minority group.” Among those called South Asians are Bangladeshi, Bengali, East Indian, Gujarati, Hindu, Nepali, Pakistani, Punjabi, Sikh, Sri Lankan, Tamil and some others. The first South Asians in Canada were the ones that settled in British Columbia in the beginning of the 20th century. The relatively short history of South Asians in Canada is usually described to comprise three distinct periods: the initial settlement that was put to an abrupt stop with the immigration bans, the quiet years when the immigration slowly resumed, though many restrictions

remained, and the new era characterized by the exponential increase of the number of immigrants and the development of the South Asian communities throughout Canada (Buchignani et al. 1985). More details about the history of settlement and current demographics of South Asians in Metro Vancouver can be found in the introductory chapter. In the following section, the interview data will be examined with a focus on ethnicity.

6.4.1. Demographic data on South Asian Canadian participants

General information

Participant recruitment for the study attracted 17 young people who self-identified as South Asian Canadians or Canadians of South Asian origin. The description of their demographic characteristics (schools, area of residence, languages they speak, etc.) and the data on their ethnic orientation presented below are based on the qualitative analysis of the interview data (see Tables 37 and 38 for details on each participant).

All South Asian Canadian participants except one were born in Metro Vancouver and raised here. There is a lot of intra-group variation in terms of their parents' history of immigration, current socioeconomic class, residence patterns, languages spoken and so on. The parents also vary widely in the extent that they maintain and enforce the values of their home country, from very traditional to very lenient or "Westernized." The influence of the family values, as well as the schools the participants attended and the neighborhoods they lived in, will be discussed as factors influencing how they talk about their heritage.

In terms of the country of origin, it is India for both parents for 14 participants; one speaker's parents came from Sri Lanka, and the two others' parents came from Fiji; in all cases, parents are of Indian heritage and almost all speak Punjabi as their main language (some also speak Hindi, Kannada, Gujarati and Tamil). The parents of ten participants came to Canada as adults, and in most cases, as a young married couple. Among the other seven sets of parents, even those who came here at a relatively early age (teen or pre-teen) were fully immersed in the Indian culture and language throughout their childhood. It can be explained by the specifics of immigration patterns of the South Asian group: large multi-generational families usually immigrate together, settle in the same household or at least in the same neighborhood and continue to

support each other. This is the reason why several young speakers who are technically 2.5 or even 3rd generation Canadians were included in this group: all of them reported growing up with their grandparents or other relatives as their caregivers and being fully immersed in Indian culture and language until pre-school started, which puts them in the identical position to those children who are technically 2nd generation, that is, born to parents who were born abroad, as defined by Statistics Canada (2017).

16 participants out of 17 in this group were born in Canada and one female came here at the age of 4 with her family. Similar to the other ethnic groups in this study, all of the participants lived in Metro Vancouver their whole lives, and most of them currently continue to reside with their parents in their family homes.

Table 37 Demographic data for South Asian Canadians

speaker	country of origin of mother/father	neighborhood in childhood	neighborhood in teen years	high school	friends
Teresa	Sri Lanka/Sri Lanka	Vancouver, Kingsway area - multicultural	same	mixed	"Most of my friends are Chinese"
Una	Fiji/India	Surrey, multicultural	Surrey, South Asian dominated	SA dominant	diverse
Viola	India/India	Burnaby, Chinese and Caucasian	Same; more South Asian families	Chinese dominant	diverse
Wendy	India/India	Delta until Grade 5 East Indian pocket in a White neighborhood	Cloverdale, more White	"half and half of Caucasian and East Indian"	NA
Xena	India/India	New West until age of 10, mostly White	North Vancouver, diverse	mixed	diverse
Yuna	India/India	Surrey, more South Asians	New West, few South Asians, mostly White and Chinese	"Caucasian or Asian (Chinese)"	diverse
Zena	India/India	Surrey: Fraser Heights "all Caucasians and Chinese"	Central Surrey: mostly White	SA dominant	diverse
Anabel	India/India	Squamish: "mostly White" with several South Asian families	Squamish: became more diverse	mixed	diverse

speaker	country of origin of mother/father	neighborhood in childhood	neighborhood in teen years	high school	friends
Brianna	India/India	Surrey “mainly East Indians or specifically Punjabi people”	Same; in recent years, moved to Langley (more White)	SA dominant	Majority is South Asian
Caroline	Fiji/Fiji	Surrey: White and South Asian	Surrey: became more multicultural	SA dominant	diverse
Daniella	India/India	Richmond: diverse, not many South Asians	same	mixed	diverse
Felicity	India/India	Surrey, mostly Punjabi	Surrey: used to be Caucasian neighborhood, now more South Asians	SA dominant	NA
John	India/India, grew up in the Netherlands	Richmond: diverse	same	mixed	diverse
Kyle	Northern India, Punjab/India	North Delta: more White people	North Delta: “mostly Indian and European”	SA dominant	diverse
Lambert	India/India	Surrey: Asian (South Asian, Chinese and Filipino)	Same	mixed	diverse
Magnus	India/India	North Delta: South Asian neighborhood	Surrey: South Asian dominant	mixed	diverse
Noah	India/India	Surrey: more White neighborhood	Surrey: same neighborhood became more South Asian	SA dominant	diverse

The socio-economic position of the families ranges from working to upper working to middle class. With a few exceptions, both parents in each family work. The majority of the positions they hold are manual or service jobs, like seamstress, hothouse worker, sawmill worker, care home worker, truck, bus and taxi driver, and shop assistants. In several families, parents hold jobs of different rank, for example, one parent is a certified accountant, while the other is a bus mechanic. In one family only, both parents work in IT positions, a more middle-class job.

Half of the parents in this group have secondary education (completed in India or in Canada), while the other half have some vocational training or college education

which they received in Canada, such as administration or business degrees from local colleges. Several parents had completed Bachelor's degrees back in India which were not recognized in Canada after immigration, so there is definitely some downward mobility in this group. For example, one participant's parents completed their Bachelor's degrees in accounting and political science in India, but in Canada, they had to work manual jobs at the sawmill and a hothouse.

All of the families in this group live in their own houses. In many cases, they share the house with relatives, most often grandparents, but also aunts and uncles and their children, which one participant described as a "joint family":

I: You said it's a joint family? I've never heard this term.

Zena: I feel like it's- it's really coming here, I mean, maybe it's South Asian families, especially. It's where instead of living with just your parents and maybe your grandparents, you live with your- your dad's brother and his family, his like son and his wife, as well.

Such living arrangements explain the cultural and language immersion many of the participants reported to have experienced in their early childhood. The majority of them had their grandparents as caregivers, and about half of the participants continued living with them in their family homes at the time of data collection.

As for the settlement pattern, eight speakers out of 17 do actually live in Surrey which is known as a preferred area for South Asians, but in different neighborhoods, including pockets where other ethnicities dominate (e.g., Fraser Heights with lots of White families). Others nine families are spread around Metro Vancouver: they reported living in North Vancouver, Burnaby, Richmond, Langley, Cloverdale, Delta, and New West. Interestingly, about half of the participants moved at least once during their lives, in some cases within the same municipality, and in others, to a completely different neighborhood. The participants explain this by different reasons. Magnus' family moved from Delta to Surrey and this is the context where he mentions it:

Magnus: My grandma speaks no English whatsoever. She knows "hello" and "no English." Those are the two phrases that she knows. ... Uh she stayed at home with my grandpa and she raised my brother, basically, because my mom was at work. Um, she doesn't tend to get out much. Um, and when she did it was... it's just with family friends. So she doesn't ever seem to need English.

I: And I guess where you live there are services [in Punjabi], right?

Magnus: That's right, and part of the reason why my parents decided to move to Surrey was because a lot of our neighbors are Indian. Um so she wouldn't feel isolated.

Moving to an area with more people of similar heritage was mentioned several more times in the interviews. At the same time, there is a concern about crime in some parts of Surrey, for example, Yuna directly says that "Surrey is not as safe anymore." Some parents in this study are acutely aware of that. Zena changed neighborhoods twice within Surrey, but her parents always chose non-South Asian neighborhoods, from the one where "it was all Caucasians and Chinese people" to the current one where "most of the people are Caucasian retired old people." In her first neighborhood, the few South Asian families were more Westernized: "their lifestyles were more towards like Caucasian families and how they lived," and in her current neighborhood, she says, "I feel like we're like the only South Asians." She explains why her parents made those choices:

Zena: Cos my parents have always thought that if we stay on this side, there I wou- me and my brother and my cousin, we wouldn't get involved with the crime and stuff, cos there's a lot of crime in Surrey. But it's mostly based on the other side, so if we- I mean we go there all the time, I'm not scared to go there, but it's just a different neighborhood, and I'm not used to that. ... I don't even know what it's like to live there. I mean I've had- I've slept over at friends' houses there, it's just a completely different environment.

Several participants noted changes that happened during recent years, usually towards more diversity, for example, Caroline always lived in the same neighborhood in Surrey, but it changed from about equal proportion of White and South Asian towards more mixed:

Caroline: I feel like there are a lot of immigrants on- at least my street because I see a lot of like um- kids going to school and you can just kinda tell. And I also work at the daycare that's across the street and just by meeting the parents and meeting the kids I can kinda tell- I feel like it's- it's very multicultural. Um and I feel like it's been that way since like the past ten years or so, whenever I can remember.

At the same time, some other neighborhoods in Surrey have changed in the opposite direction, for example:

Una: There wasn't a lot of Indian people in my neighborhood until we almost moved, and now in Surrey there's lots of Indian people, so you can tell like the area's changed. But yeah, before, when I was a kid, it

was pretty multicultural, um but now in the complex that I live in, there's I think only one White family, and the rest are all Indian.

One last thing to mention in this section is the little contact with the source country the families maintain. Most of the participants reported visiting their heritage country, but only once or twice, when they were little. Only two participants said they continue visiting on a somewhat regular basis. Some of their parents and grandparents visit slightly more often, but overall international trips are rather rare in this group. The explanation to that would be, first of all, the high cost of international travelling that puts a heavy burden on many families who pay mortgage and provide for large households here in Canada. Second, almost all participants said they have their extended family either in Metro Vancouver, or BC, or in other parts of Canada. Several participants mentioned that they have no family back in India because they are spread out around the world (UK, Norway, US), and they have visited them in those countries. Finally, it is important to note that the lower life quality and very traditional society values seem to repel the young people (and in some cases their parents) from keeping connections:

I: Do you have any plans to go to India for work or to visit?

Daniella: I've like never wanted but I have like some aunts who are like, Oh you should go like where you're from. But I'm like, No way, it's dirty, polluted. There- I feel like there's like society is more like backwards, like fifty years behind.

Several other speakers mentioned pollution, overcrowding, poverty, and societal issues as reasons why they didn't enjoy visiting or wouldn't want to visit India. At the same time, two speakers from wealthier families said they enjoyed going to India to traditional weddings of their relatives and travel within that country to famous sites like Taj Mahal.

Schools and friendship circles

As for schools, seven speakers described their high schools as mixed or diverse, and seven others said their school was dominated by students with South Asian heritage. One speaker said that his school was "Asian - by that I mean like Chinese and Filipino, Korean, or South Asian" (Lambert), and two others reported having about half of the Caucasian kids in their high school, the other half being represented by different ethnicities: "there was only two or three other Indian people in my class, and the rest were like Caucasian or Asian" (Yuna); "half and half of Caucasian and East Indian" (Wendy).

School and friendship experiences of the participants in this group vary widely. Socialization in school from early to later years is very important for forming social circles, as is clear from the words of participants who had either continued or interrupted school experience (if they had to change schools). Self-perception as belonging (or not) to a particular ethnic group can be seen in the following excerpts, and interestingly, even similar circumstances sometimes produce very different results.

Zena first went to “the non-South Asian [high] school” where she did a lot of sports. This is how she describes her social circle at that time:

Zena: And I was the only South Asian girl out of my friend circle. Um there was like me, and then like I don't know like six-seven other Caucasian girls, and like the two-three that were like Chinese, and so we'd take group photos, and I was like that odd one out [laughs].

In Grade 10, she changed schools, and she talks about her new “more South Asian school” with mixed feelings. On the one hand, almost none of the girls were into sports, so she had to play in the boy's teams, but on the other, she felt more connected to her heritage:

Zena: So I feel like I had more fun extra-curricular-wise at my old school, but then at my new school, I kinda felt like more included, I don't know if it was just because now I was surrounded by fam- like people had like families that were like mine. So they- I could relate more to these people. And then even when, now when I was hanging out with people, my- my parents would be like, Oh that's good, like you know, I can talk to their parents and be more comfortable talking to them.

A similar affiliation with her heritage group is reported by another participant who experienced a change in the opposite direction: Yuna with her family moved from a more South Asian area in Surrey to more White New West, and she comments on the “huge shift” from mostly South Asian classmates to a more diverse mix with only “two or three other Indian people in my class”:

Yuna: ...it was different because like there's a lot of influence, when you are surrounded by a lot of Indian people, then you will hear kids speaking your language at school, too, sometimes, and so like it was different that you need to remember like, Oh they probably won't understand what I'm saying sometimes [in the new school]. But yeah um, I- I made quite a few friends um but they were mostly Indian as well. And I guess I felt closer to them in that way because of that, because I was close to people that were Indian in Surrey.

At the same time, some other participants did not express positive feelings about shared ethnicity, and a few even tried to distance themselves from their classmates with the same heritage. Felicity says that all her friends in high school were South Asian, but only because in that school, as she says, "there was like ninety percent Indian." The forcefulness of this situation is clear from her words about her past and current social circles:

Felicity: It wasn't by choice, it just- I just- I wasn't like, Oh no I only want to be friends with Indians, it just kinda happened that the population surrounding me was mainly Indian and then my friends just became mainly Indian. ... All my- like all my friends now are all like friends I made at university. Like I don't talk to anyone from my childhood, anyone from elementary, high school. Just stopped talking, nothing in common with them anymore.

While Felicity waited until graduation to sever connections with her high school friends, two other participants, Wendy and Magnus, distanced themselves from their South Asian classmates in high school. Wendy talks about changing schools in the middle of her elementary, after her family moved from a more South Asian neighborhood in Delta (with more South Asian classmates) to a more White one in Cloverdale, and describes feeling like she did not belong with her ethnic group:

Wendy: Um I would say it was kinda different cos it was a lot more Caucasian people than I would have thought, right? And then I'd notice that all of the East Indians and Asians and everything, they would kind of just group together, and so I don't know, I just felt like I don't really know if I'm part of that East Indian or not. So it was different, it was really different, yeah.

While being South Asian was nothing special in her Delta school and the kids with the same ethnic background did not group together, things were different in the Cloverdale school where non-White kids were the minority and formed closed groups based on heritage. Wendy did not affiliate with that. Speaking of her high school, Wendy explains why she felt like she did not fit with her heritage group and why her friends were mostly Caucasian:

Wendy: I don't know, there's- there were just certain things in East Indian culture, it's like, if you were born on a certain side of a river, you say something differently, it's dialectal, right? And they would ask me that, and I wouldn't have, I had no idea, like I just looked this up maybe a yeah ago. And they would say, they would ask you where you are from, and then they'd- they'd wonder why I didn't speak Punjabi, and

then I kinda just, I didn't like it, so I stopped, I know it's horrible, I kinda just wouldn't talk to anyone who is East Indian.

Several other participants expressed disagreement with heritage cultural values or behaviour of their classmates in schools with a large proportion of South Asian students and explained how that shaped their social circles. Magnus grew up in the area dominated by South Asians and was fully immersed in language and culture, but in high school he wanted to distance himself from the peers with the same heritage:

Magnus: ...in high school uh my friend circles were fairly mixed, um although I had sort of moved away from the Indo-Canadian community at that point because I... I was confused [laughs] and I... I was frustrated with my parents' culture and expectations of me, so that kind of manifested as me distancing myself from my peers who were also Indo-Canadian. Um although they were feeling the same things as well. So for the first half of high school I... my friends were primarily Caucasian and um Asian, other than South Asian. Um and then towards the end of high school I started to... um come back to my community and speak with them again.

