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A Sociophonetic Study of the Northern Cities Shift in Southwest Michigan

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A SOCIOPHONETIC STUDY OF THE NORTHERN CITIES SHIFT IN SOUTHWEST MICHIGAN

by

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A Thesis
Submitted in Partial Fulfillment of the Requirements for the
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THESIS APPROVAL

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This study was designed to measure the perception of Southwest Michigan residents' perception of the Northern Cities Shift, and compare it to the perceptions of Southeast Michigan residents. Participants, recruited from the Grand Rapids and Kalamazoo areas, were asked to complete a dialect boundary map of the United States in order to discern perceptions of American English dialects and accents and determine the dialect or accent that they most associate with the state of Michigan. Participants were also asked to listen to and judge the personality traits of seven different North American speakers. The results of this study indicate that Southwest Michigan residents may subconsciously be able to detect the NCS in speech, though they were mostly unable to correctly identify the NCS as a characteristic of Michigan speech. Further research with a larger pool of participants could provide more accurate measurements as to the perception of Michigan residents towards the Northern Cities Shift.

Keywords: Northern Cities Shift, Perception Studies, Sociophonetics, Michigan

DEDICATION

This work is dedicated to my parents, John and Donna, and my sister, Samantha, who gave me their constant support for this project and without whom I would not have advanced this far in my academic career.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

The most interesting thing about language is that it is never stagnant. It is in a constant state of flux, always adapting to the times. New words develop, become well-known and highly used, and gain a permanent status in the language. Words like *bromance*, *tweet*, *e-reader* and phrases like *man cave*, *bucket list* and *brain cramp* can all be found in English language dictionaries due to popular culture and advances in technology, while other once widely-used words have become near obsolete. In terms of phonology and phonetics, languages also change all the time. Sounds and pronunciation of words in any modern language are not pronounced the same as they were even just one hundred years ago.

English has undergone several sound system changes over the years. As the English explored and colonized many parts of the world, they also spread their language, and now English is one of the most widely spoken first (and second) languages in the world. Differences in grammar and pronunciation are found in every region where English is spoken, and it is continuing to undergo sound changes in every country in which it is spoken. In the United States, several sound changes are currently taking place, but one that has received a considerable amount of attention is the Northern Cities Shift.

Several studies have been performed to measure the range of locations affected by the Northern Cities Shift (NCS), and many of these production studies are discussed in Chapter 2. However, the focus of this study is not on production of the vowels affected by the NCS; rather, it is on the perception of these sounds.

Often referred to as 'folk linguistics' or 'sociophonetic' studies, more and more sociolinguists are beginning to recognize how important perception studies are to the field. The

field of sociophonetics is growing as language perception studies can offer clues and insight into why languages change or why certain dialects of a language appear to be more prestigious than others.

This study is inspired by sociophonetic studies done in and around Michigan related to the Northern Cities Shift, namely studies conducted by Dennis R. Preston (1986) and William Labov (2010), which are explained in detail in the following chapter. The purpose of this study is to compare the results of these studies, which involve the perceptions of the Northern Cities Shift by Detroit residents, with the perceptions of residents located on the other side of the state of Michigan. Thus, the study attempts to answer the question: 'How do the perceptions of the Northern Cities Shift of residents of Southeast Michigan compare to the perceptions of residents of Southwest Michigan?'

CHAPTER 2

LITERATURE REVIEW

This chapter will discuss the discovery and development of the Northern Cities Shift, and will examine the areas that are most affected by it by discussing various production studies that have been performed in different regions. This chapter will also provide the background of various language attitude and perception studies related to the Northern Cities Shift, predominately focusing on the state of Michigan and the city of Chicago in Illinois.

2.1. NORTHERN CITIES SHIFT. The Northern Cities Vowel Shift (NCVS), also commonly called the Northern Cities Chain Shift (NCCS) or simply the Northern Cities Shift (NCS) as it will be called hereafter, refers to the shift in pronunciation of English vowels by speakers in urban areas (as well as some rural areas) ranging from upper New York to Wisconsin and even into St. Louis, Missouri. Studies regarding the NCS have been conducted in cities such as Rochester and Buffalo, NY, Detroit, MI, Cleveland, OH, Chicago, IL, and Milwaukee, WI. According to Labov et al. (2006), the shift seems to be occurring only in the speech of Americans of European descent, and, despite the proximity, does not seem to have manifested itself in Canada. The shift involves the six short vowels of English, namely [æ], [ɑ], [ɔ], [ɛ], [ʌ], and [ɪ]. Figure 1.1 below outlines the shift, and Figure 1.2 gives example words that are affected by the shift. There appears to be some disagreement as to the order in which the vowels shifted (see Eckert 1988, 1989; Gordon 2001; Labov et al 1972; Labov 2010), but most scholars agree that the first vowel to shift was the low front lax vowel [æ].

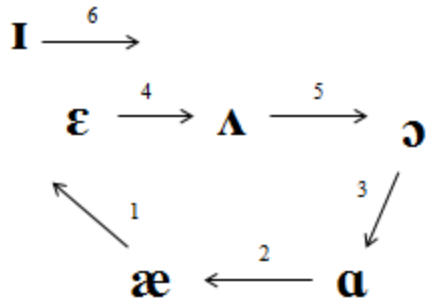

Figure 2.1. Northern Cities Shift Vowels. Adapted from Labov et al. 2006 and Labov 2010.

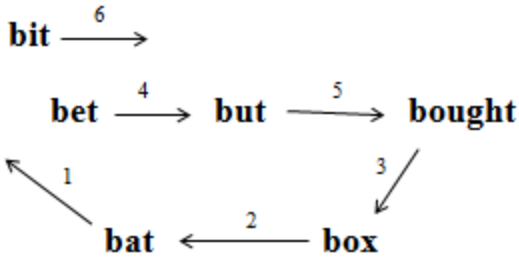

Figure 2.2. Example words with NCS Vowels

The NCS is known as a 'chain shift' because it involves the shifting of more than one vowel, indicating that, as one vowel moves, another vowel also moves to fill the previously occupied area. This motion continues until all unoccupied spaces in the vowel inventory have been filled. Gordon (2001:7) defines a chain shift as '…a series of two or more related sound changes, the end result of which is a rearrangement of the phonetic realizations of the phonemes involved without the loss or gain of any phonemic contrast'. The subject of chain shifting has been an object of debate for some time now, as many linguists create a distinction between 'push' chain shifts and 'pull' chain shifts. It appears as if the NCS is a mixture of push and pull shifts; steps one through three indicate a pull shift, while steps four, five, and possible six indicate a push shift.

Though many sound changes occur in languages found all around the world, the NCS is a particularly interesting sound change due to the sounds that are being affected. Sound changes have been occurring in English for centuries, but, interestingly, the short vowels in English have remained relatively stable for the past 1000 years (Labov 2010:112**)** Thus, the NCS is rather unique as it one of the first English language sound changes to affect sounds that have remained nearly the same for a millennium. Despite this, there appear to be rather large gaps in the research that has been conducted involving the NCS. Later sections of this literature review will

focus on some production as well as perception studies that have been performed in an effort to fill some of these gaps in NCS research.

2.1.1 DISCOVERY AND DEVELOPMENT OF THE NCS. As with most sound changes, many linguists are not entirely sure how or why the NCS first began to occur in speech. Some linguists believe that the sounds began to change as a result of the multicultural and multiethnic workforce used to build the Erie Canal in the late 1800s (Labov 2012). It is difficult to pinpoint the exact time period and reason that sounds begin to change, but linguists agree that sound change tends to occur when groups of people from various locations come together in a tight knit space. This allows for multiple, diverse linguistic features to come into heavy contact with one another, influencing and perhaps changing each other.

The Northern Cites Shift was first observed and documented by linguist Ralph Fasold in 1969 when he wrote (but did not publish) a paper containing evidence of a shift in the pronunciations of /æ/, /ɑ/, and /ɔ/ in the previously described regions (Gordon 2001:13). It was not until 1972 when William Labov, Malcah Yaeger, and Richard Steiner published their survey titled *A Quantitative Study of Sound Change in Progress* that a more detailed analysis of NCS emerged. Using empirical data obtained through interviews with participants in Detroit (taken from Shuy, Wolfram, and Riley's 1968 study), Buffalo, NY and its surrounding areas, and Chicago, Labov, Yaeger, and Steiner gave the first documented evidence of a sound change in progress occurring in the region later known as the Inland North Region. Though the focus of Labov et al's 1972 study was not specifically on the vowel shift that would later be termed the Northern Cities Shift (instead the focus of the study appeared to be on the theory of sound change itself), it nevertheless gave valuable insight into the phenomenon of the Northern Cities Shift and it paved the way for many later researchers.

Labov continued to explore the Northern Cities Shift, publishing many articles and books, perhaps the most influential being *The Atlas of North American English: Phonetics, Phonology, and Sound Change* published in 2006 along with Sharon Ash and Charles Boberg. This book chronicles the various dialects and accents found in North American English, and offers discussion on their development. The multimedia version of the book is available online free of charge, and includes several sound samples from different regions in North America. In this book, Labov et al (2006) use the term Inland North to refer to the region that is most affected by the Northern Cities Shift. Figure 2.3 below shows a map of the Inland North region adapted from the map designed by Labov et al. (2006). Areas previously noted as being a part of the NCS, such as Detroit, Chicago, and parts of Ohio and New York, are further documented in *The Atlas*, but interestingly there does not appear to be an analysis conducted on the city that is the focus of the present study: Grand Rapids, Michigan. Though Grand Rapids is stated to fall in the Inland North Region and is therefore participating in the NCS, a thorough analysis does not appear to have been conducted. As Grand Rapids is not a city on the scale of Detroit and Chicago, and therefore may have more limited participation in the NCS, it is understandable that a thorough analysis has not yet been conducted. However, recent evidence that the NCS is affecting non-urban areas has come to light. This evidence, along with an argument for the importance of the Grand Rapids region in NCS research, will be provided in later sections of this literature review.

Figure 2.3. Outline of the Inland North Region. Adapted from Labov et al. (2006).

Labov is widely regarded as being one of the most influential researchers of the Northern Cities Shift as he has played an active role in studying it for many years. However, since its discovery, the NCS has been researched and documented several times by several different researchers, all of whom have been able to add insight into this remarkable linguistic phenomenon. Some of the research conducted regarding the NCS will be presented here. The following sections will examine various production studies that have been performed in order to gain further insight into the areas that are exhibiting shifted vowels in speech.

2.2. NCS PRODUCTION STUDIES. Numerous production studies are still being conducted in areas that fall in the Inland North region (as defined by Labov, Ash, and Boberg 2006) with the goal of determining the amount of NCS shifting that has taken (or is taking) place, and also to determine if vowels are continuing to shift in their predicted direction. This section will highlight past research conducted in an effort to produce documented evidence of shifted vowels in the speech of participants in Chicago, Ohio, and Wisconsin, but will primarily focus on production studies that have been conducted in Michigan as this state is the focus of this study. Production studies

in Michigan will be broken down into further subsections to provide details of the effect of the NCS in the state.

2.2.1 NCS IN CHICAGO. The city of Chicago, Illinois is one of the most studied NCS cities as it is the largest city in the Inland North region. In 2011, Corinne McCarthy studied the vowels of 36 native Chicago residents in an attempt to gain a deeper understanding of the amount of NCS exhibited in the area. After participants read a word list containing the NCS vowels, they held a conversation with McCarthy in order to elicit spontaneous speech (McCarthy 2011:171-172). First she analyzed the results according to age groups, and discovered that the younger group produced more lowered and backed versions of the vowels in *bit* and *bet* than both the older and middle group, but the middle group exhibited the same amount of lowering as the older group, indicating that for the vowels in *bit* and *bet* lowering occurred before backing (McCarthy 2011:177). Interestingly, this result contradicts Labov's original notion that the vowel in BET first lowered before it became backed (Labov: 1994, p. 195). Next, McCarthy examined the results to find any differences in gender and education, but discovered that, while the gender of the speaker appears to affect their involvement in the NCS as more females exhibited shifted vowels than males, education appeared to have had very little effect (2011:178).

Prior to conducting this experiment, McCarthy attempted to catalogue the development of the NCS in Chicago in a 2010 study. To do so, McCarthy analyzed recordings of six people (five women and two men). Four of the recordings were interviews that were conducted in 1969 via the DARE project (Dictionary of American Regional English), and two were interviews taken from a radio show during the 1970s and 1980s. Three speakers were born in the late 1800s and three were born in the early 1900s (McCarthy 2010:104). Her results show that the three oldest speakers exhibited un-raised versions of /æ/ and moderately fronted versions of /ɑ/, while the

younger speakers exhibited complete fronted versions of /ɑ/ and raised versions of /æ/. These results lead her to conclude that, in Chicago speech, the NCS began with the fronting of /ɑ/ as well as the fronting of /æ/, and followed with the raising of /æ/ (McCarthy 2010:105).

2.2.2. NCS IN OHIO. Not many dialect studies have been conducted in Ohio, and even fewer have focused on analyzing the state's participation in the NCS. A pilot study conducted by Keiser, Hinskens, Migge, and Strand (1997) analyzed the radio speech of two speakers in the city of Columbus, Ohio. This city is located in the south-central area of the state, an area that is categorized by Labov et al (2006) as falling in the Midland dialect region. Due to this fact, Keiser et al expected to hear few, if any, shifted vowels in the radio speech they analyzed (1997:44**)**. They chose to focus on the two most commonly shifted vowels, /æ/ and / ɑ/, while attempting to find any evidence of the NCS. The results of their study are rather inconclusive. They discovered that the two speakers did raise and tense /æ/ in various environments; however, they say that this shifting of /æ/ could indicate that "central Ohio speakers may be participating in the NCS" but also that it "could be an isolated phenomenon which merely resembles the initial shift in the NCS" (Keiser et al. 1997:60). Furthermore, they found no evidence of /ɑ/-fronting, which they determine makes the data "inconclusive for central Ohio's participation in the NCS", but that this data could "be evidence of the NCS in its infancy in this area" (Keiser et al.1997:60). As Columbus does not fall into the region that is typically affected by the NCS, it is not surprising that the data collected in this study was inconclusive as to the involvement of this region in the shift.