Magnus seem to have reconciled with his heritage, but he does not keep in touch with any of his high school friends either, just like Zena cited above. At the same time, another participant, Brianna, who also experienced mixed feelings around her ethnicity in high school, now keeps connected with her high school friends and is the only one in this group who described her friendship circle as predominantly South Asian. Brianna's experience may have been partially shaped by a lack of connection to her White neighbors:

Brianna: Um at first in high school I kind of- didn't necessarily resent it, but um just because it was um like everywhere and that kind of thing, I- probably would have- label myself as Canadian at that time, but um after coming to university, or moving into like a primarily White neighborhood where the neighbors weren't so social or they weren't like reciprocal in any of- like things that I would do, like if I brought like hol-cookies around holidays or something, then like that was the end kind of thing. So like I think just feeling very um like isolated in that setting, then after that and after coming to university and stuff, that's when I kind of identified more with my Indian heritage. Yeah.

Finally, the only participant who reported to have mostly Chinese friends, Teresa, explains that many of them are from her multicultural school and neighborhood in Vancouver, and others are from her SFU department that has a high proportion of Chinese. All the other participants in this group responded that their social circles currently are very diverse, without any particular bias. To conclude, the predominance of

one ethnicity in high schools seem to influence the participants' socialization, but the pattern is quite complex and definitely deserves future investigation.

Languages

All participants in this group self-identified as native speakers of English at the recruitment stage, with English being their most often used language in all domains currently. Most of the parents speak English fluently except for three families where one parent speaks fluently and the other knows only some basic English. English proficiency in the older generation is explained by the colonial presence of Britain in India throughout the 20th century. As for the home language, participants from this group reported currently speaking either mostly English or a mix of Punjabi/Hindi and English at home. Many families still live with grandparents who in most cases have limited English proficiency, so one of the main domains of use is to talk to older relatives. Only one person reported speaking her heritage language exclusively at home; this is the only participant who was not born here but arrived to Canada at the age of 4.

English acquisition in this group started quite early. Many participants reported hearing English alongside heritage languages at home since the earliest childhood. Some of them also had older siblings who were already in school and speaking English fluently. Five speakers out of 17 attended ESL classes in elementary school, one of them for a very short time. One other speaker said that her mom got very upset “when they tried to put me in ESL” and insisted on speaking English at home to the children since then (Wendy).

The degree of bilingualism in this group is small. Out of 17 participants, two speakers self-reported native-like proficiency in their heritage language and five considered themselves fluent. For the other ten speakers, perception is better than production. Several mentioned that they used to speak much better at a younger age. Among those who reported to have good fluency, two speakers said they sometimes use their heritage language at work to talk to clients, and three speakers said they may use it sometimes in conversations with friends, “to talk about somebody” (in their presence) or just to exchange several phrases as an identity marker. In regard to formal education in their heritage language, while five speakers were put to heritage language schools by their parents, only two of them attended it for a considerable amount of time and reported some literacy skills in the heritage language. These and other details on

languages are summarized in Table 38 below. The table contains the most interesting quotes from the speakers illustrating their current language use and the process of acquisition.

Table 38 Languages in South Asian Canadian group

Speaker	Home/first language	Proficiency in heritage language	Current use of heritage language	Heritage school	Parents speak English?	ESL classes
Teresa	Tamil	"I used to be fluent... now I can't really speak it anymore."	"parents speak both Tamil and English, but I feel like most of the time they do speak English now."	NA	Yes	NA
Una	Punjabi	Perception, no production "our parents were really gang-ho about us learning English"	"I can understand both languages (Punjabi and Hindi) but I don't really speak them."	NA	Yes, fluently	NA
Viola	Kannada	"I moved here when I was about four years old, so I was already fluent in Kannada, and we kept speaking it at home"	Home language: Kannada	No	Yes, fluently	No
Wendy	Punjabi	"I can understand it, I can't speak it very well cos I don't really know how to string my sentences together"	"my dad would speak Punjabi, my mom would speak English cos she was afraid we wouldn't know English enough"	NA	Yes, fluently	No "they tried to put me in ESL, but my mom got really upset about that"
Xena	Punjabi	"Now I understand more, but I don't really speak. At all."	Mostly English at home, some Punjabi words	Briefly, no success	Yes, fluently	No

Speaker	Home/first language	Proficiency in heritage language	Current use of heritage language	Heritage school	Parents speak English?	ESL classes
Yuna	Punjabi	Fluent	Speaks at home, to older relatives, to cousin in India	Yes briefly	Yes, "okay level" now	Yes
Zena	Punjabi	Fluent	Home language with parents and grandparents, but frequent code-switching English with some relatives	Yes for 2 years	Yes, fluently, dad's better	Yes, for one year in K
Anabel	Punjabi	Very fluent	Mostly Punjabi at home with parents, grandparents. Sometimes with friends	No	Yes, dad speaks some, mom is better	NA
Brianna	Punjabi	Some fluency, perception better than production	English at home; Punjabi with boyfriend's family (more recent immigrants)	Yes for 2 years	Yes, fluently	No
Caroline	Hindi	"the five year old me was able to speak better than I can speak right now."	Hindi to grandparents	NA	Yes, fluently	No
Daniella	Punjabi	Perception better than production	"my first language was Punjabi, but once I left for school, like we didn't- like my grandparents speak to me now like at home, I respond in English."	No	Yes, fluently	No
Felicity	Punjabi	Fluent	With mom and grandparents mostly Punjabi, with dad mix, with friends sometimes	No	Mom very basic, dad ok	Yes

Speaker	Home/first language	Proficiency in heritage language	Current use of heritage language	Heritage school	Parents speak English?	ESL classes
John	Punjabi, Gujrati	perception better than production	"I kind of lost it, I can still pick up bits and pieces, and I can understand okay, but I can't really speak it."	NA	Yes, fluently	NA
Kyle	Punjabi	speaks a little	to grandparents, sometimes to parents	NA	Yes, very fluently	NA
Lambert	Punjabi	perception better than production	to grandparents, sometimes to parents "I speak a little bit, ... I think I have enough to express like basic things, maybe a little bit more advanced than basic."	NA	Dad's English is not that good, mom's okay	NA
Magnus	Punjabi	Fluent, but doesn't speak it much last 3 years (moved in with a White partner)	Only Punjabi to grandparents, English to mom, Punjabi and English to dad	NA	Mom is very fluent, dad is s a bit worse	Yes
Noah	Punjabi	Fluent	With parents, occasionally with friends	No	Dad is very fluent, mom is okay	Yes for a short time

6.4.2. Identity orientation of South Asian Canadians

The experiences described above have undoubtedly shaped the ways these young people feel and talk about their ethnicity. In addition to schools, languages and friendships discussed so far, another very influential factor is family. The participants with South Asian heritage reported that many of their parents are quite traditional, while a few of the families were described as "more Westernized." Interestingly, there is no direct correlation between parents being traditional and children choosing one or the other ethnic orientation.

The following sections will describe four groups of participants, in the descending order by the count: those who called themselves Canadian, those who reported to have

two distinct identities, those who said it really depends on the context, and those who used a hyphenated term to describe themselves. This corresponds to four out of the five categories described by Comănaru et al. (2018): monocultural orientation, complementary orientation, alternation, and hybrid identity orientation. I did not find any cases of a conflicted identity orientation in this sample. Just as noted by Comănaru et al. (2018), the categories are not mutually exclusive, and in some cases, the participants use several ways to describe their identity (e.g., both complementary and alternation identity orientation).

Monocultural orientation

Ten out of the 17 participants in this group chose to identify as Canadians. Three of them did not elaborate why they felt so, while others named one or a combination of the following reasons: being born in Canada, having Canadian citizenship or passport, being more westernized, non-belonging to the heritage culture, not considering India their home, and fragmentary knowledge of the heritage culture. At the same time, none of the participants rejected their heritage culture (though several criticized some traditional values), and several mentioned that they respected their roots and felt connected to their heritage.

Interestingly, this “monocultural identity” group varies greatly in their background and life circumstances. Some of them grew up in South Asian dominant neighborhoods, while others in multicultural or predominantly White ones; the schools they attended vary along the same axis, from diverse to dominated by one ethnic group; some participants are more fluent in their heritage languages, while others have only receptive skills; some families were described as more traditional, while others as more Westernized. The following cases will exemplify this diversity.

Monocultural orientation seems to naturally emerge in families that are more assimilated to Canada, or “more Westernized,” as several participants put it. Two females, Una and Xena, both come from such families, though there are a lot of differences in their background. Una grew up in a Surrey neighborhood that changed over the years from more diverse to more South Asian. Her high school was also predominantly South Asian; however, her friends were from different backgrounds. In their early childhood, she and her brother were taken care of by her grandparents who spoke Punjabi and English, but children were encouraged to speak English as her

parents “were really gang-ho about us learning English.” She reports having a good understanding of Punjabi, but low productive skills. Una’s parents came to Canada as preteens, and her mom feels rather Canadian, while dad affiliates more with the heritage culture. Una describes her grandparents as very traditional in the past, but getting more relaxed in recent years, and her parents, especially mom, hold more Western values. Answering the question about her ethnic orientation, Una said:

Una: Uh Canadian. Definitely. Yeah.

I: Canadian. Okay. So, do you feel, um, how important is the- you know, Indian/Fijian heritage for you, for your family?

Una: I mean, I guess it’s important, but I feel like when we go back, we don’t really belong. You- you can tell that we’re different, so we know, we know the cultures and traditions, but it’s not like the number one priority for us. There’s only maybe certain holidays we celebrate, whereas, like, they would celebrate everything if we were in India or Fiji.

In this quote, Una contrasts the knowledge of heritage culture which she possesses to its real-life application which she lacks. She also notes feeling different and non-belonging when visiting India or Fiji, which also feeds into her choosing monocultural identity orientation.

Another participant, Xena, notes some “connections with like the Indian sides of our culture” while overall identifying as “mostly Canadian.” Xena also describes her household as “pretty Westernized,” but her life story is quite different from Una’s one: Xena grew up in a White neighborhood of New West and moved to ethnically diverse North Van in the middle of her elementary, so she did not have much of a heritage community exposure, while Una did. Xena’s large extended family all live nearby, and she says jokingly that “any Punjabi person who was at the school was somehow related to me.” She maintains a very positive attitude towards her heritage: she enjoyed her only visit to India, likes Indian food that she only eats once or twice a week, and describes traditional weddings as an amazing experience. She also mentioned that she would like to start learning Punjabi at some point as she mainly has receptive skills. The phrase she uses to describe herself, “mostly Canadian,” is in contrast to her younger brother who would identify as “exclusively Canadian,” according to Xena, as he does not like traditional food, does not speak or understand Punjabi, and overall is not connected to the roots.

Given these two cases, it would be natural to suggest that growing up in less traditional families which are more assimilated to Canadian life style and values may cause the children to identify less with heritage. However, it does not explain why some of the other participants who come from traditional or even “very very very traditional” (Teresa) families also chose the monocultural identity orientation. In fact, monocultural identity was claimed by *all* participants whose families hold and enforce traditional values in regard to gender roles, appearance (make-up, clothes, hair), social activities (dating, partying), as well as insist on following religious practices. Many young people expressed discontent with these traditional values and frustration about being forced to follow them. It seems then that monocultural orientation may emerge from “pushing back” against excessive reinforcement of the heritage values in more traditional families. The following cases will provide some illustrations.

Teresa grew up in a “very very very traditional” family. Her dad has always been very strict about her appearance (no makeup, no dying hair, no revealing clothes), social life (no going to birthday parties, no talking to boys) and insisted on religious practices performed in the most traditional way. Despite all this, she says:

Teresa: I think all three of us [siblings], we would identify as Canadians. Because we were- My parents, they- they put me- like when I was younger, in traditional dance classes, Tamil classes, singing classes, and like, I did all of that and I feel like when- what I got out of that is that I’m not really into that- that kind of culture. Like, I enjoy seeing it and like, going to things like that once in a while. But I- I feel like I identify as a Canadian, yeah.

Growing up in a very traditional household and having a lot of cultural exposure at home and in the classes that she mentioned, Teresa nevertheless does not identify with the heritage culture much. This may also be because she lived and attended school in a very multicultural area of Vancouver and reports that most of her friends are Chinese (because the high school she attended that had a high proportion of Chinese). It is possible that an exposure to a variety of cultures in her diverse multicultural school and neighborhood, as well as an opposition to the enforcement of the traditional values in the family, resulted in her choosing a monocultural orientation.

Several speakers reported their fathers to be the “guardians” of the traditional ways, but in the following case of a “super traditional” (Caroline) family, it was the mother who enforced the rules:

Caroline: We stick to our beliefs a lot. My mom enforces them regularly. Um I guess we don't- we dress regularly, but uh when we have to go to like cultural things, then we would dress appropriately for that. Like my mom wouldn't let us wear jeans and stuff when we go to the temple, we have to dress nicely. And we have specific days where we don't eat like meat and stuff, and we pray on those days, so that's something I've been doing since I was little. And our beliefs, too, our mom always reminds us of them, she hasn't- she hasn't changed, she stuck to them.

Following traditions promoted the use of heritage language: "it's just a given that we speak in Hindi on those days [traditional events]," but overall, Caroline's parents speak English at home, because, as in many other cases, they were "so scared that we weren't gonna learn English properly" that English was established as the home language as soon as their kids started school.

The heritage values seem to be really ingrained in Caroline: she said that she would "feel guilty" if she would eat meat on the days when she's not supposed to. Her feelings about the prohibition on dating changed over the years from negative to more accepting:

Caroline: Um at first it bothered me, um but I just- I got over it, I really didn't have a choice with it, so I just had to accept it. Which is fine I guess, it gives me more time to focus on other things, and I'm not worried about-

I: School-

Caroline: Yeah exactly, school, like my sister, she'd twenty-three, and she's been able to live her life happily without seeing anybody, so I feel like I can do it, as well.

In addition to being raised in a very traditional family, Caroline also grew up in a South Asian-dominant neighborhood in Surrey and went to a school with, according to her, "90 percent" of South Asian kids. Despite this background, Caroline chose a monocultural orientation ("Canadian") and explained it by contrasting herself with her parents:

Caroline: I feel like my parents have a better understanding [of the culture] um and they- they kind of respect it a little bit more. Cause when they were growing up, I feel like that's all that they focused on. But me and my sisters, sometimes we don't really see- like eye to eye with our parents when it comes to our beliefs.

Compared to Teresa above, Caroline seems more in agreement with the heritage culture in her household, but she still chooses the monocultural orientation.

In some other families, one of the parents is more traditional, while the other one is more lenient. Wendy's dad, despite living in Canada since pre-teen years, is very traditional and enforces rules about make-up, going out, etc., but mostly to her, while her younger siblings have more freedoms. Her mom, on the other hand, is less strict:

Wendy: I think my dad would be very traditional, personally. But my mom would be... I think it depends on what it is. Like she's very open-like she- she talks about when I'm older and she's like, You should get married blah blah blah when you're older, and she said, I would prefer for you to get married to an East Indian man, but if you do choose otherwise, I won't, you know, be angry.

Wendy moved to a White neighborhood and school in her teenage years and experienced some ethnic identity turmoil, as was already described above, in the section on schools, where she could not fit with the group of South Asian kids and distanced herself from them. Later in the interview, Wendy notes that her mom would refer to a stereotypical Indian immigrant and say that "she really doesn't want to be like that." Having come to Canada as a preteen with her family, her mom started off with nothing and "made something of herself," which is the reason why she feels proudly "Indo-Canadian," according to her daughter. At the same time, to describe herself, Wendy chose the monocultural orientation:

Wendy: I would say just Canadian, since- I was born here, right? And I don't really know much about my culture; um, I know a few things, right? And I know my heritage, but otherwise, I don't- I don't really identify with it much.

Once again, just like with Teresa and Caroline, the common theme is not identifying with the heritage culture and a lack of knowledge of it.