2.2.3. NCS IN WISCONSIN**.** Wisconsin, another state in the Great Lakes region, has also been researched with regard to its participation in the NCS. Labov et al. (2006) places the majority of the southeastern part of Wisconsin in the Inland North Region, which would make residents of

this portion of the state likely to be participating to some degree in the NCS. Several studies have concluded that there is general /æ/-raising amongst residents of this region, (see Benson, Fox, and Balkman 2011; Jacewicz, Fox, and Salmons 2011; Labov, Ash, and Boberg, 2006; Purnell 2008; Zeller 1997), and all of these studies have linked this /æ/-raising to the Northern Cities Shift**.** It appears, however, that other vowel movements of the NCS are not as predominant in this region. For example, /ɑ/ may shift forward slightly, but not as far as can be found in other regions in the Inland North (Purnell 2008: 196). This suggests that the southeastern region of Wisconsin may not be fully participating in the NCS at this moment, though perhaps it may be playing a more prominent role in the shift in the future.

The north and northwestern parts of Wisconsin appear to fall into the North rather than Inland North region, and therefore could be seen as unlikely to be participating in the NCS. Benson, Fox, and Balkman (2011) conducted a study in this region of Wisconsin in order to determine if there is any evidence of NCS speech, and they concluded that, while /æ/-raising was indeed apparent in most respondents' speech, attributing this to the NCS is rather complicated due to the fact that Northwest Wisconsin lies in an area that is influenced by many sound changes in progress, including the low-back vowel merger as well as the Northern Cities Shift. Therefore, it is inconclusive as to whether the north and northwestern parts of Wisconsin are active participants in the NCS.

2.2.4. NCS IN MICHIGAN. The State of Michigan has long been perhaps the greatest focal point in NCS research, due to the fact that, compared to surrounding States, Michigan is the largest region within the area associated with NCS. Shifted vowels appear in the speech of a large number of Michigan residents, specifically in the Lower Peninsula. The next few sections will examine NCS production studies that have been conducted in Michigan.

NCS IN URBAN ENVIRONMENTS IN MICHIGAN. Detroit is one of the most widely studied cities when it comes to NCS research. Being the largest city in one of the most NCS-affected regions, this is not surprising. Linguistic scholars studying the NCS agree that residents of Detroit and its surrounding areas are participating in the shift, and several studies dig a little deeper to try and discover how and why the NCS has spread to and within the city. Eckert (1988; 1989) is one of these scholars. She linked the NCS to gender and social class by conducting a longitudinal study on Detroit teenagers, measuring the level of advancement of the NCS in five vowels (/æ/, /ɑ/, /ɔ/, /ɛ/, and /ɪ/). She discovered that the girls produced more advanced tokens of four of the six vowels than the boys; those vowels being /æ/, /ɑ/, /ɔ/, and /ɪ/. The boys produced more advanced tokens of /ɛ/ (Eckert 1989: 261). She further divided the adolescents into two social groups: the 'jocks' (defined as being of the middle class), and the 'burnouts' (defined as being from the working class) (Eckert, 1988: 183). Both male and female 'burnouts' produced more advanced tokens of /ɑ/, /ɔ/, /ɛ/, and /ɪ/, yet interestingly the 'jocks' produced more advanced forms of /æ/ (Eckert 1989: 261).

In terms of the analyzing the spread of the NCS through a socioeconomic lens, the results of Ito and Preston's (1998) study and Eckert's (1988), (1989) studies reveal a pattern: those who are more exposed to an urban environment or those who appear to prefer an urban setting are much more likely to produce NCS vowels than those who are either not exposed to or prefer to separate themselves from an urban environment. Though rural Michigan residents can and do produce shifted vowels on occasion (a phenomenon which will be examined more closely later), urban Michigan residents are much more likely to adopt shifted vowels in their speech. This adoption could be a way of forming an identity within a group, as seen with the 'Burnouts' in

Eckert's study. Eckert argues that '…the Burnouts have both greater exposure to urban speech and greater motivation to adopt variants associated with urban speech than Jocks' (1988:202).

Though it has been widely documented for decades that the city of Detroit is an active participant in the NCS, more recent research suggests that residents of other areas in Michigan are beginning to incorporate shifted vowels in their speech. This section will highlight some of that research, focusing on the development of NCS speech in non-urban environments in Michigan, as well as the acquisition of NCS vowels by migrants and immigrants into Michigan.

NCS IN NON-URBAN ENVIRONMENTS IN MICHIGAN. As previously noted, Michigan's Upper Peninsula (mostly non-urban) does not appear to be participating in the NCS. While Labov et al. (2006) place Michigan's Lower Peninsula in the Inland North Region, they place most of Michigan's Upper Peninsula in the "North Central" region, along with regions such as northern Minnesota, North Dakota, and northern Montana. Labov et al. (2006) state that areas that fall within this region do not "participate actively in the sound changes that define the neighboring regions". This definition, then, clearly shows that the Upper Peninsula of Michigan is not a participant in the NCS. Rakerd and Plichta (2010) give further confirmation of this. Though largely focused on perceptions of shifted vowels by Michigan residents, their experiment showed that residents of the Upper Peninsula of Michigan were not sensitive to NCS vowels (Rakerd and Plichta 2010:447), which could be due to their limited exposure to these vowels. It is relatively safe to assume, then, that Michigan's Upper Peninsula is resisting the NCS, and it could be argued that this is due to the fact that there are no large, urban environments within this region.

However, other research appears to show the opposite is true for non-urban environments located in Michigan's Lower Peninsula. Gordon (2001) measured the shifted range of NCS vowels in two rural communities in Michigan: Chelsea (located in Southeastern Michigan) and

Paw Paw (located in Southwestern Michigan). As these communities are rather rural, they were not expected to show much evidence of shifting due to the fact that the NCS is largely an urban phenomenon. However, Gordon (2001) showed evidence to the contrary: for the vowels /ɛ/, /ɪ/, and /ʌ/, relatively little shift was noticed; however, shifted versions of /ɑ/, /æ/, and /ɔ/ were much more common. Taking a closer look at Gordon's results for the vowels /æ/, /ɑ/ and /ɔ/, results show that shifted versions of /æ/ occurred most often before interdental and nasal sounds, and after velar sounds, and occurred least when preceded by palatal sounds or followed by velar sounds (2001:127-8). Shifted versions of /ɑ/ occurred most often before velar sounds or /l/, and after glottal or nasal sounds, and were shifted less when preceded by an alveolar or velar sound, or followed by a palatal sound (Gordon 2001:135-136). Finally, Gordon discovered that /ɔ/ had a very high shifting rate, mostly shifting when preceded by a velar, alveolar, or interdental sound or when followed by an alveolar or velar sound. All of these tokens of /ɔ/ had a 78% or higher shifting rate (Gordon 2001:144-145), meaning it was difficult to find an environment in which /ɔ/ did not shift.

A similar study dealing with NCS vowels in rural Michigan is Ito and Preston (1998) study. Ito and Preston attempted to discover whether the NCS had spread to northern Lower Michigan and if the presence or lack of presence of NCS vowels was due to 'local loyalty' (1998:465). They discovered that the NCS was more advanced in speakers who appeared to prefer an urban environment, and less advanced in speakers who preferred a rural environment (Ito & Preston 1998:479).

NCS ACCOMMODATION AMONGST MIGRANTS AND IMMIGRANTS IN MICHIGAN. Along with the apparent evidence that residents of non-urban environments in Michigan are starting to produce more and more shifted vowels in their speech, recent studies are also showing that Michigan

residents who come from different states or even different countries also begin to exhibit shifted vowels in their speech after having been exposed to it for a period of time. One such study, conducted by Evans (2004), measured the acquisition of the fronted and raised version of /æ/ amongst Appalachian migrants in Ypsilanti, Michigan. Ypsilanti is a town in Michigan located about ten miles east of Ann Arbor and 30 miles west of Detroit. The participants in her study were born in the South and therefore were influenced by the Southern Shift. In brief, Labov et al (2006) state that the Southern Shift involves the monopthongization of the diphthongs [aj], [ej], and [ij], which, effectively, force the phonemes [æ], [e], and [ɪ] to move forward. She chose to focus only on /æ/ as this is widely agreed to be the first vowel that shifts in NCS speech. Evans recorded the speech of twenty-eight participants, who ranged in age from 28 to 81, and who mostly migrated to Michigan from the South between the 1940s and 1960s (Evans 2004:158). The results of her study show that, while many participants exhibited fronted versions of / /æ/ (a characteristic of the Southern Shift, as previously mentioned, as well as the NCS), only nine of the twenty-eight participants exhibited a raised version of /æ/, indicating that they were influenced by the NCS (Evans 2004:160). Keeping in-tune with the widely agreed notion that women are more likely than men to exhibit sound change in their speech, Evans' results also showed that, compared to only 10% of the male participants, 47% of the female participants exhibited raised versions of /æ/ in their speech (2004:162). Digging deeper, she discovered that participants who did not raise /æ/ tended to have stronger social bonds with fellow Appalachian migrants in the Ypsilanti area, while participants who did raise /æ/ socialized less with other Appalachian migrants (Evans 2004:162).

It appears as though it is not only migrants, but also immigrants to Michigan that are affected by the NCS. Two studies focused on Middle Eastern immigrants and children of

immigrants residing in the town of Dearborn, Michigan. Samant (2010) focused on seventeen students of Mercer High School in Dearborn. Samant conducted interviews with these students and performed an acoustic analysis study to determine the amount of shift, once again choosing to focus on analyzing the vowel /æ/. She discovered that certain students were indeed shifting this vowel, even though they came from backgrounds that do not traditionally participate in the NCS (Samant 2010:30). Sociological factors played a part in the amount of shifting, according to Samant, with religious practices and cultural background apparently playing key roles in the amount of shift. Samant divided her participants into 'Lebanese' and 'Non-Lebanese' (that is, Arabic speakers of a different nationality), with both groups exhibiting little or no religious practice. Participants who identified themselves as falling into the 'Lebanese' category displayed the most fronted and raised versions of /ae/, while participants who identified themselves as 'Non-Lebanese' displayed the least shifted versions of /ae/ (Samant 2010:30).

Conversely, Bakos (2012) shows fairly opposite results to those of Samant. After determining that the type of Arabic that Lebanese residents of Dearborn would likely produce and be the most exposed to does not resemble NCS speech (an important detail as a perceived fronted /æ/, for example, could simply be L1 influence rather than accommodation to an L2 regional dialect), Bakos collected sound samples via interviews with twenty-eight Lebanese residents of Dearborn, Michigan. He concludes that 'if there are bearers of accent change for Dearborn, it would appear their efforts are to make the system more like Arabic than any other' **(**Bakos 2012:26). An argument that could be raised against Bakos' results is that he chose to focus only on the analysis of spoken word lists rather than on spontaneous speech, which could have affected the lack of exhibited shifted vowels in his participants' speech.

Roeder (2010) found that Mexican Americans who were born and raised in Lansing, Michigan and who were fluent in English (the majority being monolingual) are also participating actively in the NCS. This somewhat contradicts the previous notion by Labov, Ash, and Boberg (2006) that the NCS appears to affect only Anglo-Americans. In her study, Roeder collected speech samples from 14 Mexican Americans and compared them to sound samples from 12 Anglo Americans, all of whom are natives of Lansing, Michigan and are native English speakers (2010:169-170). The results of Roeder's study conclude not only that both Anglo Americans and Mexican Americans are actively participating in the NCS, but also that, yet again, young women appear to be more active participants in the shift than men (2010:173). As the majority of the Mexican American participants were fluent in English only, and the fact that Spanish has no phonemic lax vowels, it is highly unlikely that Spanish pronunciation played a role in the accommodation of NCS. However, Roeder points out that Mexican American residents of Lansing appear to raise and front /æ/ even more than Anglo Americans of Lansing do, a phenomenon that, as Roeder points out, appears to have shown up in other studies of Mexican American speech (see Roeder, 2010). Other than the unique pronunciation of /æ/, Roeder's study suggests that that shifted speech has become a phenomenon that is no longer unique to those with European ancestry, at least when it comes to the NCS in the state of Michigan.

These studies offer insight into how and why language change spreads from region to region. As Eckert (1988:184) says, ' … phonological change spreads between and through communities through networks of communication'. In terms of the NCS, this is especially evident amongst the studies discussed involving migrants and immigrants to Michigan. Those whose communication networks included NCS speakers were more likely to exhibit NCS vowels in their own speech than those who did not communicate regularly with NCS speakers. Though

language production studies such as the ones discussed in this section can provide information regarding the spread of language change, language perception studies can also provide valuable insight into why language change spreads from one area to another.

As can be seen from the research presented thus far, the NCS affects a significant portion of the United States, ranging from New York to parts of Missouri. The regions surrounding the focal state of this study, Michigan, have also been examined and display an active participation in the NCS, and the shift is spreading to areas within Michigan itself. This research explains why Michigan is an important state when it comes to studying the production of shifted vowels as a result of the Northern Cities Shift. Equally important, and the focus of this study, is examining the perception of this phenomenon.

2.3. LANGUAGE PERCEPTION AND ATTITUDE STUDIES. Language perception and attitude studies, sometimes referred to as sociophonetics, are becoming increasingly common. Many linguists are realizing the important part that language perception and attitude plays when it comes to language changes. These studies attempt to find links and reasons as to why language change spreads from one region to another. For example, if one dialect of a language appears to be perceived as more 'intelligent' or more 'correct' it is possible that that dialect or accent could spread and perhaps become the most widely used. Conversely, people may shun this dialect or accent because their perception of it does not match their identity, and as was noted in a previous section, identity and language are often linked (Ito & Preston 1998).

The focus of this study is to examine southwest Michigan residents' perception of the Northern Cities Shift. In order to explain the significance of this study, past language perception and attitude studies are analyzed in the next few sections. The research presented primarily focuses on perception studies related to Michigan residents and/or the Northern Cities Shift,

though other studies not related to the NCS are also examined as they provide insight into the types of results that can be gathered from sociophonetic studies.

2.3.1 PERCEPTION STUDIES TO IDENTIFY REGIONAL DIALECTS AND LANGUAGE STEREOTYPES. One of the most common language perception studies involves examining a listener's ability to judge the regional dialect of a speaker. Dennis R. Preston, a pioneer in perceptual dialectology, has conducted numerous experiments in Michigan attempting to discover why Michigan residents have what he calls 'considerable linguistic confidence' (1993:32). Preston (1986) asked participants from five areas of the United States (Honolulu, Hawaii; Detroit, Michigan; southern Indiana; Buffalo, New York; and New York City, New York) to draw their perceived dialect boundaries on a blank map of the United States. The results showed that the most common boundary (that is, the boundary that was drawn by the vast majority of the participants), was the boundary that separated the Southern dialect from other dialects. Almost every participant drew the boundary of the southern dialect to include all or most of Kentucky and Virginia at the northernmost points, though the participants from Buffalo, NY labeled these as 'Outer South' rather than just 'South' (Preston 1986:226). 'Midwest' was the second most commonly identified dialect boundary, and Preston argues that this result indicates that "'Midwest' fulfills for many of the informants the most specific realization of the speech notion 'American Standard'…" (1986:228).

The Michigan participants of Preston's study produced some unique data. First, only the Michigan participants marked 'North' and 'Midwest' as exactly the same dialect, and they included Michigan in this boundary (Preston 1986: 228; 232). While this result appears to contradict the notion that Michigan residents believe that Michigan is unique in terms of exhibiting Standard English as the participants in this study made no direct distinction between

Michigan and its surrounding states, another experiment performed by Preston looks at this result a little deeper. This study is elaborated upon in a later section. Finally, the Michigan participants of this 1986 study were the only ones to create a boundary labeled 'Canada'. Even the participants from Buffalo, NY, situated very close to the Canadian border, did not create such a label (Preston 1986:232). This result indicates that, though Michigan residents did not necessarily feel the need to distinguish their dialect from other Northern states (at least on the surface level), they certainly felt the need to distinguish their dialect from the Canadian dialect. This could be due to stereotypes held by Michigan residents toward Canada, a concept that will be examined with Niedzielski (1999) in a later section.

Another study involving Michigan speakers that focused on the identification of regional dialects is Labov (2010). Labov (2010) reports on an experiment that he conducted in 2000 in which he asked participants from Indiana University at Bloomington to first identify the region from which two speakers come, and also to rate the personality characteristics of those speakers based solely on their speech. The former experiment will be discussed in this section, and the latter experiment will be discussed in a later section.

The speakers used in Labov's experiment were two women from different regions: One from Detroit (whose speech was heavily affected by the NCS) and one from Indianapolis (whose speech characteristics were unaffected by the NCS). The majority of the participants were from Indiana, but a small group was from Chicago. The results of this experiment show that 78% of the participants correctly identified the first speaker as being from the Inland North region; specifically, they declared her to be either from 'Chicago', 'Detroit', or the more general 'Michigan' (Labov 2010:239). Labov argues that these responses are all accurate as both Chicago and Detroit "are equivalent in their development of the Northern Cities Shift" (Labov

2010:238). This experiment shows that people who are outside of the region affected by the NCS are able to recognize shifted vowels and associate them immediately as part of a Michigan or Chicago accent.

Closely related to the studies discussed above, another study by Preston (1993) aimed at discovering the perceptions of Michigan residents of dialectal differences, which is slightly narrower than identifying whole regional dialects. In this study, two groups of participants (one from southeastern Michigan and one from southern Indiana) were asked to listen to nine speakers from nine different areas ranging from Saginaw, Michigan in the North to Dothan, Alabama in the South, and rank them from most South to most North. The results of the study were somewhat surprising; though the participants were all non-linguists, they were able to accurately place each speaker along a North-South dialect boundary. Both the Michigan respondents and the Indiana respondents ranked them correctly, though the boundary discovered by Preston between the Northern and Southern dialects varied between the two groups. The Indiana respondents placed the boundary between the two dialects around Nashville, Tennessee, while the Michigan respondents placed the boundary much more North; their boundary was located around southern Indiana. Interestingly, a detail from the responses of the Michigan residents emerges that slightly contradicts Preston's earlier 1986 study. The participants of this study made a minor boundary distinction between Michigan and Indiana (Preston 1993:43). This appears to indicate that the Michigan respondents made a distinction between 'South', 'North', and 'northern North'. As mentioned earlier, it appears as though Michigan residents make no distinction between their dialect and the dialect of their surrounding region and therefore this new detail seems to contradict Preston's earlier results. However, this 1993 study shows that, when the region has been narrowed down, Michigan residents are quick to distinguish their state.

It could be said, perhaps, that when prompted to give general responses to dialect boundaries, Michigan residents believe their dialect falls into the 'Northern' or 'Midwestern' variety, but when asked to divide the dialect boundary further, Michigan residents seem quite willing to make a distinction for their state. This is most likely due to another result from this same study, which involves the personality and overall characteristics that Michiganders assign to themselves, as discussed in a later section.

From the results of both Preston and Labov's studies, one could argue that Michigan residents do not feel that their speech is marked by any distinctive dialect or accent, yet it has been determined that many Michigan residents, especially in the Detroit area where Preston's study was conducted, exhibit NCS vowels which are unique to the region. People from neighboring states, such as the Indiana residents in Labov's study, are able to immediately identify and associate NCS-marked speech as a characteristic of the Detroit or Michigan accent.

Preston and Labov have shown how language characteristics can be assigned to only certain regions of a country. Indiana residents immediately associated shifted vowels with Michigan or Chicago. Michigan residents felt the need to mark a separate Canadian dialect, yet no other participants from any other state were compelled to do so. This indicates that potential language stereotypes have been developed for these regions, and stereotypes of a region have been known to influence how one perceives sounds.

The potential stereotyping of the Canadian dialect as mentioned in Preston's 1986 study by Michigan residents is exactly what Niedzielski measured in her 1999 study. Her study explores how stereotypes play a role in the perception of a dialect. She asked 41 participants from the Detroit area of Michigan to listen to 50 sentences while focusing on the vowel of a particular word in that sentence, and then compare that vowel to a set of computer-synthesized

vowels to determine which vowel it was that the speaker said. For all 41 participants, the only difference was that half of the group was told that the speaker was from Canada, and the other half was told that she was from Detroit (which in fact was true) (Niedzielski 1999:64).

Many vowels were analyzed in this study, but one of the vowels that yielded the most interesting results is the diphthong /aw/. This diphthong is heavily stereotyped as being an element of Canadian English, and not wrongly so as this diphthong goes through a process known as 'Canadian Raising' (Labov et al. 2006:216). The group that was told that the speaker was Canadian reported hearing a raised version of the diphthong (thus a Canadian-Raised diphthong) while the group that was told that the speaker was from Detroit did not appear to hear a raised version. This shows that the stereotyping of the Canadian dialect played a direct role in the Detroiters' perception of a sound (Niedzielski 1999:69).

Another interesting discovery of this study was that the group who was told that the speaker was also from Detroit reported hearing a vowel in the speech of the speaker that does not resemble a vowel affected by the NCS, though the speaker's dialect was indeed accented by the NCS. Many of the words in the test contained the vowel /ɑ/, a vowel that is fronted to resemble /æ/ as a result of the NCS. Indeed, as the speaker was actually from Detroit, she produced a version of /ɑ/ that was fronted, yet both groups of participants overwhelmingly reported hearing a more standard form of /ɑ/; only 5% of both the 'Canadian'-label group and the 'Michigan'-label group correctly identified the more fronted version of /ɑ/ in the Detroiter's speech (Niedzielski 1999:70). This data appears to suggest that Detroiters are unable to perceive the difference between a so-called standard version of /ɑ/ and the fronted version resulting from the NCS. There were similar results with the speakers' raised and fronted version of /æ/; every single participant in the 'Michigan'-labeled group perceived a more standard version of /æ/ rather than

the actual raised and fronted version. Only 10% of the 'Canadian'-labeled group accurately perceived the raised and fronted version of /æ/ (Niedzielski 1999:72).

The evidence presented from Niedzielski's study shows that stereotypes of a dialect do in fact play a part in the perception of that dialect. Half of the participants in her study thought that the speaker was Canadian, so they reported hearing Canadian-like speech. The other half of the participants thought that the speaker was from Detroit, so they reported hearing standard speech, indicating that no distinction is made between a 'Standard' American dialect and one that is accented by the NCS. These results correlate with the results of Preston's 1986 study and further suggest that Michigan residents are unaware of the NCS in their own speech. This study also shows evidence that 1) the perception of a sound and the actual sound produced are often quite different from each other, and 2) language attitudes and stereotypes often play a large part in dialect perception studies.

Though Detroiters appear to be unable to distinguish the unique characteristics of their own dialect, they are certainly able to distinguish the characteristics of another stereotyped dialect located within their own state. This particular dialect is often labeled 'Yooper' or 'Yooperese' by Michigan residents, a name derived from the abbreviation 'U.P.' for *Upper Peninsula* (Remlinger et al. 2009:187**).** While the Lower Peninsula of Michigan is participating in the NCS, the Upper Peninsula remains largely unaffected by the sound change (Labov et al. 2006:189). This is due to the fact that the NCS is largely an urban phenomenon, and the Upper Peninsula is largely rural. This dichotomy within the state can lead to language stereotypes. Remlinger, Salmons, and von Schneidemesser point out that dialect characteristics of Michigan's Upper Peninsula (such as the conversion of interdental fricatives to dental stops, as in the words *dem* (them*), dere* (there), *dose* (those), or the use of 'eh' at the end of a sentence) are stereotyped

and often mocked in Michigan's Lower Peninsula (Remlinger et al. 2009:184). Remlinger et al argue that language stereotypes can eventually lead to an *enregisterment* of the dialect; that is, a process that 'reflects a shift in perceptions about [language] varieties and who speaks them…these processes reinforce ideological links among dialect, people, and place' (Remlinger et al. 2009:169). They conclude that speakers of a dialect can become aware of the perceptions of their dialect and embrace them, turning those stereotypes into a process of self-identification.

Though this enregisterment has appeared to have occurred in Michigan's Upper Peninsula, it has not happened in the Lower Peninsula yet as residents have not yet become fully cognizant of their unique dialect. Niedzielski asked Detroiters in 2002 to elaborate on their language attitudes of their own dialect. She asked a group three questions: 1) If they believed that Michigan residents had a unique accent, 2) If they believed Michigan residents sounded different from a standard network news anchor on television, and 3) Where they believed one could travel to in order to hear unaccented, standard American English. The vast majority (27 out of 30) of the participants stated that Michigan was the place to go to find standard American English and that Caucasian people in Detroit had no accent (Niedzielski 2002:323). When asked to elaborate, participants indicated that, if they had been told by non-Michiganders that they themselves had an accent, they believed it to be an individual characteristic rather than a characteristic of Michiganders. For example, one participant commented: 'I must have an accent, because some people mention it but none of my friends do. They just sound regular'. Another participant was shocked when, while in Tennessee, people commented on her accent as she believed that Tennesseans, not Michiganders, were the one with accents (Niedzielski 2002:323).

I have confirmed this type of language attitude in an interview with a friend (hereon known as 'Renee') who recently moved out to California from Grand Rapids, Michigan. The

interview was conducted via e-mail and can be seen in its entirety in Appendix A**.** Renee indicated that she was not aware that she had an accent until she went to college (in Southwest Michigan) and met people from out-of-state who informed her of her accent. She thought people in Michigan spoke 'normally', but since moving out to California has been told by the residents there that her accent sounds 'nasally' and has been asked if she comes from Wisconsin. When asked if she is now able to perceive the accent in Michigan, Renee states:

> People in MI sound normal to me and people in California sound normal to me. I don't really pick on the accent from other people but I do make a conscious effort not to say certain words with my weird accent in California (S Daniels, personal communication, April 25, 2013).

All of this data shows that while Michiganders are not aware of it, people from other parts of the country have detected the accent and are starting to assign stereotypes to it. Certain features of the NCS have become stigmatized, and parodies of the accent are starting to be found in the media. Niedzielski (2002: 325) gives examples of television shows such as 'Saturday Night Live', 'Roseanne', 'The Simpsons' and the movie 'Fargo' that contain characters who speak with (sometimes rather elevated) NCS speech. Niedzielski argues that it is only '…a matter of time before NCCS [NCS] dialects come to be used as stereotypes in popular culture in the way a NYC or southern dialect is today' (2002:325).

There are many ways of stereotyping language characteristics, such as associating certain characteristics with a specific region. However, sometimes language attitudes can be narrowed down into perception of a certain group of people within a specific region. This is discussed in the next section.

2.3.2. PERCEPTION STUDIES TO IDENTIFY PERSONAL TRAITS OF A SPEAKER. Preston (1999) took a computer-generated map of the United States that showed the consolidated responses of the

perceived dialect boundaries of Michigan residents that resulted from his studies and showed it to a new group of Michigan subjects. His goal was to find out what personality characteristics Michiganders in the Detroit area associate with the two most prominently identified dialects: the North and the South (Preston 1999:363). The top five characteristics that Southerners were given were 'casual', 'friendly', 'down-to-earth', 'polite' and 'not nasal' and the top five characteristics that Northerners were given were 'no drawl', 'no twang', 'normal', 'smart', and 'good English'. (Preston 1999:366). Not surprisingly, the Michigan respondents reported Northern American English as being more correct than Southern American English (Alabama receiving the lowest score), but interestingly the Michigan respondents only gave the state of Michigan the highest 'correct' ranking rather than ranking them as equal with, say, the neighboring states of Wisconsin, Illinois, Ohio, and Indiana (Preston 1999:365). Briefly, this suggests that Michigan residents of the Detroit area perceive the Michigan accent alone to be the 'most correct' and perhaps 'most standard' variety of American English. However, when asked to rank the states with the most 'pleasant' speech, the Michigan residents gave an equally high ranking to the states of Michigan, Illinois, Minnesota, Colorado, and Washington. Most of the South received low 'pleasant' rankings, with Alabama once again receiving the lowest score (though New York City received the same score). These results indicate that Northern speakers (and specifically those located in Michigan) have, as Preston (1999:367) puts it, '…made symbolic use of their variety as a vehicle for standardness, education, and widely accepted or mainstream values'.

Perhaps the reason that Michiganders felt the need to create a boundary between Indiana and Michigan in Preston's 1993 study is due to the fact that they believe Michigan is the only state to exhibit 'correct' English. Their overall perception appears to be that Michigan falls into

the same ‘category’ of regional dialect as their surrounding states, but that they consider their state to exhibit the most correct and most standard form of American English.

Labov (2000, cited in Labov 2010), asked participants at Indiana University at Bloomington to measure personality characteristics associated with a speaker whose speech was marked by the NCS. As mentioned before, the majority of the participants were from Indiana, though a small minority was from Chicago. He played the speech of two different speakers (one from Detroit and one from Indianapolis) and asked the participants to evaluate the personality of each speaker using a seven-point Likert scale on characteristics of Intelligence, Friendliness, Education, and Trustworthiness. Each participant was also asked to identify what they believed each speaker’s political position was on three issues (abortion, affirmative action, and gun control) based solely on the speech patterns of the speakers. The results of Labov’s (2010) study show that, while no significant difference was perceived in terms of the intelligence, education, or trustworthiness of each speaker, the speaker from Indianapolis was perceived as much more friendly than the speaker from Detroit. The results also show that the participants believed the Indianapolis speaker to be slightly more pro-life than the Detroit speaker, but significantly more anti-affirmative action and anti-gun control (Labov 2010:240). However, one critique of this study is that the content provided by the Detroit speaker was not identical to the content provided by the Indianapolis speaker. Due to this, it is quite possible that the participants made their judgments based on the content of the speech provided, rather than on the characteristics of the speech.