While the female speakers quoted so far came to terms with the rules at home, in the life of the following male speaker, this cultural discord in his family "has been a challenge" and resulted in "a big fight" when, after dating a non-South Asian woman for several years, he married her and moved in with her. Magnus describes plenty of areas of disagreement with his family, such as relationship, education ("they were disappointed when I didn't go into engineering"), and religion ("they were really upset when I told them I was an atheist"). He explains his feelings in the following quote:

Magnus: ...sometimes their ideas frustrate me. I often have clashes with my brother or my family, just about expectations and about things like gender roles. We don't tend to see eye to eye on those things. Uh so for

that reason I tend to get along more- a lot more with uh people who aren't Indian [laughs].

Magnus notes that his strong position in this life-long family battle of traditional vs. Western has brought results. He explains how it shaped his self-identification:

Magnus: But I think they are [relatives] getting better because I've had to be very assertive about what their expectations should be of me and what is fair for them to expect of me, because I've been to India only once when I was six. I... I have... I'm a Canadian with Indian heritage, but I was raised in Canadian culture, not in Indian culture, so I don't think that it's fair of them to have those expectations of me. ... Um, yeah, I am... I am... I am very Canadian, but I take note of my heritage and remember that. Uh I value my ability to speak my language and I value the community, as well.

Being raised in "Canadian culture" has undoubtedly shaped his identity and resulted in the monocultural orientation he claims, though, as many others in this group, he knows and remembers his roots.

To conclude the description of the monocultural orientation claimed by a large number of the participants with South Asian heritage, it appears that a variety of explicit and implicit factors plays a role in it. A very diverse group of participants chose to name themselves "mostly" or "definitely" or "very Canadian," but most of them also mentioned remembering or knowing their heritage to a different extent. In the next group of participants, simply "knowing one's roots" is expanded into having a separate South Asian identity, distinct from but compatible with the Canadian one.

Complementary orientation

The complementary identity orientation is described by Comănaru et al. (2018:532) for participants who feel that they belong to two cultures and their identities are distinct but compatible. 4 participants out of 17 talked about having two distinct parts of their identity. As with the previous group, there is a lot of variation in their backgrounds. I will provide several case studies in an attempt to show what circumstances may have influenced the formation of this particular identity orientation.

Just like many other participants, Zena grew up in Surrey, changing several neighborhoods throughout her life, but every time her family moved, they chose a predominantly White neighborhood because of the concerns about crime in some Surrey areas with a higher proportion of South Asians. She grew up and continues living in a

joint family household, with her grandparents and an uncle and his family forming one large unit. The home language continues to be Punjabi, though the younger generation usually speak English among themselves. Zena went to elementary school and started high school in a White neighborhood with only a few South Asians. Interestingly, Zena is the only person who talks about phenotypical characteristics in the context of discussing her high school friendship circle:

Zena: And I was the only South Asian girl out of my friend circle. Um there was like me, and then like I don't know, like six-seven Caucasian girls and like the two-three that were like Chinese, and so we'd take group photos and I was like that odd one out [laughs] but somehow- somehow I blended in, I guess cos I'm not as tanned. People don't even think I'm South Asian sometimes. I've gotten the most randomest ethnicities before... Are you Turkish? Are you Portuguese? Are you Italian?

When she moved to a South Asian-dominant high school, she describes it “overwhelming” at first, but a positive experience later:

Zena: ...the first day I went to school there, everyone was- like in the hallways I'd hear like Punjabi terms, some of them I never- some of them were slang, I've never even heard them before, and everyone looked at me, and I'm like, Oh my god, this is so overwhelming. [laughs] [...] At my new school, I kinda felt like more included, I don't know if it was just because now I was surrounded by- like people had like families that were like mine. So they- I could relate more to these people.

Not being an “odd one out” anymore was definitely an important part of her later high school years.

In addition to school and family experiences, there is another important factor, connection to the heritage country. Out of all participants, it is this family that maintains close connection with India and travels there frequently; Zena's relatives go there frequently, and she herself visited India 4 times (more than any other participant in this group) and enjoyed it overall, though she mentions some noticeable differences:

Zena: Um it's nice, it's hot, but I don't like- I mean I don't wanna say I hate going there, it's a nice country and like you know- you meet so many different kinds of people. But the- the environment there is not the same as how I've grown up here, so when you go there, you have to change how you dress, how you act, how you speak.

This mix of different life circumstances makes Zena's answer to my question about her ethnic orientation complicated. She first talks about her whole family calling

them “Indo-Canadian” and explains why this is an appropriate term to use. Later, she talks about herself personally and leans towards identifying as a Canadian:

Zena: I think the best term that we've used before is Indo-Canadian. I mean, not that many people use that term, but it's like the most accurate term to use. You- because if we say South Asian, then- then I feel like we- when we say that word, we're identifying ourselves as like, completely from India; we have nothing to do with Canada. We're not Canadian at all. But like, my family is so Canadian. We do all these Canadian- we- we drink maple syrup! [laughs] We do all those typical Canadian things. And even the way that we live, and like, the food that we eat, it doesn't always have to be South Asian. We do things that are more Canadian or more European, I guess. And so when- I don't know- I say I'm Canadian. And then- because people can never- or even assume that I'm South Asian. So, I- I say Canadian, but then I say my parents um, my parents are South Asi- like I'm South Asian. But I'd say my parents are from- are South Asian, because I grew up- I lived- I was born here, so I feel like I'm more Canadian. But I have that South Asian background.

In this case, the two parts in her identity do not mix, which goes along with a description of complementary identity orientation (Comănaru et al. 2018). She changes the way to describe her affiliation from referring to her parents as “South Asian” to naming herself “South Asian,” to shifting towards “having South Asian background.” Later she introduces another comparison point – her younger brother who is much more removed from his heritage, doesn't speak Punjabi and identifies solely as Canadian; in contrast to him, she is slightly “more South Asian” and “not entirely away from my heritage.”

In contrast to Zena who grew up in a White pocket of a predominantly South Asian Surrey, Anabel grew up in a South Asian pocket in an overall White Squamish. She describes her dad as quite traditional, but her mom is more flexible and understanding. Anabel is a fluent speaker of both English and Punjabi and still uses it frequently to talk to older relatives. In her high school, there was a small group of South Asian kids that represented the minority community of South Asians in Squamish. Because of this “local minority” status in a relatively isolated from the rest of Metro Vancouver town of Squamish, she says all South Asian kids in school “were like friends and stuff.” It may be the reason why Anabel is the only one of all participants who directly calls herself Indian and Punjabi:

Anabel: I do say I'm Punjabi, but I've had moments when someone's like been kinda ignorant and they'd been kind of, Oh where are you from? When they say that, I'm obviously gonna say Canada, like I'm

born here, I'm not from anywhere else, but if they ask me what's my ethnicity, I will say Punjabi, like I won't say- or like Indian, I won't say Canadian. ... like I know a lot of my friends, they'd obviously say, Oh I'm Punjabi, they're not gonna say, I'm Canadian. Cos it's just- makes more sense. Cos I guess for the most part they'll know we're Canadian, yeah.

The complementarity of this orientation is clear in the opposition of nationality and ethnicity. The label “Canadian” is obvious, does not require mentioning in the local context, but also too “broad,” according to Anabel, while “Punjabi” is specific and useful in identifying self and others and distinguishing from the White majority in Squamish.

In a similar statement, another participant, Daniella, noted the usefulness of the specific term “Punjabi” because there is “like a billion people in India, they’re- very different.” Daniella grew up in Richmond in a multicultural neighborhood and went to a high school with a diverse student population. Similar to Wendy above, Daniella distances herself from the negative image of a stereotypical South Asian immigrant:

Daniella: ...like I identify with like my ethnic background, but like the- like Canadian, like the stereotypical Canadian like Indian person, I don't.

Her family has become more “Westernized” over the years of living in Canada, and while they still celebrate Diwali and other traditional Indian holidays, the Canadian ones are also observed as they are more family-oriented. Daniella says the following about herself when discussing the traditions:

Daniella: I don't consider myself like religious or like super traditional, but like I don't see myself having like- like a white wedding dress, like I have to have an Indian wedding.

When asked to name her orientation, Daniella distinguishes the two parts of her identity, as is clear in the following quote:

Daniella: No, just Indian. Or Canadian. I feel like that's an American to say like I'm like Chinese American, Indian American, I've- no one ever says that.

Daniella also provided a situational context that would influence her to change the term she would use to describe herself, which will be discussed later, in the section on alternation.

Noah similarly rejects the hyphenated label. In contrast to previous participants, he grew up in a Surrey neighborhood with a higher proportion of South Asians and went to a high school with “ninety nine percent all the Indian kids.” His parents came to Canada as adults, and despite having earned post-secondary degrees in India, had to work unskilled jobs throughout their lives. He says that his parents “turned more westernized over the years,” and he himself and his sister are similarly not very traditional:

Noah: Yeah we never- we're pretty Western other than I know the language perfectly- I don't know I feel like I'm a good part of both cultures, like integrated perfectly into two cultures. Western and you know South Asian. ... But I never think about the word Indo-Canadian when someone asks me what I am, it's either I just say I'm Canadian or I'm Indian, never the middle.

Noah explains later that these different answers would be given to different questions, about a place of birth or ethnicity.

All four participants in this group chose to talk about their identity as comprised of two distinct part and offered some explanations, the most common one being that ethnicity and nationality are two different things that would be mixed up in a hyphenated term. In the following section, I will quote participants who did choose that term to describe themselves.

Hybrid identity orientation

Hybrid identity orientation emerges when people have their two cultures integrated or blended, forming one inseparable identity. Such people often choose hyphenated labels to describe their affiliation (Comănanu et al. 2018:538). In this group, only two out of 17 participants chose to use a hyphenated term “Indo-Canadian.” Once again, the two very different life stories make it difficult to generalize why they chose this particular orientation.

Yuna’s family moved from a South Asian-dominant neighborhood in Surrey to White/mixed ethnicity New West in the middle of her elementary school. She “really enjoyed” her Surrey school where there was “a lot of people from my community,” “a lot of Indian teachers” and where she “learned Punjabi, like after school activity.” Yuna says there was a “huge shift” when she moved:

Yuna: When I moved here [to New West], uh like I think there was only two or three other Indian people in my class, and the rest were like Caucasian or Asian, so it was a huge shift, yeah. It was weird at first cos like I- I'm just so used to it, right. And like- it's not like I was bothered by it because like I'm not racist or anything, right, but it was just- it was different because like there's a lot of influence- when like um- you are surrounded by a lot of Indian people, then you will hear kids speaking your language at school, too, sometimes, and so like it was different that you need to remember like, Oh they probably won't understand what I'm saying sometimes. But yeah um, I- I made quite a few friends um but they were mostly Indian as well. And I guess I felt closer to them in that way because of that, because I was close to people that were Indian in Surrey.

Yuna's has some extended family in different provinces of Canada and in England, and some are still in India. Her relatives visit India occasionally, but she never went there, though she visited her relatives in England. She does keep in touch with some cousins in India and speaks Punjabi to them on the phone. Her home language is Punjabi with the parents and English with her three older sisters. Her parents who immigrated as adults do not really enforce the traditions, but rather the whole family follows some of them, for example, her mom wears a traditional suit daily, and all of them wear suits when they go to the temple or saris to traditional community events; Indian food is most often cooked at the house. In this excerpt she compares Indian and Canadian societies to explain why her parents became more lenient over the years:

Yuna: Uh, well we still like to keep like our traditions. Like, we still have the traditional weddings. But like, um, we're more modern in the sense that like, I feel like in India they're still very guarded with their um- especially girls, like, you can't go out late at night and stuff. But like, my mom and my dad are more flexible in that way. They're like, Uh, you know, it's fine. And it's more safe here, I guess, too, that's why. So, like, they're more accepting of that. And like, they encourage us to go to school. I feel like some areas of India still don't do that.

A combination of these factors once again creates a unique picture of ethnic identity. The positive impression Yuna has of the heritage community, her parents' non-forceful ways with the traditions, and her school experience in the end makes her say the following about her ethnic orientation:

Yuna: I would say that I identify as both. There is a term that I use quite often to describe my ethnic orientation, Indo-Canadian.

The second female participant who chose the hybrid identity orientation is Brianna. Her story is similar in some respects, but quite different in others. She lived her

whole life in the same neighborhood in Surrey which was mostly South Asian. Both of her parents come from a smaller community in BC where they grew up in very large families of recent immigrants. Both parents carry a lot of traditional values and expectations for their kids. Because her high school was so South Asian, Brianna says that at some point she “probably would have labeled myself as Canadian,” but later, having moved into a White neighborhood in Langley and feeling isolated from the community, she says that she “kind of identified more with my Indian heritage.” Answering my question about her orientation, she, as several other speakers, draws comparison with other members of her family to position herself:

Brianna: Um my brother, I think cos he's so detached from like every like- language and even culture- he's not really aware, um so I think he would say Canadian, but um personally I would say Indo-Canadian.

There is also another factor that may feed into this choice of a hyphenated identity: she has been dating a young man from a family of more recent South Asian immigrants, whose family has Punjabi as their home language and is “more traditional, but in that area [dating] they're pretty like liberal about it all.” She spends a lot of time at the house of this young man and is more exposed to language and culture than she is currently in her own household. It is possible that this new exposure to and affiliation with Indian culture may also contribute to her choosing a hyphenated term to describe her identity.

Alternation

Contextual or situational variability was discussed by two participants, with only one, Viola, choosing it as her main orientation. Another participant, Daniella, mentioned alternation in addition to her main complementary identity orientation.

Viola came to Canada when she was 4 years old, making her the only person in this group not to be born locally. Her family retains Kannada and Hindi as their home languages up to this day. She speaks both of these languages fluently, as well as some other Indian languages. Viola has her extended family in BC and they keep connected. She and her relatives also visit India somewhat regularly and she enjoys meeting her family there. Viola grew up in a Chinese/Caucasian neighborhood in Burnaby, but she says that more South Asian families have been moving in there lately. Her high school was “almost a hundred percent Asian, like Chinese background,” and her friendship circle was and remains very diverse with friends coming from school, community and her

dance club. Viola has been doing traditional Indian dancing and singing for ten years and often performs solo and with a group. Answering my question if her parents are more traditional or more westernized, she said that they have “a balance of both, it really depends on the topic at hand.” Later she elaborated that personal relationship is one of the sensitive topics:

Viola: Yeah, dating is kind of uh, gray area. I don't know, like, um, you- I guess they wanna know that it's serious before, so like, if I just started dating someone, I wouldn't tell them right away. But if- if it was a serious relationship then I would tell them. They're not gonna force a marriage on me, but it's still kind of a little bit taboo to talk about that kind of stuff, yeah.

This complex combination of life circumstances makes it difficult for Viola to pinpoint her identity. Trying to explain her thinking about it, she brings in the idea of the situational variability:

Viola: That's hard um, I kind of identify as both. Or sometimes it might depend on the situation, umm...

I: Like who you talking to?

Viola: Yeah. Like, if I go to India and I'm with my cousins, I feel very Canadian. Like, um, [laughs] very Canadian, but like, you know, sometimes when I'm here, um, I don't know like, if my friends are- we go out for Indian food or something, you know, in that place I feel very Indian. Or other times if I'm just at school, you know, it doesn't matter, kind of. Yeah.

In a similar vein, Daniella (described above in the section on complementary identity orientation) mentions that the context and the interlocutor influence her representation of her identity:

Daniella: Like if we're out of the country, we're like, We're Canadian. But like if I'm in Canada, I say Yeah I'm Indian. But if I'm speaking with like another person who is like I don't know like uh Asian, I say I'm Punjabi.

Two identities for these speakers are kept separate and may be actualized in particular circumstances.

6.4.3. Summary

South Asians remain the second largest non-White ethnic group in Metro Vancouver (Statistics Canada 2017). While the history of immigration of this group dates back to the beginning of the 20th century, it was in the 1980s when it became a major community within Metro Vancouver and remains as such since then. Therefore, its cultural contributions are more recent compared to those of the other groups in this study. The families of South Asians in Metro Vancouver belong to different generations of immigrants, which is illustrated by the current sample. The parents of some of the participants came here as adults in their 20-s or 30s, while parents of others arrived as teens or pre-teens and grew up in large extended families here. Interestingly, growing up here does not automatically mean being Westernized: some of the most traditional parents of the participants in the current study actually grew up here, but retained a lot of very traditional values, language and culture. This can be explained by the fact that they grew up in large extended families, often in South Asian neighborhoods, and the families preserved and transferred their heritage intact to their children. It is also peculiar that some of the more recent immigrants are, on the contrary, quite liberal. This situation may reflect the fact that there are changes in the modern Indian society towards more liberal values, but the families that immigrated 50 years ago still carry the most conservative values reflecting the past of the Indian society.

The families of participants with South Asian heritage vary in their socioeconomic status, but they mostly can be described as working or upper working class, with a few middle-class occupations. Most of the parents have completed secondary education, while several have post-secondary degrees, mostly from colleges. All these families are well established in Canada, they own houses and send their kids to study at university. In many cases, several other relatives reside with the nuclear families, most often grandparents, but also aunts and uncles with their children. While this promotes the use of heritage languages in the family, many participants report only or mostly receptive skills in those languages. It can be explained by a combination of factors: on the one hand, most of the parents and also several grandparents speak English, so there is no communication barrier. On the other hand, parents in many cases were reported to promote the use of English at home to ease the transition into the school system when the participants were little.

In terms of the ways these young people talk about their ethnicity, many of them chose monocultural identity orientation saying they are Canadians. Several participants said there are two distinct parts of their identity, while a few others said that those two parts blend and create one coherent whole. Another interesting aspect that was mentioned is the situational variability, where one or the other identity is more prominent because of the context or interlocutor.

The next section in this chapter will be devoted to putting all the data together to provide comparison and contrast of the three ethnic groups, focusing specifically on their identity orientation.

6.5. Trends in identity orientation and factors behind its formation

The qualitative analysis of the interview data revealed two important things. First, while the participants use a variety of ways to describe their ethnic orientation, it is possible to summarize them into three general categories: Those who refer to themselves as Canadians, those who talk about two parts in their identity, either merged or separate, and those who focus on the contextual variability of their identity orientation. A second important finding of this part of the study is a variety of factors that may influence these young people's identity formation. In the following sections, I will discuss each of these two findings and connect them to the study objectives.

6.5.1. Identity orientation

Use of terminology

A word of caution is due regarding terminology. The findings from this study show that terms offered by the researcher may not be meaningful to the participant and the same term may mean different things to different people. Ethnic terms in particular are hard to define objectively as they change frequently following political, cultural and societal changes.

At the time of data collection, I was aiming to replicate previous studies where speakers were grouped by the degree of affiliation to their heritage culture with a particular score assigned to each group, which enabled using these data in finding

correlations with linguistic production (Hoffman & Walker 2010). The terms I used were based on this previous work where participants were asked to define their ethnic orientation as “Canadian,” “Chinese Canadian,” “Chinese,” “South Asian Canadian,” or “South Asian.” In some cases, participants readily accepted these labels, some even volunteered in naming themselves in one way or another. In a few cases, however, participants commented on the appropriateness of such terms. Noah (South Asian heritage), for example, mentioned that by themselves, these labels do not mean much: “they are just words and you need a more specific description behind them.” Polly (Chinese heritage) said that the term “Canadian” is ambiguous: “Sometimes I’m not even sure what a Canadian should be like, just cause we are so multicultural that it’s hard to say.” Another participant contested the use of hyphenated terms locally:

Daniella (South Asian heritage): I feel like that’s an American way to say like, I’m like Chinese American, Indian American. I’ve- no one ever says that [in Canada].

As data collection progressed and it became clear that terminology may be an issue, I started asking participants to define being Canadian or being hyphenated Canadian and ended up with some very valuable information discussed later in this section. Overall, I acknowledge that the interview data collected using the terms above may have biased participants’ answers. Every researcher working on similar projects in the future should carefully consider their approach to the use of terminology.

Identity orientation of the participants

The findings of the current study regarding identity orientation of young Canadians align with previous ones. First, there is considerable variation in the strength of affiliation with the heritage culture, both within and among these three groups. Second, the non-White groups, when compared to a White group were more likely to form ethnic identity (Sano et al. 2015:59). Almost all participants with British/Mixed European heritage chose a monocultural identity orientation. South Asian heritage participants chose monocultural orientation more often compared to Chinese heritage participants. At the same time, Chinese heritage participants chose hybrid orientation more often compared to South Asians. Several participants discussed situational alternation, with context and interlocutor influencing the way they feel.

As the next step, I looked at the reasoning behind choosing one or the other orientation. Being *Canadian* was often presented as a factual thing: the most popular explanation behind it was “born here” and “have Canadian passport/citizenship.” Among other common answers were being more accustomed to Canadian culture, “doing Canadian things” (Zena, South Asian heritage), and being raised in Canada. Yet another aspect of choosing the term “Canadian” was its meta-ethnic meaning: it was used to describe “a multicultural mix of people” (Jane, British/Mixed European heritage).

Among the non-White groups, being Canadian was also often defined in relation to heritage culture. Here, participants talked about a lack of knowledge or non-participation in cultural event to the same extent as older generations, as well as about a lack of identification with heritage culture or disagreement/frustration with heritage values. An interesting aspect that came up several times during the interviews was dissociation from people with the same heritage who were presented as undesirable groups, for example, “FOBy kids” (Finn, Chinese heritage, referring to “fresh off the boat” immigrants) or “stereotypical Canadian Indian person” (Wendy, South Asian heritage, referring to a person who looks and behaves like people do in rural India). Previous research described such self-positioning in relation to others and emphasized that the question “who am I?” is as important as the question “who am I not?” (Wiltgren 2017:342; Back 1996).

Interview data on the next most common category, *hyphenated Canadian*, showed that, first of all, participants separated ethnicity and nationality. The “Canadian” part of the identity denoted citizenship and a place of birth, as was already discussed above, while the “ethnic” side of the identity had to do with one or several of the following: being in touch with or loving the heritage culture, remembering one’s roots, feeling that heritage culture and values are “instilled” (Sally, Chinese heritage) or “ingrained” (Mandy, Chinese heritage), and speaking heritage language. At the same time, participants often shied away from being called too “ethnic” saying that they were raised in a more Western way, in contrast with their parents or more recent immigrants, or that they don’t belong in the heritage country (for those who have visited it). In many cases, a participant’s decision about their own identity was made in comparison to their siblings or, more rarely, parents. Older siblings and parents were usually described as “more ethnic” compared to younger siblings, who were often described as much more Westernized. Being too Westernized, however, was often presented as undesirable.

Several speakers used the phrase “White-washed” that was applied to people who do not know heritage culture, have very limited (if any) proficiency in heritage language, and go by English names compared to older siblings who would go by “ethnic” names (Rosa, Chinese heritage). Interestingly, older siblings may indirectly contribute to this process of assimilation of younger siblings because they are often the first ones to bring the English language home, as was also described in Cheshire et al. (2011:171). Older siblings also expose their younger siblings to Western values and ideas, as this study found.

Finally, contextual variability, or *alternation*, was often mentioned by the participants. Being in a particular group of people or in a particular place was described to trigger either Canadian or “ethnic” part of the identity. Participants mentioned such situations as attending traditional events, being in a group of people with the same or different heritage, and travelling outside of Canada. In general, visiting heritage county makes participants describe themselves as Canadian as they distinctly feel that they are very different from the locals. Travelling to the U.S. similarly led to a response “I am Canadian,” as the opposition based on the national border is very strong. Finally, being in a diverse group, e.g., in a university classroom, makes participants feel “more Canadian” as well because “the culture here ... is like a multicultural mix of people” (Jane, British/Mixed European heritage), which was also mentioned by several other participants. The situations where participants felt more “ethnic” include going to ethnic restaurants, attending traditional weddings (for South Asian participants), and visiting the homes of their friends whose families maintain more traditional lifestyles here in Canada. At the same time, several participants mentioned dissociation with their heritage group when its members behaved in a way disliked by them. In all these situations, a researcher who tries to “bin” their participants depending on their preferred identity orientation is faced with a challenging task and the methodology of future studies needs to account for situational variability in identity orientation.

After summarizing the three main forms of identity orientation discovered in the interview data, I would like to move on to discussing some factors that may play a role in identity formation of the young people in Canada.

6.5.2. Some factors influencing identity orientation

Previous research on second generation immigrants in the U.S. found great variability within and across minority groups in terms of their social, demographic and cultural dynamics, as well as in the degree of assimilation to the mainstream culture or integration of the heritage culture with the host culture (Tsai et al. 2000). In Canada, research on the attainment of ethnic identity among the children of immigrants has started more recently and little is known about the most influential factors in ethnic identity formation and differences among minority ethnic groups in this regard (Phinney et al. 2001, Sano et al. 2015). Sano et.al (2015) conducted a large-scale study based on the Ethnic Diversity Survey (Statistics Canada 2003) to explore the influence of parental human capital (education and language skills), family socialization, co-ethnic friendships and experience of discrimination on children's ethnic identity attainment. The authors report the different weight of these factors for Canadian Whites, Blacks, Chinese and Sound Asians. While the current study was not aiming to discover or investigate particular social factors or their weight in identity formation, the themes that emerged during the analysis of the interview align with previous findings and present some interesting facets of identity formation process.

The interview data suggest that the formation of ethnic identity of young Canadians is influenced by family and local community, as well as by the society as a whole. From birth and until they enter school system, "cultural socialization" of immigrant children happens mostly at home (Chakawa & Hoggund 2016). Sano et al. (2015:61) refer to a number of Canadian studies that showed that "interactions at home are a crucial feature of ethnic identity formation when parents and grandparents emphasize ethnic customs and beliefs, including filial respect/responsibilities." This is particularly important for Asian families as familism and family obligations are highly valued in both Chinese and South Asian cultures (Hwang 1999). Previous research also showed that South Asian families often hold high expectations of personal sacrifices for the sake of the family (Ibrahim et al. 1997).

In the current sample, participants' families vary in the extent to which they maintain a traditional life style, teach and promote cultural or religious beliefs and hold traditional expectations of their children's life choices. The interview data showed that Chinese families strongly prefer traditional Chinese food and strictly maintain the use of

Cantonese at home, while in other areas, parents were described as “lenient.” The only thing Chinese parents insist on is getting good education. South Asian families, in contrast, often choose English over the heritage language for home use and cook a variety of foods rather than strictly Indian food. At the same time, many South Asian families still remain much more conservative in terms of controlling the social lives of their children, their education and religious affiliation. One interesting consequence of this is a conflict of traditional Indian values with more liberal Western values which in many cases pushes children in these families away from their heritage. This topic was touched upon in one of the interviews, and a participant with Chinese heritage provided an interesting comparison of Chinese and South Asian (“Indian”) cultures:

Finn: I think in the case of an Indian that's because their sense of family traditions are very strong, right, like, how like- I don't know, their dressing style, their traditions, holidays and cultures, so I think if you would- it's not even like adopting Canadian culture, but shying away from Indian culture and adopting Western culture as a whole, I think that's when you would say like Oh I am a Canadian. But-

I: Why would they do that?

Finn: Maybe because they don't want to have such strong Indian values and cultures now, because I know a lot of the- Indian women are like feminists and like they really don't like how India treats women, so then in that case you want to dissociate with your ethnicity, like, Oh I'm not Indian, like I'm not part of that, kind of like society and values, like I'm Canadian, I'm part of a system that has equality and like independence for women.

I: You don't have that in China, there is not so much oppression for women?

Finn: Yeah, our values- I don't know, like Chinese culture values are like, mostly like, hard-working, there is a strong sense of duty, but like these are things I would- I agree with. And for our festivals, like we celebrate Chinese New Year and like stuff like that, but it's nowhere near like the Indian level, like no one like dresses up or like gets around, like it's just kinda like Happy New Year like, or like- like Happy Autumn festival, have some mooncakes... Maybe cause there's no religious emphasis, this is kind of like- like a festival, it's kind of like a reason to send gifts, that's how I see it.

Such value conflict in South Asian families may contribute to the young people preferring to identify more with Canadian values and culture, while this is a non-existent issue for Chinese families. The preference for monocultural orientation in young people with South Asian heritage can be partially accounted for by this situation. Future research

needs to pay special attention to such cultural differences as, for example, a predetermined set of questions in a questionnaire may not adequately cover all aspects of family domain in such different ethnic groups.

An important factor closely related to family life is the use and knowledge of the heritage language. Previous research showed that the use of heritage language at home contributes greatly to the formation and maintenance of the ethnic identity and leads to establishing “cultural solidarity” with one’s ethnic group (Woolcock & Narayan 2000, Phinney et al. 2001, Hiller & Chow 2005, Sano et al. 2015). The participants in the current study frequently identified knowledge and use of the heritage language as a necessary condition to be considered “of particular ethnicity.” All participants from non-White ethnic groups spent their early childhood immersed in their heritage language because their caregivers in most cases were older relatives who were either monolingual in the heritage language, or strongly preferred using it at home. However, around the age of 4-5, at the start of preschool or kindergarten, these two groups chose very different strategies regarding their heritage languages. All Chinese families maintained the use of Cantonese either exclusively, or with some English allowed at home, while most of the South Asian families switched to using English as their home language in order to ease the transition into the school system for their children. This is of course possible because all South Asian parents speak at least some English, and in many cases are fluent English speaker, while only a few Chinese parents have English proficiency. A strong presence of heritage language may be one of the factors contributing to Chinese participants choosing hybrid orientation over monocultural one, while the situation is the opposite for South Asian participants.

Moving to the influence of local community, schools and neighborhoods were discussed in terms of how diverse they were and what connections participants built and maintained during and after their school years. Ethnic composition of schools plays an important role in the young people’s ethnic identity formation; Knifsend and Juvonen (2014), among others, found that diverse schools contributes to the development “of complex social identities and positive ethnic intergroup attitudes” (719). Based on the interview data, diverse schools appear to be the most comfortable environment where children thrive, while schools dominated by one ethnicity may be less comfortable for students who are a minority in a given situation (a Chinese student in a South Asian school, a South Asian student in a White school) and for students of the same ethnicity

who for some reasons dissociate with their heritage group (two South Asian participants). However, no clear correlation between the ethnic composition of schools and identity orientation of the participants was found. Similarly, friendship groups do not seem to be directly related to the school or neighborhood composition. Overall, South Asian participants reported to have very diverse multiethnic social circles, while among British/Mixed Europeans and Chinese, there are more co-ethnic friendships. Sano et al. (2015:53) found that co-ethnic friendship is “an important predictor of ethnic identity for the children of immigrants,” and children with more diverse friends are less likely to form strong ethnic identity. This idea appears to find some confirmation in the current study as more South Asians participants chose monocultural orientation compared to Chinese.

As concerns the wider society, Vancouver is an example of a super-diverse community where one can encounter many different cultures and languages. The official policy of Canada in regard to diversity is documented in the Canadian Multiculturalism Act (1988), defined as “an Act for the preservation and enhancement of multiculturalism.” Many participants in the current study directly referred to diversity being a defining characteristic of this area, and expressed positive opinions about being exposed to a wide variety of cultures throughout their lives. Definitions of “being Canadian” provided by participants often referred to this particular aspect. In this context, what superficially appears as monocultural orientation (“I am Canadian”) may actually mean completely the opposite: the extreme multiculturalism present and robust in this area. This once again takes me back to the word of caution I started this section with: when offering our participants some labels to choose from, we need to make sure the researcher is on the same page with them regarding the meaning.

The last section of this chapter is devoted to searching for correlations of linguistic production and identity orientation.