As Detroit is an area highly affected by the NCS, it is not surprising that most of the research on language attitudes in Michigan has focused on this area. But what is surprising is that little research has been done to discover the language attitudes on the other side of the state.

Located between two cities highly affected by the NCS – Detroit and Chicago – the city and surrounding area of Grand Rapids, Michigan, is also participating in the shift (see Labov 2006; Hillenbrand et al 1995; Hillenbrand 2003). Therefore, this region could offer interesting insight into the perception of the NCS in the state of Michigan. Perhaps the proximity to Chicago could prove to be a key into southwest Michigan language attitudes. This study attempts to answer the question: How do the language attitudes of southwest Michigan residents compare to the language attitudes of southeast Michigan residents?

To understand how important the Grand Rapids area is to the study of the NCS, it is necessary to explore the background and history of this region. The next section will elaborate on the reasons why southwest Michigan is vital to NCS research.

2.4. HISTORY OF GRAND RAPIDS, MICHIGAN. As Grand Rapids, Michigan and its surrounding areas is the focus of this study, it is important to provide some background information of the city in order to gain a better understanding of the type of people who reside here, and to give an indication as to why a smaller metropolitan area in Michigan (as compared to other, larger metropolitan areas such as Chicago and Detroit) is an active participant in the Northern Cities Shift.

The city of Grand Rapids is located in the Southwest region of the lower peninsula of Michigan. According to the 2010 U.S. Census Bureau, the city is home to 188,040 residents, and the Grand Rapids Metropolitan area (defined by the United States Census Bureau as the combined counties of Kent, Barry, Ionia, and Newaygo) has a population of roughly 1,005,648 residents. Grand Rapids is the largest city in Western Michigan, and the second-largest city in the entire state (the largest being Detroit). The city lies on the banks of the Grand River.

Olsen (2011) provides a history of Grand Rapids on the city's official website. Before European settlers arrived, Western Michigan was home to primarily three Native American tribes: The Ottawa, Ojibwa (Chippewa), and Potawatomi. In 1821, the Treaty of Chicago allowed for the United States to officially acquire the land around the Grand River, which it immediately opened up for settlers. The Baptist Missionary Isaac McCoy and fur trader Louis Campau were amongst the first European settlers in the region. In the decades to come, more settlers came to the region. By the time Michigan became an official State of the United States, the village of Grand Rapids was already prospering. In 1850, with a population of 2,500, Grand Rapids was given a city status.

Two settlers, William Powers and Ebenezer Ball, changed the future of Grand Rapids forever when they established a furniture factory with an assembly line in the city. For nearly a century, Grand Rapids was famous worldwide for its furniture production, and was even nicknamed the 'Furniture City'. Workers and companies came to Grand Rapids from all over the country and the world in hope to gain success in the furniture manufacturing industry, further populating the area. In between the late 1850s and late 1860s, two railroad lines were built through the city; one connected Milwaukee to Grand Rapids and Detroit, and another connected Grand Rapids to Indiana. By 1900, Grand Rapids had a diverse population of around 90,000 people.

In the 20th century, Grand Rapids saw a huge increase in European immigrants. The city was filled with people speaking a variety of languages, including Dutch, German, Polish, Irish, and Italian. Fleeing war, famine, and other hardships in Europe, these immigrants came to Grand Rapids with the hope of finding stability and employment in the growing city. Many African Americans migrated from the South as well, and several thousand Hispanic families (primarily

Mexican) immigrated to Grand Rapids in the 1920s while looking for employment on the railroads.

This diversity can still be seen in the city today. In 2010, roughly 64% of Grand Rapids residents identify themselves as 'White', 20% as 'African-American', and 15% as 'Hispanic or Latino', with the remaining percentage identifying themselves as 'Native American', 'Asian', 'Pacific Islander', 'Other' or 'Mixed Race' (United States Census Bureau 2010). The median age of Grand Rapids residents was 30.8 years in 2010, and the median income for a household in the city was around $39,000 (United States Census Bureau 2010).

Due to the fact that Grand Rapids was a rapidly growing city around the time of the development of the NCS, it is really not surprising that it began to participate in the NCS. It could be said that the location of the city (in between the two epicenters of the NCS: Chicago and Detroit) as well as its rapid growth period that the city went though were the main reasons why a relatively small city began to mimic the speech patterns of its much larger neighbors. Furthermore, the city was built primarily by the manufacturing industry, which was the same industry that participated in the building of the Erie Canal and in the expansion of the city of Detroit, and this socio-economic factor can also be used to explain Grand Rapids' participation in the NCS.

As can be seen by review of literature, the NCS is a phenomenon that is gaining interest in the field of Linguistics. It is an important sound change in-progress that can yield insight into how and why language changes. The NCS is primarily seen in larger, urban areas throughout the Inland North region, though recent research has shown that smaller areas within the region are starting to exhibit the Shift. While production studies can often give clues to the mysteries of language change, it could be said that perception and language attitude studies can be just as

valuable. How one perceives a dialect, accent, or other aspect of language can play a major role in how it is spread. The current study attempts to provide further insight into the phenomenon known as the Northern Cities Shift by examining the perceptions of the Shift by residents of a region that appears to have largely been neglected by many linguistic scholars: The city and surrounding areas of Grand Rapids, Michigan.

CHAPTER 3

METHOD

3.1 PARTICIPANTS. Data was collected from 19 adult participants ranging from 22 – 54 years old. Data from four participants was omitted due to the fact that those participants spent five years or less residing in southwest Michigan. Therefore, only data from 15 participants was analyzed in this study. Participation in this study was voluntary and participants were recruited through word-of-mouth and through postings on various internet web pages. Table 3.1 below displays the biographical information of each participant.

Table 3.1.Participant biographical information. All cities are in Michigan unless otherwise noted.

Participant	Gender	Age	Place of Birth	Place of Residence in MI	Amount of time in SW MI
1	F	52	Grand Rapids	Grand Rapids	52 years
2	F	23	Grand Rapids	Grand Rapids	23 years
3	F	50	Grand Rapids	Hudsonville	50 years
4	F	24	Grand Rapids	Wyoming	24 years
5	M	33	Kentwood	Wyoming	29 years
6	M	54	Gary, IN	Grand Rapids	50 years
7	F	26	Kalamazoo	Kalamazoo	25 years
8	F	23	Holland	Hudsonville	23 years
9	F	23	Grand Rapids	Holland	23 years
11	M	28	Grand Rapids	Grand Rapids	28 years
13	M	24	Boynton Beach, FL	Grand Rapids	23 years
14	F	25	Grand Rapids	Grand Rapids	25 years
16	M	22	Kalamazoo	Kalamazoo	22 years
18	M	23	Holland	Grand Rapids	23 years
19	M	24	Kalamazoo	Grand Rapids	24 years

In order to be eligible to participate in this study, participants had to meet several requirements. Each participant must have lived in southwest Michigan (no more than 50 miles in any direction outside of the city of Grand Rapids) for the majority of their lives. They must have been born, raised, and currently living in southwest Michigan, though exceptions were made for two participants (#6 and #13) who indicated that they traveled to Michigan as infants and were raised there. This requirement ensures that any judgment of the NCS is not the result of a past experience where the participant may have become aware of their accent while living for a long period of time in a region unaffected by the NCS. Participants of both genders were included, with eight females and seven males. Participants represent three age groups: Young Adult (20s), Adult (30s), and Middle Aged (50s). All participants were also required to be monolingual in English in order to prevent any crossover influence from their second language; however, several of the participants indicated that they have studied one or several foreign languages for varying lengths of time (though they did not consider themselves to be fluent). The average age of the females was 30.75 years (ranging from 23 – 52 years old), and the average age of the males was 29.7 years old (ranging from 22 – 54 years old). Education of the participants was also considered, with nine participants indicating their highest level of education to be high school and six participants indicating that they had received some college education (either an Associate's Degree or a Bachelor's Degree).

3.2 METHOD AND MATERIALS. The study was conducted at the Grand Rapids Public Library, and in the private homes of participants if they indicated that to be their preference of location. Four instruments were used in this study: A short biographical questionnaire, a blank map of the United States inspired by Preston's 1986 study, The Speech Accent Archive (http://accent.gmu.edu) created by Steven Weinberger of George Mason University and another

short questionnaire related to language perception. At the beginning of the study, each participant completed a short biographical questionnaire to gather information about their gender, age, education level, occupation, place of birth and residence, amount of time spent in southwest Michigan, out-of-state as well as in-state travel experiences, and language study history. This biographical questionnaire ensures that each participant has not had much outside influence that could interfere with their judgment of NCS vowels. The biographical questionnaire can be viewed in Appendix B.

Preston (1986) asked participants in several states to draw perceived dialect boundaries on a blank map of the United States. This design was also used in this study, though the major difference is that the Michigan participants in Preston's study were from the southeast area (Detroit), while participants in this study come from the southwest (Grand Rapids) area. After completing the biographical questionnaire, participants were asked to draw dialect boundaries on the map. For some participants, this direction had to be elaborated or explained further, so instructions such as 'draw regions where you think they speak with a certain accent' were given. Many participants struggled to identify the individual States, and therefore this part of the study appeared to be rather difficult for the participants. This also seemed to take the participants the longest amount of time to complete (note: no time limit was given as to not create anxiety).

After filling out the map, participants were asked to listen to various speakers recite a passage via The Speech Accent Archive (from here on referred to as SAA). The SAA is a very useful tool in a dialect perception study as participants are not able to make judgments based on the content of the speech; each speaker recites the exact same passage, listed below:

> Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog

> for the kids. She can scoop these things into three red bags,
> and we will meet her Wednesday at the train station
> (Weinberger 2013).

Any judgment made by the participants would, therefore, be based solely on the way the speakers talk rather than on what they are talking about. The SAA is particularly useful for this study as the passage contains several examples of words that contain the vowels /æ/ and /ɑ/, which are the two vowels most affected by the NCS in Michigan. Words such as *ask, slabs, snack,* and *plastic* are perfect examples of where you would expect to hear a shift /æ/ in NCS speech. Words such as *Bob* and *frog* would expect to show fronted versions of /ɑ/ by speakers affected by the NCS.

The participants listened to seven different speakers from seven different locations: Detroit, MI; Chicago, IL; St. Mary's, Ontario, Canada; Wisconsin Rapids, WI; Delaware, OH; Belmont, MS; and Birmingham, AL. All of the speakers were females whose native language was English. The first two cities were chosen because the speakers represent NCS speech. The next three areas were chosen because they represent non-NCS speech but are still within 300 miles of Grand Rapids, Michigan. The final two regions were used to 'mix things up', as it were. The speakers of those regions had clear southern accents and were used to give participants perspective about the different accents that they were listening to. The speaker from Canada was also chosen because, as been shown before in Niedzielski (2002) and in Preston (1986), a stereotype exists in Michigan towards Canadian speech. The Canadian speaker served as a test to see if Michigan residents held the stereotypes of Canadian speakers when they do not know that a speaker is, in fact, Canadian. Participants were not notified of the origin of the speaker in order to prevent any stereotypes from influencing their judgment; they simply were asked to complete a questionnaire based solely on the speech of each speaker.

The seven speakers were divided into four different orders, or sequences, in which they would be played to the participants. The sequence of speakers that each participant was given was noted at the top of their questionnaire (though they themselves were not aware of what each sequence meant as they were not given the origins of the speakers). The four sequences were as follows:

Table 3.2. Sequence of speakers presented to participants

Sequence / Passage	Sequence 1	Sequence 2	Sequence 3	Sequence 4
1	Chicago, IL	Detroit, MI	Chicago, IL	Detroit, MI
2	Birmingham, AL	Belmont, MS	Belmont, MS	Birmingham, AL
3	St. Mary's, ON, CA	Delaware, OH	Wisconsin Rapids, WI	Delaware, OH
4	Wisconsin Rapids, WI	St. Mary's, ON, CA	Delaware, OH	Wisconsin Rapids, WI
5	Belmont, MS	Birmingham, AL	Birmingham, AL	Belmont, MS
6	Delaware, OH	Wisconsin Rapids, WI	St. Mary's, ON, CA	St. Mary's, ON, CA
7	Detroit, MI	Chicago, IL	Detroit, MI	Chicago, IL

The speakers were put in a carefully-constructed order. All sequences have several commonalities. First, the first and last passage of every sequence is a speaker with NCS-influenced speech. This was done deliberately; both the Detroit and Chicago speaker were at around the same level of NCS speech. The participants listened to NCS speech first, then listened to several other accents, and finally listened to NCS speech once again so it could be determined if their perception of NCS speech was influenced at all by the other accents that they listened to. Next, the second passage of every sequence is a speaker with a type of Southern accent. The Birmingham, Alabama speaker appeared to the researcher's ears to have a relatively 'light' accent, while the Belmont, Mississippi speaker's accent appeared 'heavier'. These speakers were chosen to be presented second because their accents are quite distinct from the NCS-speech found in the first passage. This was done to expose the participants to a variety of accents, and

was meant to help the participants maintain focus. The third, fourth, and sixth passages were always non-NCS and non-Southern speakers who fell within the allotted 300-mile radius of Grand Rapids, Michigan. The fifth passage was once again a Southern speaker. This was done to break up the three non-NCS and non-Southern speakers, as the difference in accent of those speakers was often minute and relatively difficult to distinguish. Three similar-sounding speakers in a row might make the participants lose focus and/or interest, so a Southern speaker, with an accent distinct from the rest, was used to break up the 'monotony'. Finally, as mentioned before, the last passage of each sequence was another NCS speaker, and this was used to see if perceptions of NCS vowels were at all influenced by listening to other non-NCS speech.

The participants were asked to first read over the questionnaire to become familiar with what types of things they should be listening for. Then, they were asked to listen to the passage only once to complete the first part of the questionnaire. This shows immediate reactions to the speaker's speech, or first impressions of the speaker. On occasion, the participants would ask to listen to the passage a second time before completing the first part of the questionnaire, and this wish was granted, though most of the participants did not elect to listen a second time until they reached the last question. On very few occasions, participants listened to the passage a third time, but this was usually due to a distraction occurring during one of the listening sessions.