6.6. Linguistic correlates of identity orientation

The findings from the quantitative part of the study (Chapters 4-5) showed that while all speakers participate in all sound changes, there are some “ethnic” patterns: British/Mixed Europeans raise /æN/ and front /ow/ and /uwl/ significantly more than both Chinese and South Asians. Chinese advance /i/ and /e/ in the horizontal space more compared to South Asians, and back /awT/ more compared to two other groups. South

Asians raise /æɡ/ and front /aw/ more compared to both Chinese and British/Mixed Europeans. The findings from the qualitative part of the study showed that within each of these heritage groups, participants can be described to prefer a monocultural or bicultural identity orientation. The last important step in this project is to explore if there are any differences in linguistic behavior by participants with different identity orientation.

To answer this question, only data from the two non-White groups were examined because British/Mixed Europeans are predominantly monocultural and using their data would skew this category. The monocultural orientation was treated as such, and the overarching term “bicultural” was applied to participants who described their identity orientation as hybrid, complementary or alternating. Admittedly, it imposes the researcher’s perspective and erases the fine differences participants created in the process of their identification, but this was a necessary step because the smaller categories (hybrid, complementary, and alternating) only contained a few people each. This grouping is also not balanced in terms of the gender, so whenever gender was statistically significant for a given change, the identity interpretation was not attempted. Table 39 below presents the details.

The new variable “Identity” with two levels (monocultural, $N = 14$, and bicultural, $N = 17$) was added to the dataset and a trial set of mixed effects tests was conducted. No statistically significant effect of identity orientation on the production of vowels was identified, but again, I can’t guarantee the truthfulness of the “bicultural” level within this variable, so this result should be taken with a grain of salt. To examine any trends, the R package ggplot2 (Wickham 2016) was used to visualize how the sound changes in question were realized by participants with mono- and bicultural identity orientation.

Table 39 Distribution of participants by identity orientation

		Monocultural	Bicultural	total
Chinese	males	3	2	5
	females	1	8	9
South Asian	males	4	1	5
	females	6	6	12
total		14 (7 males, 7 females)	17 (3 males, 14 females)	31

The following observations are made on the basis of the visual inspection of the graphs. The Canadian Shift is clearly very uniform across all the participants, regardless

of their identity orientation (Figure 23, top panel). The next change in progress, the raising of /æ/ allophones, presents a noticeable difference for /æɪ/ (Figure 23, bottom panel), as the monocultural group raises it more than the bicultural group. The monocultural group has an equal number of males and females, so the latter finding cannot be attributed to the gendered pattern for /æɪ/ raising described earlier. Thus, participants from the non-White groups with monocultural identity orientation lead raising of /æɪ/. At the same time, there is a smaller difference for /æʊ/ in the opposite direction as bicultural participants raise slightly more than those with a monocultural orientation, though there is also retraction which is not accounted for.

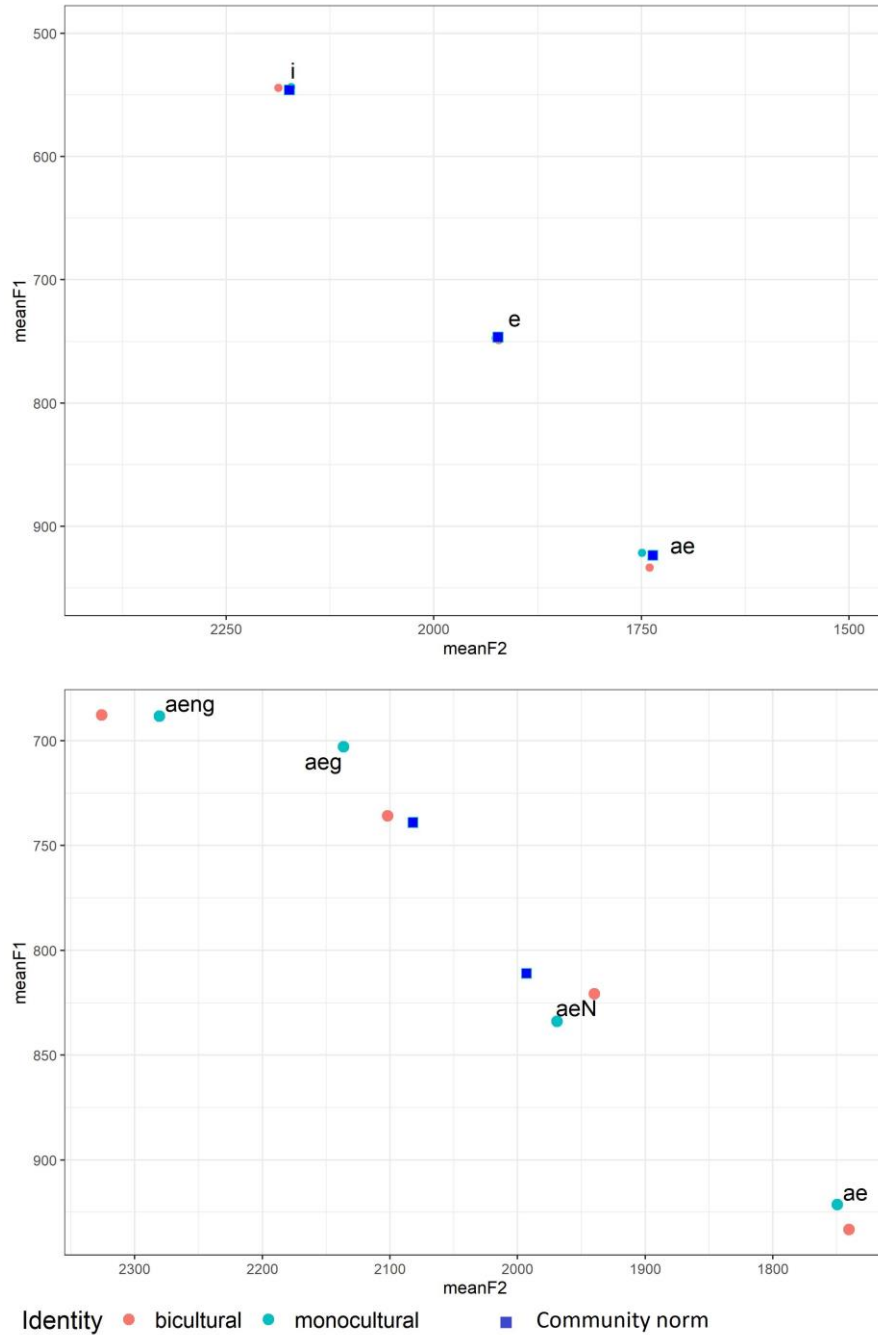


Figure 23 Canadian Shift (top) and allophones of /æ/ (bottom) by identity orientation

Figure 24 shows the distribution of diphthongs by identity orientation category. Starting with Canadian Raising (top panel), there are some differences in the horizontal dimension for both raised allophones and /aw/, and a smaller difference in the vertical dimension for /ay/. Because we are mostly concerned with the degree of raising of the pre-voiceless diphthongs, that is, movement in the vertical space, I would suggest that

identity orientation has no effect on Canadian Raising. Moving on to the fronting of the back vowel (bottom panel), there is a very uniform pattern in that monocultural participants front all vowels slightly more than bicultural. Once again, the fronting for many vowels was found to be advanced by males, but the current pattern cannot be attributed to a gender effect because there is an equal number of males and females in the monocultural group.

Overall, similar to the minimal heritage effect on shifting of vowels participating in the Canadian Shift and raising of vowels participating in Canadian Raising, there seems to be quite a uniform pattern for participants with mono- and bicultural identity orientations. This once again may attest to the status of these sound changes as completed or nearing completion in Vancouver English. At the same time, two changes in progress that showed more clear heritage effect, raising of /æ/ allophones and fronting of back vowels, also demonstrate more pronounced effect of identity orientation.

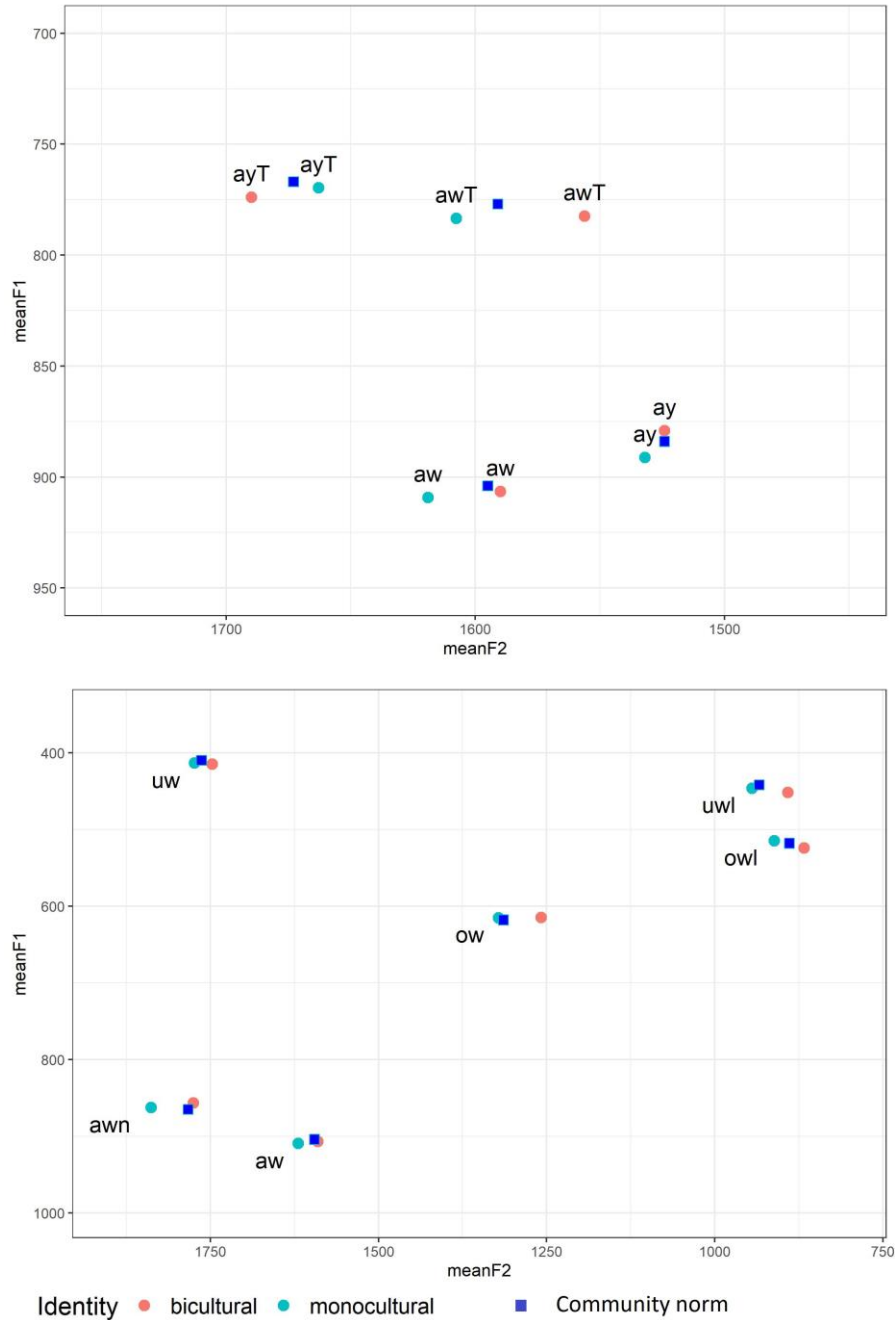


Figure 24 Canadian Raising (top) and fronting of back vowels (bottom) by identity orientation

Given that the qualitative analysis of the interview data revealed some major differences between the two non-White groups in terms of their identity orientation and factors influencing it, the next question that comes to mind is if the participants with mono- and bicultural orientation within these two heritage groups differ in their linguistic production. To get a glimpse into this, I created and examined a set of plots with two

identity groupings plotted separately for the two heritage groups (Figures 25-26). Unfortunately, because three out of four groupings within heritage groups are not balanced by gender (see Table 39 above), the results to a large extent mirror those for gender within heritage groups, whenever gender had a statistically significant effect on a given change. That is, if there is a large difference between males and females for a particular sound, Chinese monocultural group that has more males patterns like Chinese males, while Chinese bicultural group that has more females pattern like Chinese females. The same pattern holds for the bicultural South Asian group that is comprised of mostly females; the only balanced grouping in terms of gender is monocultural South Asians.

Starting with the Canadian Shift (top panel of Figure 25), the first interesting observation is the reversed pattern in terms of the degree of advancement for monocultural and bicultural groups within these two ethnic groups. This can be partly attributed to the gender effect described earlier: monocultural Chinese are mostly males (three out of four), and they repeat the gender pattern for /e/ and /æ/ (males were found to lag behind females in the shifting of /e/ and /æ/). However, the effect of gender does not explain the distribution of South Asian identity groupings. Bicultural South Asians are mostly females (six out of seven), but they lag behind in lowering of these same vowels, contrary to the general gender pattern where males lag behind females. Monocultural South Asians who are balanced in terms of gender and are thus more immune to the gender effect have slightly lower realizations of both /e/ and /æ/. For high vowel /i/, the identity pattern repeats that one for gender in the Chinese group: males have the most advanced value in F1; since this group is mostly males, this finding cannot be attributed to identity effect.

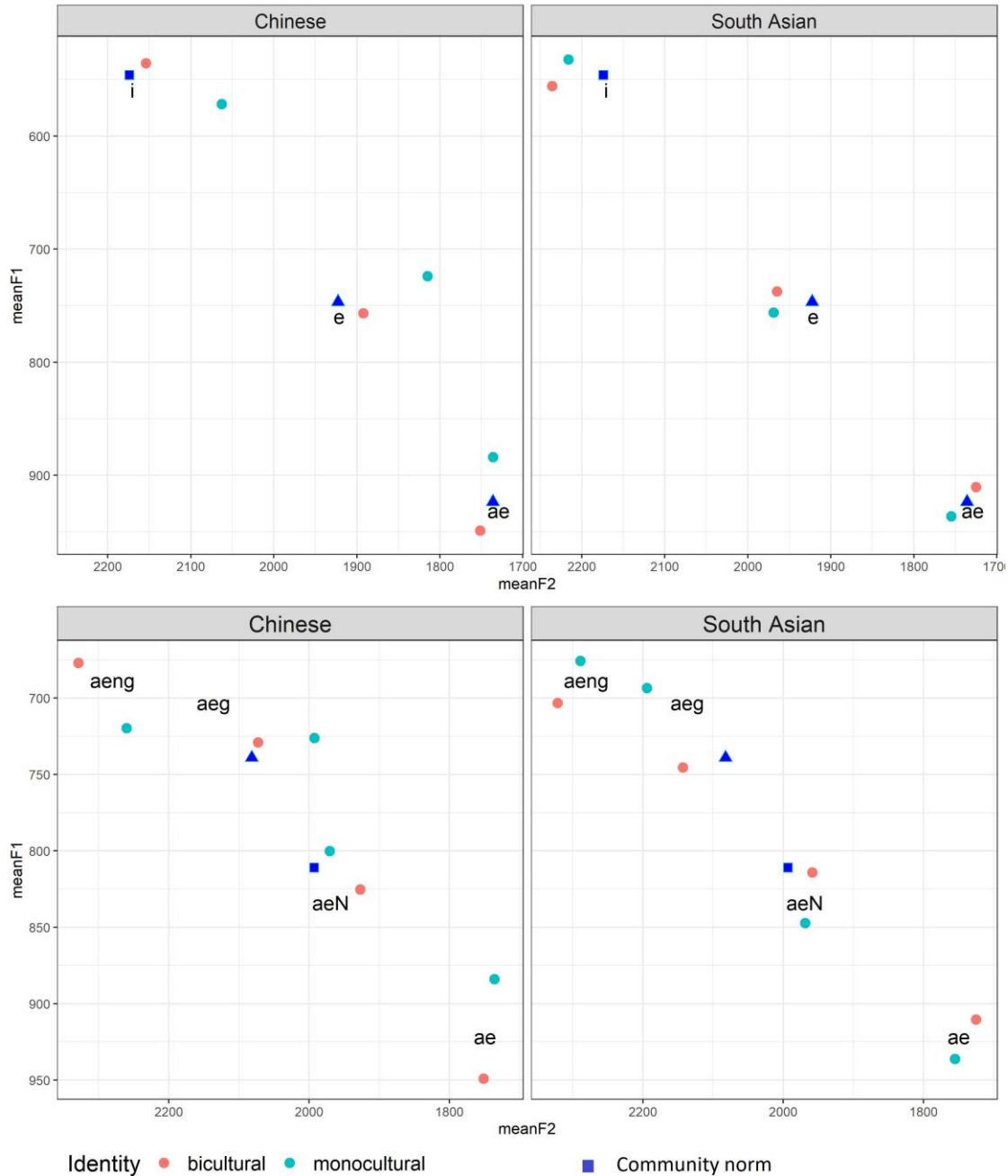


Figure 25 Differences in Canadian Shift (top) and allophones of /æ/ (bottom) within ethnic groups

Moving on to the distribution of the /æ/ allophones (Figure 25, bottom), no statistically significant gender effect for /æN/ was identified, so the Chinese group shows a non-gendered pattern for monocultural participants who have more raised /æN/ compared to bicultural participants. The pattern is reversed for South Asians: monocultural participants have a lower realization for /æN/ than bicultural ones within

this heritage group. The allophone /æɡ/ in the Chinese group has no difference in F1 depending on the identity, while in the South Asian group, there is a very prominent difference: monocultural participants raise much more than bicultural ones. This finding holds despite the discovered gender difference in /æɡ/ raising (females overall raise more than males) because, even though the bicultural South Asian group consists mostly of females, it lags behind in raising.

Figure 26 presents the distribution of the diphthongs based on identity orientation. The top panel shows Canadian Raising plotted by identity and heritage group. To remind the reader, no gender effects were found for any of the vowels. The only statistically significant difference that was found was more back realization of /awT/ by Chinese participants compared to two other groups. Starting with this vowel, it is clear that bicultural Chinese participants may have an influence here, since their /awT/ realization is further back compared to the monocultural group. In terms of raising, both /awT/ and /ayT/ of monocultural Chinese participants are located higher in the vowel space, while the pattern is reversed for South Asians, where for bicultural participants, /ayT/ is slightly higher, and there is hardly any difference in /awT/ raising between these two groupings within South Asian heritage group.

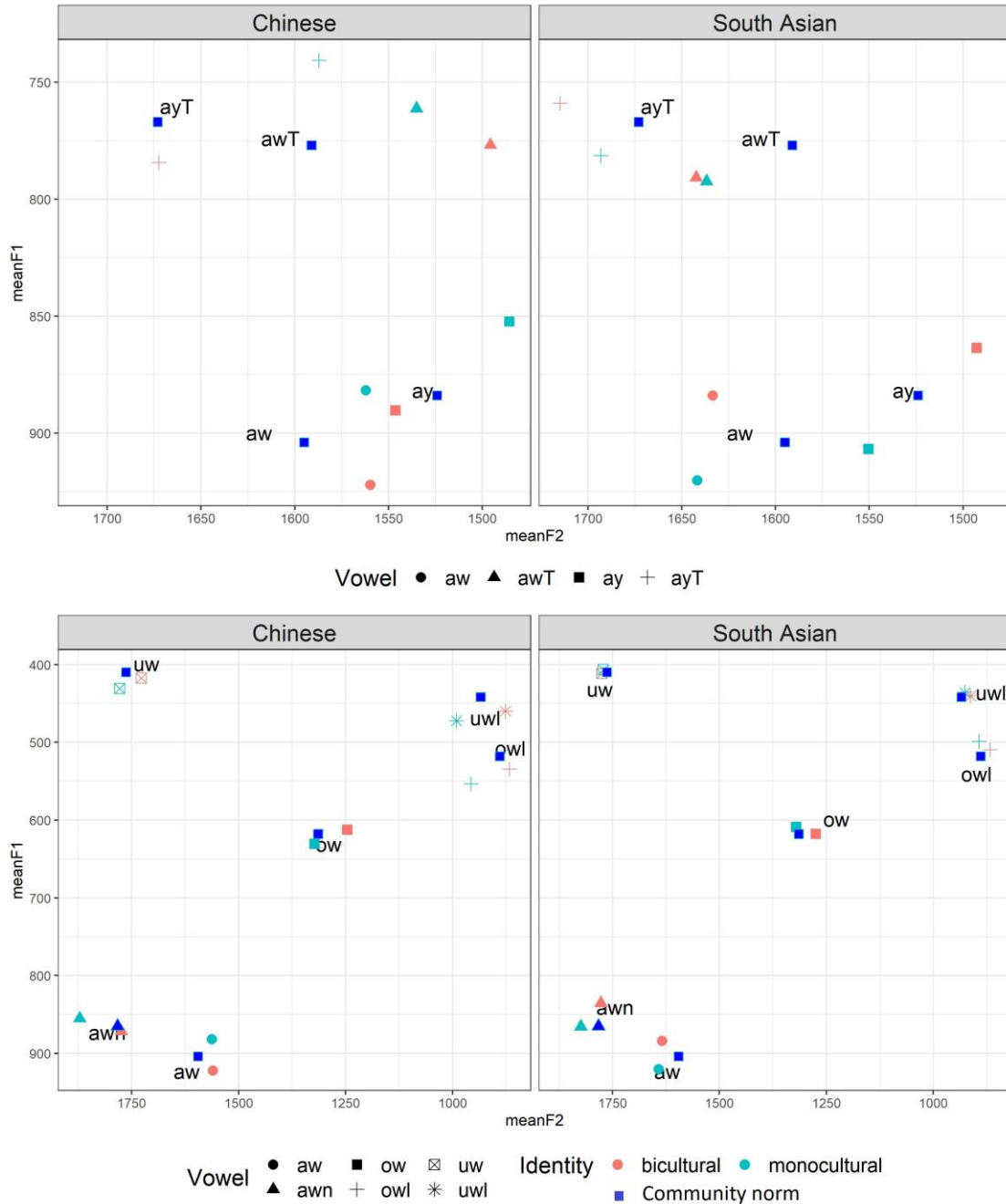


Figure 26 Differences in Canadian Raising (top) and fronting of back vowels (bottom) within ethnic groups

Finally, as for the fronting of the back vowels, first of all, it should be noted that there was a statistically significant gender effect on the F2 of /awn/, /owl/, /owl/, and /owl/ (with males fronting more than females), so for monocultural Chinese who are mostly males and bicultural South Asians who are mostly females, the differences seen in Figure 26 (bottom) for these four sounds should be disregarded. Focusing on the

remaining two vowels, monocultural Chinese front /uw/ more than bicultural Chinese, while there is a very small difference in the same categories in the South Asian group. As for /aw/, there is once again the reversed pattern for mono- and bicultural categories within these two ethnic groups for the vertical dimension. In the previous analysis, South Asians were shown to have the most front realization of /aw/ compared to the two other ethnic groups, but no clear advantage of either mono- or bicultural groups in fronting is seen here for this group, similar to Chinese.

To put all the findings together, starting with the South Asian group, there are some differences in the realization of many vowels by mono- and bicultural participants, but the direction is unclear except for the following: monocultural South Asians clearly lead in the raising of /æɪ/, the change for which this ethnic group is already the leader. Monocultural South Asians also stay more conservative than bicultural ones for /æN/ raising, the change led by British/Mixed Europeans.

Moving on to Chinese heritage participants, monocultural participants have more raised /æN/ and more fronted /uw/ compared to bicultural participants, thus following the lead of British/Mixed Europeans who advance /æN/ and staying true to overall community norm of fronted /uw/ (no heritage effect was discovered). Bicultural Chinese participants have a more back realization of /aw/ vowel compared to monocultural ones, thus creating this more pronounced difference between Chinese overall and two other groups.

The exploration of possible correlations of identity orientation with linguistic production revealed new layers of meaning that would go unnoticed if we would stay at the level of etic categorization. Some explanations of the differences between identity orientation categories within these two ethnic groups are offered in the last chapter of this dissertation.

Chapter 7.

Unity in super-diversity

The final chapter of this dissertation will start with a review of the results from the quantitative (Chapters 3-5) and qualitative (Chapter 6) portions of the study. The discussion section that follows will focus on the emergent themes and theoretical implications of this project. The results of the current study aim to fill in the gap in knowledge regarding participation of non-White speakers in on-going sound changes in Canadian English, as well as provide the most up-to-date description of the vowel system of Vancouver English as a regional variety of Canadian English. The theoretical implications of the findings concern our understanding of language acquisition in multiethnic communities, issues related to delimiting and describing speech community in super-diverse urban centers, as well as the necessity to look into a complex interplay of meanings behind sociolinguistic variables.

Our current knowledge of Vancouver English is based on the sociolinguistic studies conducted with White speakers only (Boberg 2010, Sadler-Brown 2012, Pappas & Jeffrey 2013, Swan 2015, Mellesmoen 2016), which cannot be considered satisfactory anymore. For the last 40 years, the proportion of visible minorities among immigrants to Metro Vancouver have been steadily increasing, thus drastically changing the demographic profile of the area. Official data of Census Canada on ethnic background of Metro Vancouver population show that today, people with British/European heritage comprise about half (49.3%) of the total Metro Vancouver population, while the other half belongs to one of the visible minority groups, with Chinese (20.6%) and South Asians (11.9%) being the largest ones (Statistics Canada 2017). Locally born children of immigrants grow up speaking English as their main (though not the only one) language and consider themselves native speakers of English. However, no studies have so far described their speech patterns. The main question driving this research is: In a multiethnic community, where Whites are not the numeric majority, do they remain a norm-establishing group whose speech patterns are acquired by non-White speakers, or is the variety of English spoken in such a community co-constructed by all its native speakers, regardless of their ethnic background? If the former is true, we can expect to see that White speakers lead the sound changes and non-White speakers lag behind or

abstain from participating in them. Their vowel systems would be different, possibly reflecting language transfer from the heritage languages. If the latter is true, we would expect that all speakers, regardless of their ethnic background, participate in all changes. Though there may be some normal sociolinguistic variation, the vowel systems of all these speakers will be similar.

7.1. Review of the results

7.1.1. Quantitative results

The quantitative part of the project was designed and implemented as a variationist study with a goal to examine if and to what extent young people from three different heritage groups participate in several on-going sound changes in Vancouver English. Word list data were elicited from 45 participants representing 3 ethnic groups (British/Mixed European, Chinese and South Asian) and analyzed instrumentally. The results of the descriptive and inferential statistical analysis showed that, first, the vowel systems of these young people are similar and they all are undoubtedly speakers of modern Canadian English, and second, all three groups participate in the most important changes in Canadian English: the Canadian Shift, Canadian Raising, the fronting of back vowels, and allophonic variation of /æ/ in pre-nasal and pre-velar positions. The differences along the ethnic lines that were discovered concern not the presence or absence of a given feature, but the degree of advancement, similar to findings of some previous studies. These differences may probably be accounted for by the stage of the sound changes (mid-range vs. nearing completion or completed, Labov 1994:63) and their status (local vs. national vs. supranational), as well as by a possible social or indexical meaning of some of these variables. In the next paragraphs, I will summarize the results for each of the sound changes.

The Canadian Shift and Canadian Raising are established features of the national variety of English in Canada that can be described as either nearing completion or completed in Canadian English. Both of them are acquired truthfully by all speakers regardless of their ethnic background. In regard to raising of /awT/ and /ayT/, all three ethnic groups follow an extremely uniform pattern, except for backing of /awT/ by Chinese heritage group. No evidence of possible weakening of Canadian Raising in Vancouver was found, contrary to some previous studies (Chambers & Hardwick 1986,

Sadlier-Brown 2012). Similarly, all speakers participate in the Canadian Shift as defined by the thresholds established by the ANAE (2006), though minor differences between the two non-White groups were found in the horizontal dimension for high front vowels. Regardless of this, the results undoubtedly show the overwhelming conformity to these two sound changes by all study participants.

The raising of /æ/ allophones is an active change in progress that has started in British Columbia relatively recently. Raising in pre-nasal, pre-velar, and pre-velar-nasal environments is well-represented in the current sample of Metro Vancouver speakers; however, some differences along ethnic lines were discovered. These differences align with what is known about the social meaning of this variable based on the U.S. studies: more pre-velar raising in speaker with non-White backgrounds (Becker and Wong 2010, Riebold 2015), and more association of pre-nasal raising with White speech in the U.S. (Gordon 2000, Roeder 2009), as well as its use with “White majority community” in Montreal (Boberg 2004). Additionally, pre-velar raising and fronting of /æ/ has been recently called an emergent iconic feature of the Pacific Northwest region (Swan 2016) which may be related to its specific use by one of the ethnic groups, as will be discussed below.

The fronting of back vowels is a supranational change in progress that has been attested in many dialects of English around the world, though the three vowels and three allophones described under this umbrella term may be at a different stage of advancement. In North America, the fronting of /uw/ and the centralization of /ow/ is a global “continental trend” (Boberg 2008:361), while /aw/ is centralized in many regional U.S. dialects except for the U.S. North. In Canada, /ow/ and /uw/ showed age correlation which suggests this change is progressing, while the fronting of /aw/ showed no age correlation, suggesting it is stable (Boberg 2011). In the current study, speakers from three ethnic groups mostly adhered to the established thresholds for the fronting of back vowels and, most importantly, had the same order of phonological constraints. More fronting of /ow/ and /uwl/ was found in the White group compared to the non-White groups, which aligns with previous findings about the ethnic association of this variable (Thomas 2007, Cogshall & Becker 2009). South Asians were shown to front /aw/ more compared to two other groups, which does not directly follow the trend described previously, where more fronting of /aw/ was associated with White speakers and/or higher social status groups (Hinton et al. 1987, Labov 2001, Fridland 2001). This may be

indirectly related to the self-perception of the South Asian community, as will be discussed later.

Before focusing on the effects of heritage, I would like to say a few things about the vowel systems of these participants. When plotted by ethnic group, the three systems show striking similarities. Taken together, the vowel system is undoubtedly that of Canadian English as defined by Boberg (2010). Among its most prominent features that distinguish it from American English are the low-back merger of /o/ and /oh/, the raising of pre-voiceless allophones of /aw/ and /ay/, the advanced fronting of /aw/ and /uw/ and the centralization of /ow/, as well as the advanced backing and lowering of /i/, /e/ and /æ/. Based on these findings, Vancouver English can be described as a true representation of modern Canadian English. The fact that the data was drawn from participants with different ethnic background proves that all these speakers who were raised in Metro Vancouver are members of its speech community, at least in terms of targets of production (evaluation of the shared norms should definitely be the focus of future work).

To facilitate future discussion, I would like to also summarize the findings by gender and heritage. For the short vowels, statistically significant differences were found between males and females in the F1 of /e/ and /æ/ (females have more lowered realization of these vowels) and in the raising of /æɪ/ and /æŋ/ measured in Cartesian distance (females raise more than males). For the diphthongs, gender is not a significant predictor of Canadian Raising, but it is a significant predictor of fronting of several vowels, with the same tendency across the board: males have fronter realization of /aʊ/, /oʊ/, and /uʊ/, and this difference is statistically significant. Thus, overall, females lead in the lowering of /e/ and /æ/ and raising of /æɪ/ and /æŋ/, while males lead in the fronting of pre-lateral and pre-nasal allophones of the back vowels.

As for heritage, starting once again with the short vowels, Chinese differ from South Asians as they have more retracted high front vowels. For the allophones of /æ/, South Asians lead in /æɪ/ raising, while British lead in /æN/ raising (measured in Cartesian distance). Moving on to the diphthongs, Chinese have the most back realization of /aʊ/, while South Asians have the most fronted realization of /aʊ/. Finally, British/Mixed Europeans front /oʊ/ and /uʊ/ more compared to the other two groups.