The questionnaire consisted of four questions and a comment question for each of the seven speakers. The questions were identical for all speakers. Participants were asked to answer the first three questions after listening just once to the passage. The first three questions asked participants to 1) identify the origin of the speaker, 2) rate personality characteristics of the speaker, and 3) rate the resemblance of the speaker's accent to the participant's own accent. The entire questionnaire can be viewed in Appendices B, C, and D, but the second and third

questions are offered below. Once completing these questions, participants were given the option to listen to the passage a second time to complete the fourth and final question, which asked participants to identify any words that 'appeared to have a stronger accent than others'. Finally, participants were given an optional comments section in which they could note interesting things about the speaker.

2. Please rate the following personality characteristics of the speaker:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
The speaker sounded friendly.	1	2	3	4	5	6	7
The speaker sounded polite.	1	2	3	4	5	6	7
The speaker sounded educated.	1	2	3	4	5	6	7
The speaker sounded casual.	1	2	3	4	5	6	7
The speaker's accent sounded standard.	1	2	3	4	5	6	7
The speaker's accent was pleasant.	1	2	3	4	5	6	7
The speaker's accent represents "correct" English.	1	3	3	4	5	6	7
The speaker sounded trustworthy.	1	2	3	4	5	6	7

Figure 3.1. Question #2 from the questionnaire

It is important to note that a mistake was noticed after the printing of the questionnaires. There is a '3' in the 'Disagree' section where there should be a '2'. This mistake was pointed out to participants, and it did not appear to have a negative influence on responses.

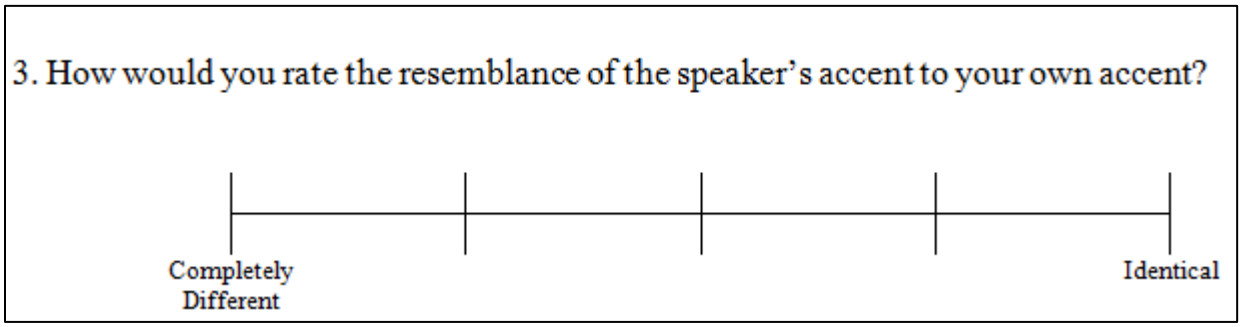

Figure 3.2. Question #3 from the questionnaire.

Participants were told that they could circle anywhere on the line. In analyzing the results, an estimate was given, with ‘Completely Different’ receiving a score of 1 and ‘Identical’ receiving a score of 5.

3.3. ANALYSIS. The results of the dialect perception portion of the study were analyzed in several ways. First, they were analyzed by the sequence of speakers the participants were presented with. This was done by arranging the participants and their responses to the questionnaire according to the sequence of speakers that they were given, in order to determine if the order of speakers had any effect on the participants’ reactions to their dialect or accent. Participant responses were also analyzed according to gender, education level, and ages of the participants. These divisions were used to attempt to discover any patterns of responses. For the second and third questions listed on the questionnaire (those asking for the participant to identify personality characteristics of the speakers as well as give their perceived similarity of the speaker’s accent to their own), the results were calculated via averages of responses. Due to the small pool of participants used in this study, any result found cannot be deemed ‘significant’, and therefore extensive statistical analysis of the results was not conducted.

CHAPTER 4

RESULTS

4.1. DIALECT BOUNDARY MAPS. Before listening to any speakers, participants were asked to draw their perceived dialect boundaries on a blank map of the United States. The purpose of this was to establish any regional identification that participants gave the state of Michigan, along with other regions that are affected by the Northern Cities Shift. The participants' responses were combined in a rough composite of their perceived dialect regions, displayed below. Each region that was identified by the participants will also be examined more closely. The 'Midwest' boundary will be elaborated upon last, as it appears to contain the state that is the focus of this study, Michigan.

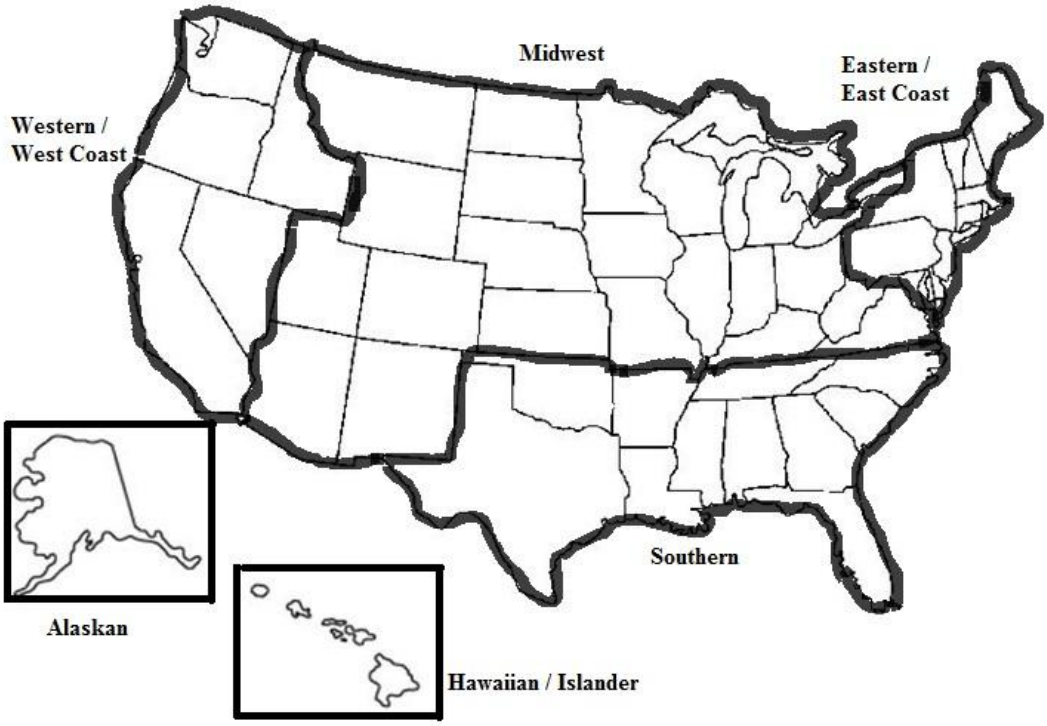

Figure 4.1. Rough composite of participants' dialect boundaries

4.1.1 WESTERN / WEST COAST. The most common boundary displayed by the participants in the western part of the United States was often identified as 'Western', or 'West Coast'. This

boundary often included the states of Washington, Oregon, Idaho, and Nevada, as well as California (though several participants put California in its own dialect boundary). Though the most common boundary is given in the image above, it is important to note that several participants elongated the boundary as far as (and including) the states of Montana, Wyoming, Colorado, and New Mexico. Some participants even included Alaska, though this was not common.

Participants were also encouraged to write comments about how they believe people speak in the regions that they identified. Several participants included comments, and some of the comments associated with the Western dialect boundary include:

> 'Most common American English sound'
> 'Different pronunciations of "o" and "a" than the Great Lakes / Midwest'
> 'Skater Dude Speak' [California]
> 'Similar to Midwest, a little more aspirated'
> 'Valley girl' [California]
> 'Like, ya know / Valley'
> 'SoCal / Islander speakers say "gnarly" and "radical"'
> 'Hip and surfer type, try to be as cool-sounding as they can'

These comments suggest possible stereotypes of the speech of people living in the Western states. Some perceive the speakers in this region to be similar to a 'Midwest' accent, as seen in the first and fourth comments. The second comment shows an attempt to identify specific phonetic variation found in the region, and the seventh reflects an attempt at specific lexical items. Many of the other comments give a specific identification to the overall manner of speech found in the region, giving names such as 'skater dude', 'valley girl', and 'hip and surfer type'.

4.1.2. EASTERN / EAST COAST. The region marked on the Eastern part of the United States was often referred to as 'Eastern', 'East Coast', or 'New England'. The average boundary for this region appeared to include the states of Pennsylvania, Maryland, Delaware, New York, New

Jersey, Rhode Island, Massachusetts, Vermont, Connecticut, New Hampshire, and Maine. However, the boundaries for this region were more difficult to establish as many participants created separate boundaries for New York, Boston, and/or New Jersey, though the vast majority included these states in the boundary reflected in the image above. One participant included Michigan and its bordering states in this region.

Some of the comments given by the participants for this region included:

'northern New York-type accents'
'speak like a "Mainah" (Mainer)'
'"a's are "i"'s, New Yorker'
'Nasal-y vowels' and 'non-rhoticized "r"'
'New York accent, Boston accent'
'Boston/New Englander (emphasis on vowels)'
'New York accent' and 'Jersey/Jersey Shore accent'
'Yankee'
'New York, Maine, Jersey have more of a city slang, but I'm sure the backwoods people speak a little bit southernish'
'Boston/Yankee speakers say "wicked"'

It appears as many participants regard this region as being heavily influenced by the speech of New Yorkers and Boston residents, which is understandable as these two cities are the largest in the region. The fourth comment appears to reflect a bit of linguistic knowledge held by the participant, as he or she correctly identifies the lack of a rhotic "r" found in many parts of the upper eastern region of the US.

4.1.3. SOUTHERN. Another region most commonly identified by the participants was a region often marked 'Southern'. The border for this region often included the states of Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, Georgia, North Carolina, South Carolina, and Florida. Though a few participants marked a separate dialect boundary around Florida, the majority included it with the states mentioned above. A few participants

separated regions in the south, marking certain regions as being ‘Old South’ (Mississippi, Alabama, Georgia, South Carolina), ‘Cajun’ (Louisiana), ‘Deep South’ (Arkansas, Mississippi, Tennessee), ‘Southern Drawl’ (Kansas, Oklahoma, Arkansas), and Texas or Texan English.

Some of the comments given by the participants associated with this region include:

‘Southern, “Oh bless your heart”’
‘Slower speech speed, more emphasized vowels’
‘Ya’ll’ [noted several times]
‘Country accent’
‘ Swamp/Old School country accents. Think Colonel Sanders and Mint Juleps’ [‘Deep South’]

4.1.4. ALASKAN AND HAWAIIAN/ISLANDER. It appears as though participants did not pay as much attention to this region as they did the mainland United States. Some participants simply ignored these states, leaving no markings at all, others grouped them together as one, though the majority of participants did in fact separate them. One participant included Alaska within their ‘Midwest’ boundary, another included the state within their ‘Western’ boundary, and one participant labeled the region as ‘Canada’ (they had also included the states of North and South Dakota and Minnesota in a ‘Canadian’ boundary). No other notable distinctions were made in this region, except for a few comments:

‘ Hawaiian; have oceanic influence, “aloha”’
‘ “Don’cha know”, “eh”’
‘SoCal/Islander speakers say “gnarly” and “radical”’
‘ [Alaska] similar to Great Lakes’
‘ [Hawaiian] “brah”, “aloha”’

4.1.5. MIDWESTERN. Finally, the region most commonly labeled ‘Midwestern’ will be examined. This region was slightly more difficult to create a composite of, as participants had widely varying borderlines for this region. The most common eastern border of this region landed between the states of Ohio and Pennsylvania, though some participants extended it to include Pennsylvania, West Virginia, and Virginia. Most participants included the states of Kentucky,

Missouri, and Kansas at the southern border of the region. The western border of the region was what varied the most – several participants drew the boundary line to include the states of Nebraska, North Dakota, and South Dakota, but several others stretched the border all the way to Idaho, Utah, and even Arizona. Therefore, the composite boundaries given in Figure 4.1 is a very rough estimate.

The majority of participants included the state of Michigan within their 'Midwest' boundary. However, a few participants created a separate boundary just for the state, or created a boundary that included only Michigan and its surrounding states. One participant created a boundary that included Michigan, Wisconsin, and Minnesota and labeled it 'Upper Midwest – Northern Vowels Shift', which, while somewhat inaccurate, indicates a level of linguistic knowledge. Another participant made a distinction between 'Northern Michigan' and 'Southern Michigan', giving each their own dialect boundary. Yet another participant included Michigan in their 'Northeastern' dialect boundary. These results will be analyzed in the next chapter.

The following are some comments given to the region identified as 'Midwestern', as well as the comments given by those who created a separate 'Michigan' or 'Great Lakes' dialect region:

'Midwest – "don'cha know", "eh"' [Michigan included]
'normal to me' [Michigan included]
' weird Northern accents stressing flat "a"s' [Michigan included]
'flat with some southern twang' [Michigan excluded]
'lots of Dutch influence' [Michigan included]
'dropping of final consonants (e.g. "ca" for "cat")' [Michigan included]
'Upper Midwest English – Northern Vowels Shift' [Michigan included]
'GAE' [General American English] [Michigan excluded]
'Michigan accent' [only the lower peninsula of Michigan included]
'Fargo' [North and South Dakota only]
'Northern Michigan speaks a little more Canadian'
'Southern Michigan tends to just have a Michigan accent'
' Upper Midwest, "Michigander"' [Michigan and Wisconsin only]

The results of the dialect region maps will be analyzed more closely in the following chapter.

4.2. DIALECT PERCEPTION. After completing the dialect map of the United States, participants were asked to listen to seven speakers from different regions of the U.S., including two speakers from regions affected by the NCS (namely Detroit and Chicago), as well as two southern speakers (from Mississippi and Alabama), and three speakers from regions that fell within 250 miles of Grand Rapids, Michigan (namely Ohio, Wisconsin, and Ontario, Canada). Though participants were asked to complete the survey for all seven of these speakers, the results that will be focused on here are their reactions to the Detroit and Chicago speaker only. The other speakers were used only as a type of 'distraction' for the participants. They were used to make the participants fully aware that they would be listening to speakers from various regions, not just regions nearby. This would ensure that participants would pay close attention to the speakers and not have to listen to seven dialects or accents that were all similar to each other.

The results of the participants' perceptions of the personality traits of the Detroit and Chicago speaker will be displayed first. These results were divided up according to the sequence of speakers heard, and then by the gender, ages, and educational backgrounds of the participants.