After completing this step of analysis with a focus on gender and heritage as explanatory variables, I analyzed the interview data in order to describe the participants from the standpoint of their ethnic orientation. The next section will summarize the findings.

7.1.2. Qualitative results

Previous studies that found a correlation between ethnic orientation and sound change in Chinese Canadians include Hoffman and Walker (2010) and Nagy et al. (2014). Along similar lines, Newlin-Lukowicz (2015) described a correlation of the degree of involvement in the Polish community with the linguistic behaviour in two generations of Poles in New York City, and Wong (2010) showed that indices of social networks and “lifestyle orientation” correlated with the raising of /ɔ/ by Chinese in New York City. In all these studies, in addition to ethnicity assigned by the researcher, the participants described how they felt in regard to their heritage which allowed to place them on a continuum of mainstream/ethnic.

Based on the questionnaires described in the studies cited above, I prepared a set of interview questions to discuss topics pertaining to participants’ knowledge of their heritage language and culture, their families and social networks. These questions were discussed during the interviews. The transcribed interviews were subjected to thematic analysis with an attempt to arrive at a classification similar to previous studies. However, “binning” participants into the three distinct categories (“Canadian,” “hyphenated Canadian” and “ethnic”) turned out to be near-impossible. To begin with, no clear cases of “Chinese” and “South Asian” participants were identified, thus shrinking the classification to two categories only, “Canadian” and “hyphenated Canadian.” Second, each of these terms concealed a variety of explanations and motivations, to the extent that two people who chose the same term could hardly be objectively put in the same category. In particular, “hyphenated Canadian” was a cover term for two distinct sub-categories: some participants described a “blended” identity that contained both of their cultural experiences, while others reported to have two distinct identities, one Canadian and one “ethnic,” that co-existed but did not merge. Moreover, some participants reported that situational context triggered activation of one or the other identity. To resolve the classification issues, Comănaru et al.’s (2018) framework of identity orientation was adopted and the participants were described as preferring either

monocultural or hybrid orientation, most often realized as a hyphenated term, with several gradations.

The analysis identified clear tendencies for identity orientation within each group. Most of the White participants (12/14) chose monocultural orientation (“Canadian”), which is not surprising. More unexpectedly, many of the participants with South Asian heritage (10/17) also preferred monocultural orientation, while many Chinese chose a hybrid identity orientation (9/14). Finally, while most Chinese females chose the hyphenated term to talk about their identity (7/9), in the South Asian group, only half of the females did so (6/12). In both heritage groups, males preferred a monocultural identity as three out of five Chinese chose the term “Canadian” and four out of five South Asian did so, too.

On the basis of the thematic analysis, several factors were identified as potentially influencing the identity orientation in both of these ethnic groups. In particular, knowledge and use of the heritage language and the extent to which parents enforce traditional values on their kids may play a crucial role in this intra-group difference. A number of other potentially important factors for identity formation, such as neighborhoods, schools, and social circles, and their different weight for people in these ethnic groups was described, but no straightforward influence of these circumstances on participants choice of identity orientation was seen. The discovered gender differences in identity orientation remain unexplained as the data interview did not reveal anything specifically related to it. Future research should address the issue of differences in identity orientation between males and females.

As a final step of the analysis, their linguistic production was examined from the standpoint of identity orientation via descriptive analysis of the quantitative results plotted by identity orientation category. While these findings are preliminary and more exploration is needed, one trend that was identified concern the differences in the way participants with mono- and bicultural orientation in the two non-White groups align with the majority community speech norms: monocultural Chinese and monocultural South Asians appear to have different (or even opposite) targets of production for at least one sound change in progress each.

The final section of this dissertation will focus on answering the research questions and offering some possible explanations for the discovered patterns.

7.2. Discussion

The research questions posed in the beginning of this dissertation are:

- Do speakers with different ethnic backgrounds participate in the phenomena of Canadian Shift, Canadian Raising, raising of /æ/ allophones and fronting of back vowels?
- Is there a difference in use depending on the ethnic background of the participants?
- Does their linguistic behaviour depend on the extent of a speaker's affiliation with their heritage community?

The answer to all three of these questions is “yes.” While all these young people are native speakers of English and participate in on-going sound changes, there is variation related to ethnicity (possibly distinguishing these three ethnic groups on a macro level) and identity orientation of the participants (possibly serving to align or misalign the speakers within each ethnic group with the majority community). In what follows, I will elaborate on each of these points, suggest some explanations based on previous research and the current description of the ethnic groups, and derive theoretical implications.

7.2.1. The acquisition of community norms by ethnic groups

The first major finding of the study is that speakers with different ethnic backgrounds who grew up in Metro Vancouver from birth or early age acquire the local variety of English. A number of factors contributes to this, ranging from societal to residential. First, Metro Vancouver features a well-established highly multiethnic community where none of the ethnic groups is dominant in terms of numerical advantage or presence in any of the societal domains. This type of community is supported by the official state ideology that aims to preserve and promote multilingualism and multiculturalism of its population (Canadian Multiculturalism Act 1988). As a result, numerous ethnic groups residing in Metro Vancouver can choose to either maintain their ethnic identity or assimilate to the majority community and many of

them choose *integration* instead of assimilation (Berry 1984, Bourhis et al. 1997), where both heritage and host cultures co-exist in the community and in the individual. As a consequence, knowledge and use of English and heritage languages do not cancel each other out since each has appropriate domains. Crucially, because at least half of the population belongs to visible minorities, being non-White is “unmarked.” All of the above may result in a reduced need for ethnic markers or ethnolects for the non-White groups.

The next crucial factor is the absence of residential segregation typical of many urban centers in the U.S., as well as some in Canada (Boberg (2004) described ethnophonetic variation in Montreal English resulting from social and geographic segregation of ethnic groups). In Metro Vancouver, while particular ethnic groups do prefer some municipalities (see Table 5 in Chapter 1), overall British/Mixed Europeans, Chinese and South Asians are not insulated but integrated. There are frequent contacts across ethnic lines in different domains; what contributes to that is the fact that a large proportion of front-line workers are visible minorities, which became especially clear during 2020 pandemic lockdown (Statistics Canada 2020). Another proof of the extensive inter-ethnic contacts is the increasing number of mixed unions. In 2011, 9.6% of all couples reported to have a partner from a different ethnic group, and this number continues to grow (Statistics Canada 2014a).⁹

So, what can we suggest about language acquisition in such a community? Labov discusses two different routes of language learning in a speech community: transmission from a parent to a child, nearly free of errors, and diffusion among the adults, which is less accurate. In situations of residential and social segregation, it is the latter that takes precedence, which explains differences in the speech of ethnic minorities described in a number of studies, e.g., African Americans in Philadelphia in Labov 2014, Italians and Jews in Montreal in Boberg 2004, multiethnic youth in Gothenburg (Sweden) in Gross et al. 2016, etc. At the same time, in the absence of

⁹ Two personal anecdotes can confirm this and also serve as an extension. First, I am Russian and my partner is Filipino. I have been exposed to Filipino language and culture not just through him, but through his extended family. He has many relatives in Metro Vancouver, and pre-pandemic, regular large family gatherings were a must. The same can be said about many of my friends and acquaintances in inter-racial unions whose families mingle across ethnic borders a lot, which adds to the regular inter-ethnic contacts. Second, my 5-year old son started Kindergarten this year in a public school in South Vancouver. Out of 20 kids who attend it more or less regularly (due to pandemic conditions), at least half have parents from different ethnic groups (i.e., interethnic couples) who we meet regularly at drop offs and pick ups.

such segregation, like in Metro Vancouver, diffusion is unlikely to be the main mechanism of language acquisition in the community.

What about transmission from parents to children? If it were the main mechanism of language acquisition locally, we would expect to see large differences in the vowel systems of participants belonging to non-White heritage groups since their parents have very different degree of English knowledge and proficiency. Some South Asian parents are fluent speakers of accented, non-native variety English, and most Chinese parents do not speak English at all or only have “basic” knowledge of English, as reported by their kids. The findings of the study suggest otherwise, as the differences between the two non-White groups are minimal and concern only few sounds, while their vowel systems overall are very similar to each other and to that of British/Mixed Europeans. We have to reject transmission in the family as the main mechanism of language acquisition, similarly to Labov’s conclusion about New York speech community that the “unbroken sequence does not imply that all transmission is within the nuclear family” (2007:380-1). The current findings confirm this idea. In a diverse community without residential segregation, when immigrants do not speak the local variety of English natively, their children probably acquire English from peers and through participation in mainstream community activities (schools, social groupings like clubs and bands, etc.).

Community acquisition raises new questions. First, is it the “White” speech patterns that non-White speakers acquire? If this were the case, the degree of contact with and exposure to White speakers would probably lead to differences in linguistic production (cf. Ash and Myhill’s (1986) work on linguistic correlates of inter-ethnic contact). Instead, despite diversity of social circles, schools and neighborhoods, we see uniformity of the speech patterns in these participants. Therefore, in a multicultural and multiethnic speech community like Metro Vancouver, it is probably less appropriate to suggest the presence of White speech norms and more appropriate to talk about shared community norms, as suggested by Meyerhoff and Stanford (2015).

Finally, language acquisition in a multiethnic community has been shown to result in two different outcomes: a) development of multiethnolects due to group second language acquisition (Kotsinas 2001, Quist 2008, Svendsen & Røyneland 2008, Cheshire et al. 2011), and b) maintenance of non-native varieties of English in monoethnic close-knit communities (Sharma 2011). Fox and Sharma (2018) discuss

both of these outcomes in London, the city that surpasses Metro Vancouver in terms of diversity and was dubbed “super-diverse” in a seminal publication by Vertovec (2007). There are two boroughs of London which have very large numbers of South Asians, but only in one of them, the processes leading to the formation of MLE (Multicultural London English) are attested, while in the other, British Asian English remains the dominant variety. Fox and Sharma (2018) explain the different outcomes by making reference to the crucial differences in these two communities which concern the extent of diversity of population and socioeconomic class. The first neighborhood is highly diverse (though with one dominant ethnic group), while the second one is highly monoethnic. In the first neighborhood, poor working-class recent newcomers from many different countries live in public housing estates, while the second community is lower-middle class, where several generations of British Asians buy houses to live in close proximity to each other, thus ensuring maintenance of close-knit ties within this community. Young urban Bangladeshis from the first neighborhood are described to lead language changes that lose affiliation with ethnicity and become quickly adopted by multicultural and White youth, the process that led to the formation of Multicultural London English in similar ethnic enclaves. At the same time, in the second community, British Asian English with plenty of Punjabi features remains a dominant variety acquired by second generation, as well.

Given the highly multiethnic and multicultural profile of Metro Vancouver, as well as presence of several sizable ethnic communities (South Asians, Chinese, Filipino, Koreans, Vietnamese, and so on), can we expect one or both of these outcomes here? I suggest that it is unlikely because, first, historically Metro Vancouver is not separated into working-class and middle-class neighborhoods like London with its Inner and Outer areas. Second, immigration policy in Canada is different from the U.K., and the majority of newcomers arrive here either for a specific job (e.g., within Federal skilled worker immigration program) or as a dependent. As a result, Metro Vancouver does not have such a large number of low working-class or unemployed immigrants who would settle in underprivileged areas, which is one of the necessary conditions for the emergence of a multiethnolect. At the same time, the absence of residential segregation described above, a lack of non-native model of English for most of Chinese and a departure from heritage for most of South Asians make the possibility of prolonged maintenance of non-native varieties of English questionable, as well.

The findings of this study suggest that multiethnic community can be a favorable environment for the acquisition of a native variety of a language, given certain historical, political, and socioeconomic conditions. A major theoretical implication that this part of study raises is our understanding of the mechanisms of language acquisition in a diverse community, including presence and absence of native and non-native models, influence of peers, schools and local communities.

7.2.2. From ethnicity to identity orientation

The three ethnic groups adhere to almost all thresholds established in the previous studies for the Canadian Shift, Canadian Raising, fronting of back vowels and raising of the allophones of /æ/, which served as a ground to state that all these speakers are native speakers of Canadian and Vancouver English. Despite this overt unity, some differences in vowel production were discovered to be correlated with heritage, and some also showed interesting connections with identity orientation. The differentiation does not have a clear direction, that is, none of the groups is consistently different from the other two, rather, each group varies from one or both others in two variables.

To begin, the two changes that are most advanced or even near completion in Vancouver English, the Canadian Shift and Canadian Raising, showed the least amount of heritage effect, and where it was evident, it was in the dimension that is secondary to the inherent nature of these changes. For the Canadian Shift that concerns the diagonal downward movement of the vowels (both in F1 and F2), Chinese males produced more retracted /i/ and /e/ (difference in F2 only) compared to South Asians males, but not compared to British/Mixed Europeans. The horizontal movement of the high front vowels is not associated with any social characteristics, to my knowledge, so I cannot offer any reasonable explanation for this finding.

As for Canadian Raising, no heritage effect on the F1 dimension was found, but raised /awT/ and unraised /aw/ showed differences in F2 that had a statistically significant effect of the ethnic group. Though the fronting of /aw/ is discussed in the chapter on back vowel fronting, together with /ow/ and /uw/, it is more appropriate to put it here since the fronting of /aw/ and /awT/ has been extensively discussed in the Canadian sociolinguistic literature as a phenomenon separate from raising (though

interacting with it) (Chambers 1973, 2006, 2012, Chambers & Hardwick 1986, Hung, Davidson & Chambers 1993, Sadlier-Brown 2012, etc.). Early studies suggested a connection of the /aw/-fronting with American speech, so that young Canadians were hypothesized to “Americanize” by adopting the more fronted variant of this diphthong (Chambers 1981, Chambers & Hardwick 1986).

More recently, the fronting of raised /awT/ was shown to be a regional marker in Canada, with /awT/ in British Columbia and the Prairies more backed than in other provinces (Boberg 2008:140). As for the fronting of the unraised /aw/, Chambers (2012) discusses it as an example of a variable with consistent sociolinguistic correlates across Canada, but anticipates that “the homogeneity of (aw)-Fronting will eventually be disrupted by the development of regional markers” (471). Such markers would possibly start as ethnic markers but then evolve into community markers, according to the author. Current findings suggest that we may witness the beginning of this process in Vancouver: South Asians fronted unraised /aw/ more than both British/Mixed Europeans and Chinese, and Chinese backed raised /awT/ more compared to both British/Mixed Europeans and South Asians. Additionally, while no identity differentiation was found for /aw/, some interesting dynamics exists for /awT/, for which bicultural Chinese prefer the backing of this diphthong, while monocultural Chinese stay closer to the group mean, i.e., in a more central position. This should be explored more in a future study, with a focus on production and perception, including both recognition of the ethnic group by the listeners and social evaluation of the backed or fronted variants.

Regarding other diphthongs, out of all back vowels and allophones, only /ow/ and /uwl/ showed a statistically significant heritage effect, both in the same direction. British/Mixed Europeans have a much fronter realization of these two vowels than Chinese and South Asians. Additionally, /uwl/ showed some identity orientation effect: monocultural Chinese had a more fronted realization of this diphthong than bicultural ones. The existing description of ethnic correlates and indexical meanings of back vowels is based on the U.S. and U.K. work and is closely tied to particular communities, reflecting their dynamics in terms of gender roles, social classes, and ethnic barriers, which is why taking these findings and applying them to a local community may not be very appropriate. Still, there are some consistent findings across communities, in particular, the association of fronted /ow/ with European American speech (Thomas 2007:463), middle-class norms (Labov 2001:187), and higher social status groups

and/or White speakers in the U.S. (Thomas 1989, Coggshall & Becker 2009) and U.K. (Baranowski 2017). The fronted variant of /uw/ has similarly been described to be connected to higher status groups or social classes; in the U.S., it also has associations with the “Valley girl” and “Surfer dude” personae defined by Eckert (2018:171) as “casual, fun-loving, affluent, free, and white.” As for the fronting of pre-lateral /uw/, the environment that usually inhibits it, it has been described for European Americans as an indication of advancement of /uw/ fronting overall (Fridland & Bartlett 2006).