4.2.1. SEQUENCE OF SPEAKERS. As mentioned previously, the participants listened to seven speakers from seven different areas of North America, presented in four different sequences. The table of speakers and sequences is presented here again for ease of reference. It should be noted that the numbers omitted in the "Participants" section indicate the participants whose data was omitted from analysis, as noted in the previous chapter.

Table 4.1. Sequence of Speakers Presented to Participants.

Sequence / Passage	Sequence 1	Sequence 2	Sequence 3	Sequence 4
1	Chicago, IL	Detroit, MI	Chicago, IL	Detroit, MI
2	Birmingham, AL	Belmont, MS	Belmont, MS	Birmingham, AL
3	St. Mary's, ON, CA	Delaware, OH	Wisconsin Rapids, WI	Delaware, OH
4	Wisconsin Rapids, WI	St. Mary's, ON, CA	Delaware, OH	Wisconsin Rapids, WI
5	Belmont, MS	Birmingham, AL	Birmingham, AL	Belmont, MS
6	Delaware, OH	Wisconsin Rapids, WI	St. Mary's, ON, CA	St. Mary's, ON, CA
7	Detroit, MI	Chicago, IL	Detroit, MI	Chicago, IL
Participants who received this sequence	1, 5, 9, 13	2, 6, 14, 18	3, 7, 11, 19	4, 8, 16

4.2.2. IDENTIFYING REGIONS OF THE SPEAKERS. The first question listed on the questionnaire that participants were asked to fill out asked the participants to identify the region that the speaker comes from. Table 4.2 below lists the responses of the fifteen participants whose data was kept. Seven of the fifteen participants identified the speaker as hailing from the "Midwest" region, and two others gave similar labels (namely 'North' and 'Illinois').

Table 4.2. List of participant responses of the Detroit speaker's location.

The Detroit speaker comes from…			
Participant Number	Response	Participant Number	Response
1	Midwest; Michigan, Ohio, Illinois, Indiana	9	Wisconsin
2	Midwest; Michigan	11	Iowa
3	Midwest States	13	Ohio-ish, maybe more Northeastern
4	Upper Midwest (Michigan/Wisconsin)	14	Illinois
5	East; Ohio, New York, Pennsylvania, etc	16	Midwest
6	Pennsylvania	18	Canada/Midwest
7	North	19	Delaware
8	Midwest, Michigan, Wisconsin		

Participants 1, 3, 5, 7, 9, 11, 13, and 19 (referred to here as 'Group 1') listened to the Detroit speaker last, while Participants 2, 4, 6, 8, 14, 16, and 18 (referred to here as 'Group 2') listened to the Detroit speaker first. This means that Group 1's responses could have been influenced by other speakers that they heard, while Group 2's responses were not influenced by the other speakers. If the table is arranged by groups, the responses are indicated thusly:

Table 4.3. Responses arranged by Group

The Detroit Speaker comes from…				
Group 1 (Detroit last)			Group 2 (Detroit first)	
1	Midwest; Michigan, Ohio, Illinois, Indiana		2	Midwest, Michigan
3	Midwest States		4	Upper Midwest (Michigan/Wisconsin)
5	East; Ohio, New York, Pennsylvania, etc		6	Pennsylvania
7	North		8	Midwest, Michigan, Wisconsin
9	Wisconsin		14	Illinois
11	Iowa		16	Midwest
13	Ohio-ish, maybe more Northeastern		18	Canada/Midwest
19	Delaware			

As can be seen, the participants who listened to the Detroit Speaker last (Group 1) were far less accurate at describing her location. Four of the eight participants (50%) in Group 1 listed areas outside of the Midwest, while only one of the seven participants in Group 2 (about 14%) listed an area outside of the Midwest. More participants in Group 2 were also able to correctly identify the speaker as hailing from an NCS region (they answered 'Michigan' or 'Illinois'. Due to the fact that Group 2 listened to the Detroit speaker first, before listening to any other speakers from various regions, these results suggest that after listening to speakers from other, non-NCS regions, perception of NCS speech becomes altered and correctly identifying NCS speech becomes more difficult.

When taking a look at the responses to the Chicago speaker, a similar pattern with Group 2 can be found. Table 4.4 displays the participants' responses to the location of the Chicago speaker. It is important to note that, in this instance, Group 1 listened to the Chicago speaker first, and Group 2 listened to her last.

Table 4.4. Participant responses to the location of the Chicago speaker

The Chicago Speaker comes from…				
Group 1 (Chicago first)			Group 2 (Chicago last)	
1	Eastern States		2	Midwest, Indiana, Ohio
3	(no response)		4	Minnesota
5	Upper Midwest (Illinois, Minnesota, the Dakotas)		6	Midwest
7	North or Northeast		8	Minnesota
9	New York		14	NE (New York)
11	Pennsylvania		16	Northeast. Near Boston
13	New York		18	Chicago
19	New Hampshire			

Once again the participants in Group 2 more accurately guessed the region of the speaker, with one participant even pinpointing the city of Chicago. As the participants in Group 2 listened to the Chicago speaker last, the hypothesis that listening to other, Non-NCS speech before listening to NCS speech has a strong influence on the perception of NCS speech is refuted.

These results indicate that the participants' reactions to NCS speech did not appear to be influenced by listening to other non-NCS speakers. One group was more consistent in accurately guessing the location of the NCS speakers, even after listening to other, non-NCS speech. In order to gain a better understanding of why one group was more accurate in their perception of the regions from which the speakers came from, it is imperative to take a look at the biographical data of the participants in the group.

As stated before, Group 2 consisted of Participant numbers 2, 4, 6, 8, 14, 16, and 18. The group consists of four females (participants 2, 4, 8, and 14) and three males (participants 6, 16 and 18). Group 1 also consisted of four females (participants 1, 3, 7, and 9), and had four males

(participants 5, 11, 13, and 19). Thus, in terms of gender, both groups had almost an equal amount of males and females, and therefore gender does not appear to have a strong influence in the performance of the groups. However, it appears as though, overall, females from both groups were more accurate in their perception of the region of the Detroit speaker than males were. All eight of the female participants listed the Detroit speaker as coming from the 'Midwest', 'North', or 'Illinois', while only two of the seven males listed 'Midwest' as an option for the region of the Detroit speaker; the remaining males listed areas such as 'Iowa', 'Pennsylvania', or 'the Northeast', regions that could not be considered to fall into the Midwest region and are also otherwise most likely not candidates for NCS-speech regions. Table 4.5 below displays the participants' responses according to gender for the Detroit speaker.

Table 4.5. Participant responses of the location of the Detroit speaker arranged by gender.

The Detroit speaker comes from…			
Male Participants		Female Participants	
Participant Number	Response	Participant Number	Response
5	East; Ohio, New York, Pennsylvania, etc	1	Midwest; Michigan, Ohio, Illinois, Indiana
6	Pennsylvania	2	Midwest, Michigan
11	Iowa	3	Midwest States
13	Ohio-ish, maybe more Northeastern	4	Upper Midwest (Michigan/Wisconsin)
16	Midwest	7	North
18	Canada/Midwest	8	Midwest, Michigan, Wisconsin
19	Delaware	9	Wisconsin
		14	Illinois

This same accuracy was not found with the perception of the location of the Chicago speaker. It appears that both males and females struggled to identify the region that the Chicago speaker came from. However, in this case, males were slightly more accurate than the females, as three of the seven males listed Midwest in their responses, and one male even listed the city of

Chicago – by far the most accurate response given. In contrast, only one female listed Midwest as the location of the speaker.

Table 4.6. Participant responses of the location of the Chicago speaker arranged by gender.

The Chicago speaker comes from…			
Male Participants		Female Participants	
Participant Number	Response	Participant Number	Response
5	Upper Midwest (Illinois, Minnesota, the Dakotas)	1	Eastern States
6	Midwest	2	Midwest, Indiana, Ohio
11	Pennsylvania	3	(no response)
13	New York	4	Minnesota
16	Northeast, near Boston	7	North or Northeast
18	Chicago	8	Minnesota
19	New Hampshire	9	New York
		14	NE (New York)

Next, the age of the participants will be examined. While the vast majority of participants fell between the 20-29 year age range, a few participants were older. Eleven of the fifteen participants were between 20 and 29 years old, one participant was between 30 and 39 years old, and three participants were between 50 and 59 years old. Referring back to the groups of participants, arranged by sequence of speakers heard, it seems that the average age of participants in Group 1 (the group that heard the Chicago speaker first and the Detroit speaker last), was 32.5 years old, while the average age of the participants in Group 2 (the group that heard the Detroit speaker first and the Chicago speaker last) was 27.7 years old. The average age difference between the groups is only about five years. Due to the fact that Group 2 was more accurate in their perceptions of the location of the Detroit speaker, it could be suggested that younger people are slightly more capable of identifying NCS speech though participants of all age groups struggled to identify the location of the Chicago speaker. Table 4.7 below outlines this.

Table 4.7: Perceptions of perceived locations of NCS speakers arranged by age of participants

Age Range: 20-29 years old		
Participant Number	Detroit Speaker Perceived Region	Chicago Speaker Perceived Region
2	Midwest, Michigan	Midwest, Indiana, Ohio
4	Upper Midwest, (Michigan/Wisconsin)	Minnesota
7	North	North or Northeast
8	Midwest, Michigan, Wisconsin	Minnesota
9	Wisconsin	New York
11	Iowa	Pennsylvania
13	Ohio-ish, maybe more Northeastern	New York
14	Illinois	NE (New York)
16	Midwest	Northeast, near Boston
18	Canada/Midwest	Chicago
19	Delaware	New Hampshire

Age Range: 30-39 years old		
Participant Number	Detroit Speaker Perceived Region	Chicago Speaker Perceived Region
5	East; Ohio, New York, Pennsylvania, etc	Upper Midwest (Illinois, Minnesota, the Dakotas)

Age Range: 50-59 years old		
Participant Number	Detroit Speaker Perceived Region	Chicago Speaker Perceived Region
1	Midwest; Michigan, Ohio, Illinois, Indiana	Eastern States
3	Midwest	(No Response)
6	Pennsylvania	Midwest

While these charts do indicate that younger speakers tend to be a bit more accurate in their perceptions of the locations of NCS speakers, at least with identifying the location of the Detroit speaker, this result is inconclusive due to the imbalance of the ages of the participants. With a more balanced group (in terms of age) more accurate results could be found.

Finally, the education levels of the participants will be analyzed. In order to do this, a division of ‘College Experience’ and ‘High School’ was used. Participants who identified themselves as having an Associate’s Degree, Bachelor’s Degree, or who indicated that they had spent years in college (though they did not graduate) fell into the ‘College Experience’ category. Participants who indicated that their highest level of education completed was High School, and who gave no indication of any form of higher education, fell into the ‘High School’ category. Eight participants were placed into the ‘High School’ category, and seven were placed into the ‘College Experience’ category.

In terms of the Groups, as discussed previously, four participants from Group 1 (who heard the Chicago speaker first and the Detroit speaker last) have a high school education, and

four participants have some form of higher education. For Group 2 (who heard the Detroit speaker first and the Chicago speaker last), four participants had a high school education, and three had some form of higher education. Each group had an almost identical amount of participants from each education level. Therefore, it can be said that education level did not play a part in the accuracy that the participants in Group 2 displayed.

Looking at the overall picture, we can see that education did play a part in the overall accuracy of the participants. Table 4.8 displays the responses of each participant's perception of the location of the Detroit and Chicago speaker, divided according to their education level.

Table 4.8: Participant responses of locations of NCS Speakers by Education Level

Education Level: College Experience		
Participant Number	Detroit Speaker	Chicago Speaker
4	Upper Midwest (Michigan/Wisconsin)	Minnesota
5	East; Ohio, New York, Pennsylvania, etc	Upper Midwest (Illinois, Minnesota, the Dakotas)
7	North	North or Northeast
11	Iowa	Pennsylvania
13	Ohio-ish, maybe more Northeastern	New York
14	Illinois	NE (New York)
16	Midwest	Northeast, near Boston

Education Level: High School		
Participant Number	Detroit Speaker	Chicago Speaker
1	Midwest; Michigan, Ohio, Illinois, Indiana	Eastern States
2	Midwest, Michigan	Midwest, Indiana, Ohio
3	Midwest States	(No Response)
6	Pennsylvania	Midwest
7	Midwest, Michigan, Wisconsin	Minnesota
9	Wisconsin	New York
18	Canada/Midwest	Chicago
19	Delaware	New Hampshire

It appears as if the participants who received some form of higher education were less accurate in guessing the locations of the NCS speakers than those who received a high school education. This result could be linked to the production of shifted vowels as seen in Eckert (1988, 1989), where adolescents who identified themselves as 'jocks' or middle class appeared to produce less shifted vowels than the 'burnouts', or working class. Perhaps those who receive some form of higher education (usually, but not always, members of the upper and middle class) are exposed

to other, non-NCS speech and therefore become lose familiarity with it, while those who receive a high school level education (usually attributed to the working class, but this is not always the case) still perhaps surround themselves with members of their community, and therefore remain familiar with aspects of NCS speech.

In brief, the results from this portion of the study indicate several things. First, a summary of some general findings:

- Perception of the region that an NCS speaker comes from does not appear to be influenced by listening to other speakers from non-NCS regions; however:
- The group that heard the Detroit speaker before any other speaker appeared to be more accurate in their perception of the locations of the NCS speakers than the other group.
- Participants were more accurate in their perception of the location of the Detroit speaker than they were with the location of the Chicago speaker.
- Male participants were less accurate than female participants in identifying the region of the Detroit speaker; however, they were slightly more accurate in identifying the region of the Chicago speaker.
- Younger participants more accurately identified the locations of NCS speakers, though due to the lack of balanced age groups, this result is inconclusive.
- Participants with college experience were less accurate in identifying the regions of the NCS speakers than participants whose highest education level completed was high school.

To elaborate upon the third point made, one group did appear to be more accurate than another. This group was the group who listened to the Detroit speaker first, followed by other non-NCS speech, and ending with the Chicago speaker. Analysis was done to determine if any

variables set this group apart from the other group, who heard the Chicago speaker first and the Detroit speaker last, but no such variation was found. Both groups had almost an identical number of males and females, thereby removing any indication that gender could have played a role. Finally, both groups had almost the same amount of participants with college experience and high school educations, and therefore education also did not play a part in the groups' accuracy.

This was an analysis of the first question on the questionnaire that participants were asked to complete for this study. The following section focuses on the second question, which asked participants to identify personality traits of the speakers.

4.2.3. PERCEPTION OF PERSONALITY CHARACTERISTICS OF NCS SPEECH. Participants were asked to rate certain personality characteristics of the speakers on a scale of 1 ('Strongly Disagree') to 7 ('Strongly Agree'). As each speaker recited the exact same passage, the only variable was the speaker's accent or dialect. The following is a chart that summarizes the responses of participants' responses to personality characteristics of speakers who exhibited NCS vowels in their speech. The numbers highlighted in a shade of lighter grey represent the highest scores received (for each personality trait), while the number highlighted in darker grey represents the lowest scores.

Table 4.9. Average response of perceived personality characteristics of the speaker

	Average Ratings						
Personality Trait of the Speaker	Detroit, MI Speaker	Chicago, IL Speaker	Wisconsin Rapids, WI Speaker	Delaware, OH Speaker	St. Mary's, Ontario Speaker	Belmont, MS Speaker	Birmingham, AL
Friendly	5.00	3.60	4.73	4.60	5.13	5.60	5.93
Polite	5.33	4.53	5.53	4.73	5.33	5.13	5.80
Educated	5.07	4.20	5.07	5.00	4.20	3.67	4.87
Casual	4.40	4.60	4.60	5.27	5.20	5.53	5.47
Standard	5.27	4.07	4.20	6.27	4.40	3.00	3.53
Pleasant	4.47	3.40	4.53	4.47	4.20	4.67	5.40
Correct	5.00	4.40	4.87	5.93	4.33	3.60	4.00
Trustworthy	5.20	4.53	5.33	5.00	5.13	5.27	5.67

From the chart, it can be seen that the Birmingham, Alabama speaker ranked highest in four of the eight categories, and therefore was thought to be the friendliest, the most polite, the most pleasant, and the most trustworthy speaker. This is interesting as there does appear to be a stereotype that Northerners have about Southerners: that they are friendly and polite. Indeed, the other southern speaker (from Belmont, Mississippi) received the highest score for "casual", which fits alongside the stereotype that Southerners are also relaxed and laid-back, also seen in the results of Preston's 1999 study. Both the Detroit speaker and the Wisconsin Rapids speaker were tied for sounding the most educated. Finally, the Delaware, OH speaker received the highest ratings for both standard and correct personality traits.

Interestingly, the Chicago speaker received the lowest ratings in four categories: Friendly, Polite, Pleasant, and Trustworthy, while the Detroit speaker received the lowest rating for Casual. The Belmont speaker, whose accent was noticeably 'stronger' than the other Southern speaker from Birmingham, Alabama, received the lowest scores for Educated, Standard, and Correct. The St. Mary's speaker received the lowest score for Pleasant.

If the results of the NCS speakers are focused on, it can be seen that the NCS speakers from Chicago and Detroit received the lowest scores in over half of the categories (Friendly,

Polite, Casual, Pleasant and Trustworthy). However, this does not necessarily mean that the participants believed these speakers to be unfriendly, impolite, etc. To give perspective about these numbers, the rating scale will once again be noted here.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

Figure 4.2. The rating scale used for personality characteristics of the speakers

So, for example, with a score of 5.93, the participants mostly 'Agree' that the Birmingham, Alabama speaker is friendly. With a score of 3.60, the participants' beliefs about the friendliness of the Chicago speaker falls somewhere between 'Somewhat Disagree' and 'Neutral'. The highest score, 6.27 (given to the Delaware, OH speaker for 'Standard') falls between the 'Agree' and "Strongly Agree' ratings, while the lowest score, 3.00 (given to the Belmont, MS speaker for 'Standard') falls right at the 'Somewhat Disagree' rating. Therefore, without further explanation, it can be somewhat misleading when it is said that the NCS speakers received the lowest scores in five of the eight categories. A closer look at the scores and categories given to the NCS speakers is necessary in order to determine the actual meaning behind these numbers.

The NCS speakers received the following 'low' scores:

Friendly	3.60	(Chicago Speaker)
Polite	4.53	(Chicago Speaker)
Casual	4.40	(Detroit Speaker)
Pleasant	3.40	(Chicago Speaker)
Trustworthy	4.53	(Chicago Speaker)

Comparing these results to the rating scale, it can be seen that three of the scores (Polite, Casual, and Trustworthy) fall between the 'Neutral' and 'Somewhat Agree' ratings, while the other two (Friendly and Trustworthy) fall between the 'Somewhat Disagree' and 'Neutral' ratings. Therefore, to say that the participants believed the NCS speakers to be unfriendly, impolite, not casual, unpleasant, or untrustworthy would be somewhat incorrect. It is true that the ratings

given to the Chicago speaker for ‘Friendly’ and ‘Pleasant’ fall into the more negative range. This results show that participants did indeed feel the Chicago speaker to be somewhat unfriendly and unpleasant. However, the remaining ratings fall between the ‘Neutral’ and ‘Somewhat Agree’ categories. This shows that the overall judgment of the NCS speakers was not completely negative, though participants appeared to feel that other speakers exhibited these personality traits a bit more strongly.

In order to determine if listening to other non-NCS speakers influenced participants’ perceptions of the personality characteristics of the Detroit speaker, average ratings were calculated for the group of participants who heard the Detroit speaker last (Group 1) and the group of participants who heard the Detroit speaker first (Group 2). In this case, Group 1 has the possibility to be influenced by other speakers, while Group 2, who heard the Detroit speaker before any other speaker, does not have that possibility. The following chart displays the average ratings for both groups. The highest and lowest ratings for each category are shaded.

Table 4.10. Average ratings of perceived personality characteristics of the Detroit speaker based on the order heard
*Note: As one participant did not answer, this average was calculated out of fourteen participants, not fifteen.

Personality Characteristic	Group 1 (Detroit last)	Group 2 (Detroit first)	Mean
Friendly	5.29	4.75	5.02
Polite	5.29	5.38	5.36
Educated	5.00*	5.13	5.07
Casual	4.71	4.13	4.42
Standard	4.71	5.75	5.23
Pleasant	4.57	4.38	4.48
Correct	4.71	5.25	4.98
Trustworthy	5.14	5.25	5.20

No major distinctions between the ratings provided by participants who heard the Detroit speaker first and the participants who heard the speaker last were found. Most ratings for both groups ranged between a rating of four or five, or the ‘Neutral’ and ‘Somewhat Agree’ ratings. The ratings for the category of ‘Standard’ showed the greatest distinction among groups, where

Group 1 (who heard the Detroit speaker last) gave a ranking of 4.71 and Group 2 (who heard the speaker first) gave a ranking of 5.75, marking a full point difference. This could show that participants' views about the 'standardness' of accents was influenced by the sequence of speakers that they were exposed to. Those who heard the Detroit speaker first, before listening to any other speaker recognized the accent to be more 'standard' than those who heard her last. However, it can be said that listening to other speakers of non NCS-speech did not appear to have a strong effect on listeners' perceptions of personality characteristics of the Detroit speaker due to the lack of overall distinction found among the groups

If a similar analysis is conducted with the Chicago speaker, similar results are found. In the case of the Chicago speaker, Group 1 listened to her first and Group 2 listened to her last. Table 4.11 below displays the average ratings of the Chicago speakers. The highest and lowest ratings for each category are shaded.

Table 4.11. Average ratings of perceived personality characteristics of the Chicago speaker based on the order heard.

Personality Characteristic	Group 1 (Chicago first)	Group 2 (Chicago last)	Mean
Friendly	3.50	3.71	3.61
Polite	5.00	4.00	4.50
Educated	4.50	3.86	4.18
Casual	4.25	5.00	4.63
Standard	4.00	4.14	4.07
Pleasant	3.38	3.43	3.43
Correct	4.63	4.14	4.39
Trustworthy	4.86	4.14	4.50

Overall, the chart shows that many of the participants gave lower ratings to the Chicago speaker than to the Detroit speaker. Again, no major distinctions between Groups 1 and 2 were found. The categories that received the most difference in ratings were 'Polite' and 'Educated', where the difference in ratings between the groups is at least one full point. In the case of 'Polite', Group 2 found the speaker to be less polite than Group 1. From the data, the same conclusion

found with the Detroit speaker can also be found here: Listening to other, non-NCS speech does not appear to influence the participants' perception of NCS speech.

Table 4.12 below displays the average ratings of personality characteristics of females and males for the Detroit and Chicago speakers.

Table 4.12. Rating averages of personality traits of the Detroit and Chicago speakers by gender.
* *Note: As one participant did not answer, this average was calculated out of fourteen participants, not fifteen.

	Detroit Speaker		**Chicago Speaker**	
Personality Traits	Males	Females	Males	Females
Friendly	4.43	5.50	3.23	3.86
Polite	5.43	5.25	4.57	4.50
Educated	5.57	4.57*	4.43	4.00
Casual	4.00	4.75	3.71	5.36
Standard	5.71	4.86	4.23	3.88
Pleasant	4.57	4.38	3.14	3.63
Correct	5.23	4.75	4.86	4.00
Trustworthy	5.57	4.88	4.29	4.75

Overall, there does not appear to be many major distinctions between the ratings given by the female participants and the ratings given by the males. The females gave a slightly higher rating than the males in the 'Friendly' category for both the Detroit and Chicago speaker. They were consistent in giving slightly lower ratings than the males in the 'Polite', 'Educated', 'Standard' and 'Correct' categories. In the 'Pleasant' category, the females gave a slightly lower rating to the Detroit speaker than the males, but a slightly higher rating to the Chicago speaker than the males. This was also the case for the 'Trustworthy' category. However, the distinctions found for almost all of the ratings between the males and the females is quite small. Only one major difference of rating was found. The males gave a rating of 3.71 to the Chicago speaker under the category of 'Casual', yet the females gave quite a higher rating, 5.36. In terms of the scale, the average male rating falls between 'Somewhat Disagree' and 'Neutral', while the

average female rating falls between ‘Somewhat Agree’ and ‘Agree’. It can be concluded that the females believed the Chicago speaker to sound more ‘Casual’ than the males.

The only other distinction, still rather small but somewhat important, is the difference in the rating of the ‘Standard’ personality trait given to the Detroit speaker. Males averaged a rating of 5.71 for ‘Standard’, falling between ‘Somewhat Agree’ and ‘Agree’, while the females averaged a rating of 4.86, falling between ‘Neutral’ and ‘Somewhat Agree’. This shows that males tended to find the Detroit speaker’s speech to be more standard and perhaps ‘normal’ than the females. The males also gave a higher rating for ‘Standard’ than the females for the Chicago speaker as well. These results indicate that the male participants were slightly more likely to recognize NCS-marked speech as being ‘standard’ than the female participants.

An attempt was made to determine if the education level of the participants played any role in how they judged NCS speech. This analysis required a division of the participants between those with college or university experience and those without. Participants who marked their education level as ‘Associate’s Degree’ or ‘Bachelor’s Degree’ were put into the ‘Higher Education’ category. One participant marked her highest level of education completed as ‘High School’, but she noted that she had spent three years at a university. Her data was included with the participants who had completed a higher education degree. It is important to mention that all participants had received at least a high school-level education, and no participant earned more than a Bachelor’s Degree at a university. The following chart shows the division of average ratings based on the education level of the participants.

Table 4.13. Average ratings of the Chicago and Detroit speakers based on education level of participants.

	Detroit Speaker		**Chicago Speaker**	
Personality Traits	High School Education	Higher Education	High School Education	Higher Education
Friendly	5.50	4.42	3.38	3.86
Polite	5.25	5.43	4.00	5.14
Educated	5.25	4.83	3.88	4.57
Casual	5.23	3.71	5.00	4.14
Standard	5.38	5.14	4.00	4.14
Pleasant	4.88	4.00	3.13	3.71
Correct	5.25	4.71	4.00	4.86
Trustworthy	5.50	4.86	3.63	5.57

Greater variation in ratings is seen here with the division of participants by level of education than was seen when the participants were divided by gender. For example, participants with a high school level of education perceived the Detroit speaker to be more 'Casual' than the participants who had received some form of higher education, averaging a 5.23 rating (just above 'Agree') compared to a 3.71 rating (in between 'Somewhat Disagree and 'Neutral'). Conversely, participants with a high school level of education also perceived the Chicago speaker to be less polite, educated, and trustworthy than participants who had college or university experience. One of the biggest distinctions is found in the personality trait 'Trustworthy' with the Chicago speaker. Participants with a high school level of education averaged a rating of 3.63 (between 'Somewhat Disagree' and 'Neutral') while participants with higher education averaged a rating of 5.57 (between 'Agree' and 'Strongly Agree'). In terms of the Detroit speaker, the average ratings for all personality traits except for one were higher (some marginally, some significantly) with the participants with a high school-level education. The one personality trait that elicited a higher average rating by participants with higher levels of education was the trait 'Polite'. Interestingly the opposite is true with the Chicago speaker. Participants with higher levels of education gave higher ratings to all the personality traits of the Chicago speaker except for one,

that being ‘Casual’, where participants with a high school level of education gave a higher average rating.

Though the vast majority of the participants were in their 20s, the participants’ ages were also used to analyze the perceptions of NCS speech. Twelve of the fifteen participants’ ages ranged from 23-33 years old. The remaining three participants were aged 50, 52, and 54. Despite the imbalance in the age groups, some interesting data was elicited. The chart below summarizes the average ratings provided by the ‘Young’ participants (those in their twenties and thirties), and the ‘Middle Aged’ participants (those in their fifties).

Table 4.14. Average ratings of the Chicago and Detroit speakers based on the ages of participants.

	Detroit Speaker		**Chicago Speaker**	
Personality Traits	Young	Middle Aged	Young	Middle Aged
Friendly	4.75	6.00	3.50	4.00
Polite	5.50	4.67	4.50	4.67
Educated	4.91	5.67	4.17	4.33
Casual	4.17	5.33	4.50	5.00
Standard	5.17	5.67	4.00	4.33
Pleasant	4.17	5.67	3.33	3.67
Correct	4.75	6.00	4.42	4.33
Trustworthy	5.00	6.00	4.58	4.33

Obviously, because of the relatively small number of participants who fell into the ‘Middle Aged’ category, the conclusions drawn from these results are very limited. However, the data that is available reveals several interesting pieces of information. Overall, the middle aged participants gave higher average ratings to all but one personality trait for the Detroit speaker. The trait that received higher average ratings from the ‘Young’ participants was the ‘Polite’ trait, where young participants averaged a rating of 5.50 (between ‘Somewhat Agree’ and ‘Agree’), and the middle aged participants averaged a rating of 4.67 (between ‘Neutral’ and ‘Somewhat Agree’). Several personality traits were given different ratings by both age groups. The traits Friendly, Casual, Pleasant, Correct, and Trustworthy all showed at least a one-point difference in

the two age groups. The trait that displayed the greatest distinction was the 'Correct' trait, where young participants gave an average rating of 4.75 (between 'Neutral' and 'Somewhat Agree'), and the middle aged participants gave an average rating of 6.00 (right at 'Agree).