In the lack of local studies of social and indexical meanings of the fronted back vowels, the only thing we can do is to try to “transplant” the existing descriptions from other places to the Metro Vancouver community. Overall, there is definitely alignment with other North American studies which proves the global nature of the fronting of back vowels and its social correlates. The fronting of /ow/ in Metro Vancouver is indeed led by British/Mixed Europeans which confirms its association with being “White and mainstream.” The same group also has the most advanced values of /uwl/ fronting, which is potentially related to the advancement of fronting of /uw/, as described above. While all three ethnic groups in the current study front /uw/ similarly, British/Mixed Europeans may have started this change in progress and continue being the leader, based on their advanced /uwl/ position, which again aligns with previous findings.

Two recent studies of Asian Americans found that Chinese heritage speakers readily participate in /uw/ fronting in New York and San Francisco (Hall-Lew 2009, Wong 2014). In the current study, no heritage effect was found for /uw/ fronting, which may indicate that this variant is widely accepted by the community and potentially has no ethnic correlates. However, within the Chinese heritage group, monocultural Chinese front /uw/ more than bicultural Chinese, thus aligning more with the community norm.

The last point to discuss is pre-velar and pre-nasal raising that showed both the statistically significant effect of heritage, and a small identity orientation trend. Pre-nasal raising has been associated in different communities with “White” speech (Gordon 2000, Roeder 2009), or, alternatively, “White majority community” (Boberg 2004, based on Montreal study). In the current study, British/Mixed European differ from the two non-White groups in the degree of raising of this allophone, implying possible “White speech” associations, while both non-White groups have less raising of /æN/. Looking at identity orientation graphs (Figure 25 above), we also see that there is a difference between

monocultural Chinese who align once again with British/Mixed European in this respect and bicultural Chinese whose value for raised /æN/ is much lower. The tendency is reversed with the South Asian group: monocultural South Asians do not align with British/Mixed Europeans, while bicultural ones do so.

Finally, pre-velar raising has been shown in some communities to be exhibited by speakers with non-White backgrounds (Becker & Wong 2010, Riebold 2015), however, it also may have an emergent meaning as a local identity marker (Swan 2016). Both of these interpretations may be applicable to the current study findings. On the one hand, South Asians showed significantly more /æɡ/ raising than British/Mixed Europeans, which may be interpreted as an ethnic marker, while on the other hand, monocultural South Asians (i.e., those who labeled themselves “Canadian”) raise /æɡ/ much more than bicultural ones. This counterintuitive situation may be explained by a complex interplay between ethnic identity and place identity (cf. Becker 2009, Wong 2014, Nycz 2018).

Why would Chinese, especially those with monocultural orientation, show more alignment with British/Mixed Europeans compared to South Asians, and why would monocultural South Asians distance themselves from the White group? Looking into the history and current standing of these two ethnic groups in Metro Vancouver may offer some insights. In general, Chinese community have a longer and possibly “more visible” local presence compared to South Asian one. Sizable Chinese populations accompanied by businesses, restaurants and churches are found in many municipalities of Metro Vancouver, while this is less true for South Asians. The downtown Vancouver area features Chinatown with historical buildings, Chinese Cultural Center of Greater Vancouver, Classical Chinese garden and a number of other landmarks, while South Asian presence in downtown is considerably less prominent. A rather small Punjabi business area used to exist in South Vancouver, but is being pushed away by gentrification to Surrey where recently new “Little India” was established. Despite a variety of ethnic groups populating Surrey, in public opinion, it still has a very close association with South Asians (Sumartojo 2012), who in that sense are much more compartmentalized compared to Chinese who reside and thrive in Richmond, Coquitlam, and many areas of Vancouver proper (Strathcona, Victoria and 41st, Metrotown, etc.). Interestingly, despite being more compartmentalized in terms of geographical spread, there is a greater degree of heterogeneity in South Asians who come from a great

number of countries and represent a lot of different languages and religions. Chinese are relatively more homogenous in terms of language, culture and religion, even given a more recent opposition of Mainland China and Hong Kong. Overall, this may mean more coherence within Chinese community compared to the South Asian one.

Despite these differences, these two ethnic groups may experience similar prejudice from other Vancouverites. Overall, while in Canada and Metro Vancouver, there is less overt racism (though there has been an increase of racial tension during the 2020 pandemic), some of the circulating opinions and public discussions clearly conceal racialized issues. For example, studies of “monster houses” show that housing has been used as “a medium and metaphor for the expression of concern about neighborhood level ethnic change” (Ray et al. 1997:83). “Monster houses” are huge, multi-storeyed buildings built to the maximum capacity allowed by cities’ by-laws. The term “monster houses” has been racialized and refers specifically to homes built by rich South Asians and Chinese. Such buildings started appearing in 1990-s in several areas of Metro Vancouver, most notably Richmond and Surrey, and continue to be the center of heated debates as such houses sometimes replace historical homes and farmland and overall change the neighborhood landscape and feel.

The wealth of new Asian immigrants has been the focus of public resentment, as well (Sumartojo 2012), and the newcomers are sometimes believed to destabilize the community. Chinese investors are often blamed for the housing crisis in Metro Vancouver that leads to many families leaving for suburbs or even other provinces (McCarthy 2011), and South Asian gangs are deemed to be responsible for crime and violence that spread from Surrey to neighboring municipalities. While the existence of “super-rich Asians” and South Asian gang activity is real, clearly not every Asian immigrant belongs to either one of these categories. So, how do working- or middle-class Asians distance themselves from these stereotypes? Probably by overt dissociation with the new immigrants or stereotypical immigrant personae, which was voiced during the interviews by several participants, as well as by aligning in some way with the majority community. The differences in this alignment may be related to their history and current standing.

Chinese, as a more local community in a sense of having a longer history, more homogeneity within the group, and more integration on different levels into the majority

community, align with this community as represented by British/Mixed Europeans in terms of targets of production (cf. Kelly cited above who called herself “technically Canadian, well not technically Canadian, but I’m technically White”). Monocultural Chinese, i.e. who preferred the term “Canadian,” naturally exhibit more alignment, while bicultural Chinese show less alignment and some distinctions (this group led /awT/ backing, as discussed above).

At the same time, South Asians, being more recent newcomers, more concentrated in one municipality, but also more heterogeneous as a group, may retain more distinctions from the majority community. Adherence of many families to cultural values, as discussed at length above, is one proof of that. Being “Canadian” for monocultural South Asians may mean less connection to the majority group, in contrast to the Chinese. In some cases, it just means being less traditional and more Westernized compared to their parents, as the interview data showed. “Canadianness” is internally constructed as a set of actions and characteristics rather than taken for granted and assimilated to (cf. Zena, South Asian heritage: “We do all these Canadian things- we drink maple syrup!”). For this group, because of their more recent history locally, the claim to be local may be especially urgent, which explains their extreme /æɡ/ raising, an emergent marker of the local identity (Swan 2016). Monocultural South Asians in particular were shown to assert the local identity rather than the ethnic one. These findings align with previous work in the U.S. on so-called “place identity” where several groups of immigrants showed intra-group differences in linguistic production depending not only on their extent of affiliation with heritage culture, but also on their claim to “localness and authenticity” (Becker 2014:146; Schilling-Estes 2004; see Newlin-Łukowicz 2015, 2016; Becker 2009, 2014; Wong 2014). In this light, the fact that South Asians lead in /aw/ fronting that has been associated both with White speakers and with higher social status groups in other locations (Hinton et al. 1987, Labov 2001, Fridland 2001) may mean that this variable has lost its connection with “Whiteness” in this location. Future studies may shed more light on the indexical meaning of /aw/-fronting.

To conclude, the findings of the study suggest that variation may serve to align or distance the speakers within each ethnic group with the majority community in a particular aspect, and sometimes this process is simultaneous. At the same time, the fact that the speakers with stronger and weaker affiliation to their heritage all still

participate in the on-going changes in Vancouver English tells us that being a part of the speech community does not mean giving up on one's heritage, and neither does maintaining a strong ethnic identity mean not following the community norms. In other words, super-diversity can exist in unity, as was put in the title of this chapter.

7.2.3. Future directions

Multiethnic urban centers like Metro Vancouver remain relatively undescribed in sociolinguistic literature both because they emerged as super-diverse communities quite recently and there may be both a lack of appropriate methodology for their description, and a change in thinking that needs to happen. In this section, I will outline a few directions for future research, though it will only scratch the surface of this huge new field.

The findings of the current study demonstrate that speakers with different ethnic backgrounds have similar patterns of sound change and overall vowel systems. The next obvious question to answer is if other grammatical systems of these speakers are aligned, as well, especially in light of a recent Vancouver study on perception that showed good degree of accuracy for recognition of one's own ethnic group, as well as White voices (Wong & Babel 2017). Though the majority of work on ethnolinguistic variation is focused on vowels, several studies did show that variability along ethnic lines can exist in the variants of consonants (Mendoza-Denton 2008, Schlee et al. 2011, Drummond 2012), in morphosyntax (Cheshire & Fox 2009, Hazen 2000) and prosody (Fought & Fought 2002). Comparing the rates of use and constraints on use of variables that have been shown to have social correlates, such as *t/d*-deletion, *-ing*-ending, definite and indefinite articles, quotative *like*, intensifiers *so* and *really*, raising terminal intonation, etc. in British/Mixed Europeans, Chinese and South Asians is an obvious direction of the future research.

Bringing in speakers from other large ethnic groups in Metro Vancouver, as well as mixed-race individuals, is another natural extension of this project. Multiracial individuals have been shown in a few studies to have a unique way to position themselves in regard to both the majority community, and their heritage group(s) (Bucholtz 1995, Fought 2010, Holliday 2019). Given the increasing number on inter-ethnic unions in Canada, the number of multiracial individuals will be growing, too, with

unclear consequences for language change. This is probably one of the least explored areas in Canadian sociolinguistics that needs urgent attention.

The mechanisms of language acquisition in a diverse community discussed earlier can be clarified by ethnographic studies in local communities and families. Looking into friendship groups and school dynamics have been very illuminating for discovering language variation and change in other locations (cite), so conducting such studies in different municipalities of Metro Vancouver, with researchers coming from the same communities, would be very valuable. As for the families, comparing linguistic production of 1st and 2nd generation immigrants with the same heritage, as well as focusing on older and younger siblings in the same household, can provide explanation for language acquisition mechanism and possible transfer effect of the heritage languages (Sharma 2011, Wong 2014, Newlin-Łukowicz 2015).

The repertoire approach employed by some sociolinguists in the last decades have shown nuances of social meanings behind linguistic variation (Becker 2014, Wong 2014, Fox & Sharma 2018). Examining repertoires of 2nd generation Canadians from different ethnic groups would allow to flash out differences related of identity orientation outlined above.

Finally, indexical meaning of different variables, in particular, allophones of /æ/, retracted /aʷT/ and fronted /aʷ/ needs to be examined, for example, in a perception study that would establish a link between variants of a variable and their social meaning (D'Onofrio 2015), including emergent meaning of locality and authenticity and its complex interplay with ethnicity.

Exploring these and other topics will fill in the widening gap in sociolinguistic knowledge. Despite super-diversity becoming the new normal, we still know close to nothing about language variation and change in super-diverse urban centers. Traditional definition of speech community formulated as a result of a few specific studies may have lost its wide applicability because our societies changed so much in the last 50 years (Patrick 2002:584). Modern urban centers present new challenges to defining and studying speech community because they are inherently heterogeneous, rarely have distinct ethnic boundaries within them, and are exceedingly multilingual. Sociolinguists today face the task of finding the way to treat such cities as speech communities, as well

as of sampling their informants from highly mixed ethnic populations represented by several generations of immigrants in addition to those who have lived here longer. For sociolinguistic theory, super-diverse cities are an exciting testing ground for the notion of the speech community and its viability, as well as for a number of other foundational concepts of sociolinguistics.

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Appendix A.

Study materials

Word list (from Boberg 2008)

Instructions: *You will be presented with some common English words which you will have to read aloud. You must speak with your normal voice and at a normal speaking rate.*

bar	cow	tooth	girl	sad
sit	pair	seed	did	sore
file	proud	stayed	bang	cook
student	tide	carry	new	do
collar	star	step	state	spirit
stare	sod	mafia	code	tight
pajamas	Pakistani	boots	dull	turn
lasagna	lager	writer	cool	ferry
strong	charity	pour	food	set
tally	rider	dark	stone	deck
sort	stamp	llama	house	coat
too	spa	worry	hanger	cup
sell	saw	Slavic	gag	veto
sat	horrible	dead	Iraq	core
fork	sale	side	singer	seen
start	see	relative	tan	tool
still	coin	town	whale	curry
sterile	Colorado	foot	dirt	pasta
sorry	steel	father	tour	shout
palm	tag	soon	plaza	spice
down	whine	due	say	panorama
drama	stir	barrel	full	façade
south	soprano	sign	tie	taco
bother	which	foil	ham	berry
doubt	tire	sawed	car	sock
void	stood	top	care	Picasso
fool	band	Don	tube	harp
caller	tin	sun	sure	avocado
caught	poor	gown	cold	short
bad	bird	loud	stole	toy
steer	toe	sight	sick	tip
dawn	sack	foul	sanity	ten
sour	talk	borrow	fight	boat
bold	lava	stain	tap	hurry
go	cut	bag	macho	seat
monitor	cot	duck	stud	calm

Appendix B.

Mean formant values and standard deviations for vowels and allophones for three ethnic groups

	British/Mixed European				Chinese				South Asian			
Vowel	F1	SD	F2	SD	F1	SD	F2	SD	F1	SD	F2	SD
ʌ	808	92	1509	139	786	88	1491	177	801	78	1514	154
æ	915	81	1718	120	931	92	1747	133	926	66	1743	105
æɡ	779	72	2005	160	729	107	2050	142	715	88	2173	177
æN	775	108	2082	196	819	133	1940	152	834	88	1965	169
æng	750	88	2192	201	690	71	2310	165	688	61	2303	147
ær	643	106	1940	133	607	59	1922	134	599	53	1969	153
ah	817	82	1234	99	794	90	1203	119	809	90	1212	106
ahr	758	59	1338	158	765	53	1314	135	755	52	1310	159
ʌr	527	67	1351	113	537	44	1372	118	530	50	1359	145
aw	897	86	1579	124	911	83	1561	125	906	63	1639	146
awn	879	103	1739	137	867	124	1803	140	853	71	1805	166
awT	767	77	1619	131	773	66	1507	135	792	64	1640	166
ay	886	88	1519	90	880	76	1529	111	890	74	1527	147
ayT	759	52	1666	138	772	60	1649	122	773	61	1703	185
e	744	89	1921	164	748	80	1871	157	749	93	1968	203
er	582	57	2164	171	575	48	2143	119	540	40	2265	137
ey	544	76	2368	215	539	65	2353	179	519	73	2483	204
eyr	594	61	2204	137	599	53	2152	124	560	59	2319	125
i	552	78	2160	176	547	63	2128	181	543	75	2224	166
ɜ	558	67	1609	158	581	53	1648	157	564	52	1665	189
iy	391	43	2662	208	419	51	2647	229	401	51	2759	206
o	797	67	1211	104	804	74	1228	87	808	73	1228	111
oh	807	67	1227	119	801	79	1209	109	794	62	1193	106
ohr	536	46	958	127	555	39	977	122	534	42	945	143
or	582	46	1016	89	563	51	949	98	565	62	988	104
ow	627	70	1377	130	618	54	1269	141	613	70	1302	134
owl	514	55	895	87	540	43	893	90	504	46	883	76
owr	484	47	880	75	517	33	858	75	497	43	828	102
oy	562	89	950	91	587	79	948	128	552	88	916	144
u	593	59	1414	264	600	56	1382	290	599	60	1396	252
uw	403	43	1775	286	422	44	1743	261	409	40	1773	336
uwl	428	38	979	93	464	44	910	99	438	41	921	126
uwr	442	40	999	167	492	47	917	127	452	52	963	153