A similar pattern is also found with the Chicago speaker, where the middle aged participants gave higher average ratings to all but two personality traits. The traits that received higher average ratings from the young participants were 'Correct' and 'Trustworthy'. For all personality traits of the Chicago speaker, no significant distinctions were found between the age groups as were found with the Detroit speaker. The biggest distinctions were found in the 'Friendly' and 'Casual' traits, where the middle aged participants gave an average rating that was higher by .50 points.

In brief, the following conclusions can be made about the participants' perceptions of the personality traits associated with NCS Speech:

- The NCS speakers received the lowest average scores of all the speakers in five of the eight personality traits: Friendly, Polite, Casual, Pleasant, and Trustworthy. However, this does not mean that the participants believed the speakers to be unfriendly, impolite, etc. Upon closer examination, the average scores given to these speakers fall between roughly 3.4 and 4.5, which fall between the 'Somewhat Disagree' and 'Somewhat Agree' categories.
- Four of the five lowest scores given to NCS speakers were given to the Chicago speaker, indicating that participants noticed a difference between the speech of the Chicago speaker and that of the Detroit speaker
- The participants' perception of the personality traits of the NCS speakers did not appear to be influenced by the other, non-NCS speakers.

- Female participants found the Chicago speaker to be more ‘Casual’ than the males; however, no other noteworthy distinction was found between the female participants’ ratings of personality traits and the male participants’ ratings.
- Several distinctions were found amongst the participants who had completed a high school education and the participants who had received some form of college education. Participants with a high school education found the Detroit speaker to be more casual, and the Chicago speaker to be less polite, educated, and trustworthy than the college-educated participants. Overall, the participants with a high school education tended to give higher ratings to the Detroit speaker, while participants with a college education tended to give higher ratings to the Chicago speaker.
- Though the age groups of the participants were imbalanced, the data reveals that the participants who fell into the ‘Middle Aged’ category (between 50 and 59 years of age) tended to give higher personality trait ratings to both the Detroit and Chicago speaker than the younger participants.

4.2.4. RESEMBLANCE TO PARTICIPANTS’ OWN ACCENT. The third question on the questionnaire asked the participants to rate the resemblance of the speakers’ accents to their own (perceived) accent. They were given a small chart on which they could indicate how strongly they believed the speakers’ accents matched their own, as seen below.

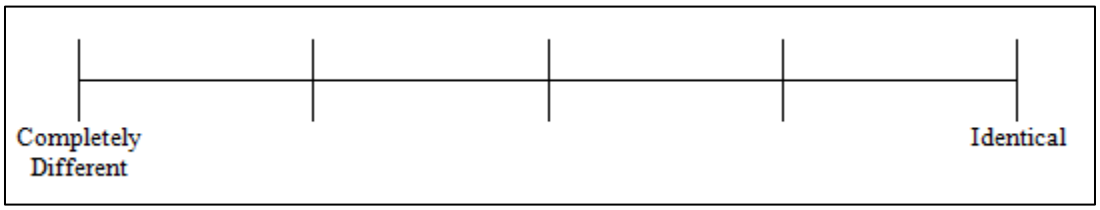

Figure 4.3. Question number three from the questionnaire.

Participants were told that they could mark any area along the horizontal line. For data collection purposes, numbers were later added to the vertical lines in order to calculate averages. The

'Completely Different' indicator on the far left was given a score of '1', and the numbers ascended in order to '5', the number given to 'Identical'. Any position marked by the participants that fell in between two vertical indicators was given a '.5' score. For example, if a participant marked the following location, they would be given a score of '2.5'.

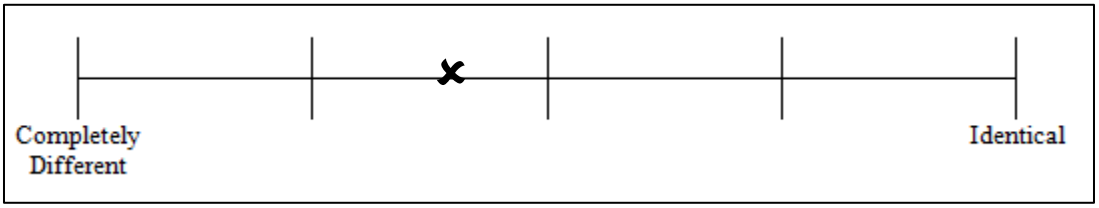

Figure 4.4. Example response to the question

Participants were asked to indicate this resemblance to their own perceived speech or accent for each speaker. The following chart displays the average ratings given by the participants for each speaker.

Table 4.15: Average ratings for the perceived similarity of the speakers' accents to the participants' own accents. *Note: As one participant did not answer, this average was calculated out of fourteen participants, not fifteen.

	Average Ratings						
	Detroit, MI Speaker	Chicago, IL Speaker	Wisconsin Rapids, WI Speaker	Delaware, OH Speaker	St. Mary's, Ontario Speaker	Belmont, MS Speaker	Birmingham, AL
Resemblance	4.20	3.20	2.93	4.17	3.50*	1.37	2.40

The data shows that the Detroit speaker received the highest similarity rating to the participants' own accents, with the Delaware, OH speaker coming in at a close second. The Belmont, MS speaker received the lowest score, just above 'Completely Different', though this is not unexpected.

It is interesting that the average similarity ratings given to the Chicago speaker did not more closely resemble the ratings given to the Detroit speaker since both speakers were participating in the Northern Cities Shift. This result, along with the results of the perceived

personality traits of the speakers, indicate that the participants noticed a clear difference in pronunciation or accent between the Detroit speaker and the Chicago speaker. The results from the perceived personality traits questions could be said to indicate that the participants held a slightly more negative view towards the Chicago speaker than the Detroit speaker, and the results from the similarity question indicate that the participants felt the Chicago speaker to resemble their own accent less than the Detroit speaker, and even less than the Ontario and Ohio speaker. This suggests that something in the Chicago speaker's speech was influencing their perception of the speaker more than it was influencing their perception of the Detroit speaker. One possibility of this distinction is nasalization; it could be argued that the Chicago speaker's speech contained more nasalization than the Detroit (or other) speaker's speech. Phonetic analysis of the Chicago speaker's speech is necessary to confirm or refute this theory.

When analyzing the different responses according to gender, it was found that very little variation in responses occurred between males and females. The average male response to the similarity of the Detroit speaker's accent to the participants' own accents was 4.29, while the female average was 4.13. In terms of the Chicago speaker, the average male response was 3.21 and the average female response was 3.19. These averages indicate that, as mentioned before, both males and females felt that the Detroit speaker resembled their own speech more than the Chicago speaker; however, there was no major difference found between the average responses of the males and the females.

It appears as though the sequence of speakers that the participants were exposed to was somewhat influential in how similar the participants believed the Detroit and Chicago speakers' accents were to their own. Participants who heard the Detroit speaker first averaged a response of a 4.00 accent similarity, while participants who heard the Detroit speaker last averaged a

response of a 4.38 accent similarity. These numbers are very similar to each other and therefore, in terms of the Detroit speaker, it appears as though the participants' responses were not affected by listening to speakers from other regions. However, a difference was spotted with the Chicago speaker. Participants who heard the Chicago speaker first averaged a response of a 2.88 accent similarity, while the participants who heard the Chicago speaker last averaged a response of 3.57 accent similarity. This result indicates that participants may have been influenced by the speech of other speakers when deciding how similar the Chicago speaker's accent was to their own. After listening to several other speakers, they felt that the Chicago speaker resembled their own accent more than the participants who heard the Chicago speaker before listening to any other speakers.

There also appears to be no difference of importance found when the results are divided by the participants' ages. As stated before, the imbalance of the participants' ages makes any results inconclusive, but they can serve as a starting point for further research.

In brief, the findings from the perceived accent similarity question are as follows:

- The Detroit speaker was given the highest similarity rating of all the speakers, with an average of a 4.2 (out of 5) similarity rating.
- The Belmont, Mississippi speaker was given the lowest similarity rating of all the speakers, with an average of a 1.37 (out of 5) similarity rating.
- The Chicago speaker was given an average similarity rating of 3.20 out of 5, which was the fourth highest rating. This indicates that participants noticed a significant difference between the speech of the Detroit speaker and that of the Chicago speaker.
- No noteworthy distinction was found amongst the male and female participants' perceived accent similarity to either the Detroit or the Chicago speaker. Moreover, both

males and females gave higher similarity ratings to the Detroit speaker than they gave to the Chicago speaker.

- In terms of the Detroit speaker, the order of speakers that the participants were presented with did not appear to impact their perception of accent similarity. However, participants who heard the Chicago speaker first, before listening to any other speaker, gave a lower similarity rating than the participants who heard the Chicago speaker last, after listening to several other speakers. This indicates that the other speakers used in the study were influential in the participants' perception of accent similarity with the Chicago speaker.

4.2.5. ACCENTED WORDS. Participants were asked to write down any words that they believed were more 'accented' than others. This was not a requirement; participants were free to write as much or as little as they wanted. However, several participants elected to write words down. This portion of the survey was used to determine if participants could subconsciously recognize NCS vowels in words. The following chart summarizes the words that participants believed to be more accented in the speech of the Detroit and the Chicago speaker. Each word is followed by a number in parentheses – this number is the amount of times the word was recorded as being heavily accented.

Table 4.16. Words and their frequencies mentioned by the participants as being heavily accented.

Detroit Speaker	Chicago Speaker
bags (7), snack (4), slabs (4), store (4), spoons (4), snake (3), frog (3), ask (3), station (2), shells (1), scoop (1), kids (1), Stella (1)	bags (8), store (5), frogs (4), Stella (3), Bob (3), slab (2), snakes (2), scoop (2), snack (2), Wednesday (2), train (1), call (1), spoons (1), snow peas (1), blue cheese (1), for (1), fresh (1)

If the words chosen for the Detroit and Chicago speakers are combined, the results are as follows (in order, from most mentions to least mentions). The words in bold are words that contain one of the vowels affected by the Northern Cities Shift:

Table 4.17. Words chosen by participants to be the most 'accented'

bags	15	snake	5	**Bob**	3
store	9	spoons	5	station	2
frog	7	**Stella**	4	**Wednesday**	2
snack	6	scoop	3		
slab	6	**ask**	3		

As the chart shows, the word that was mentioned the most by the participants was the word 'bags', which contains the vowel [æ], perhaps the most recognized vowel in NCS speech. This vowel was also apparently recognized in the words 'snack', 'slab', and 'ask', all mentioned at least three times by the participants. However, Purnell (2008) notes that words such as 'bags' will be subject to prevelar raising, a phenomenon that is characteristic of the Midwest and not necessarily unique to the Inland North region. Overall, words that contained the vowel /æ/ were marked 30 times by the participants. As /æ/ is believed the be the first vowel that shifts in NCS research, and is the vowel that is most often studied in terms of the shift, it would make sense that words that contained this vowel would be marked more than words that contained other vowels. The second most commonly noted vowel, /ɔ/, was pointed out a total of 16 times by the participants. Words that contained this sound could have been influenced by the NCS, as /ɔ/ is often lowered closer to /ɑ/ in NCS speech, or they could have been influenced by the 'caught-cot' merger that is taking place in many of the regions where the speakers came from. Interestingly, the other vowel that is most studied in NCS research, /ɑ/, was noted only three times by the participants. Perhaps this result would have been different if more words that contained /ɑ/ were present in the speech sample. The other vowels most affected by the NCS, namely /ɪ/, /ɛ/, and /ʌ/, did not appear to be noticed as much by the participants, as words that contain these vowels (such as 'fresh', 'shells', 'kids', and 'Wednesday') were only mentioned once or twice apiece (note that words that were only mentioned once by the participants were not included in Table 4.17 above). Overall, it can be said that participants did appear to be conscious

of NCS speech as they mentioned several words that contain shifted vowels as being more heavily accented than others.

The participants marked a total of 38 words as being more 'accented' with the Detroit speaker, and, similarly, they mentioned a total of 40 words for the Chicago speaker. The word 'bags' was the most mentioned word for both the Detroit and Chicago speaker. Many other words were also mentioned for both speakers a similar number of times; however, the word 'Bob' was not mentioned at all for the Detroit speaker, yet it was mentioned three times for the Chicago speaker. This occurred with other words that are usually affected by the NCS as well, such as 'Wednesday', 'call' and 'fresh', indicating that perhaps the Chicago speaker's speech was slightly more affected by the NCS than the Detroit speaker's speech.

4.2.6. COMMENTS OF THE PARTICIPANTS. The final section of the questionnaire asked participants to write down comments about each speaker. This section was also optional, though many participants did write down some comments. One participant said of the Detroit speaker: 'Very similar to accents I am familiar with in Michigan'. Another commented: 'Very different, boring, similar to Midwestern but restricted somehow.' Finally, one participant noted: 'Sounds a little like Boston'. The first two comments indicate that the participants did not seem to pick up on the NCS and that, in fact, they seemed to be quite familiar with the accent.

For the Chicago speaker, participants noted the following: 'I focused on "needing a toy snake", and also the word "Bob"'; and 'Very little accent here'. The latter comment indicates that the participant had no indication that the speaker's speech was affected by the Northern Cities Shift. This comment, along with some of the comments provided for the Detroit speaker further the hypothesis that many people in Michigan are unaware of the Northern Cities Shift, and in fact do not seem to notice the vowel changes occurring in their own state.

4.3.LIMITATIONS OF THE STUDY. Though interesting results were found from this study, several limitations must be taken into consideration. First, the relatively small amount of participants used in this study means that any results found from this study could not be called 'significant' or 'insignificant'. To make these types of declarations, more participants and more data must be elicited. Second, though four participants were omitted from the study due to their not meeting the requirement of amount of time spent in Southwest Michigan, several other participants who were not omitted from the study also indicated relatively significant time spent outside of the region. They were not omitted for two reasons: one, with an already small pool of participants, eliminating any more would prove detrimental to the study; two, though they may not have spent their entire lives in Southwest Michigan, they certainly spent the vast majority of their lives in the region. However, given the fact that many of the remaining participants did in fact spend part of their lives outside the region, their perception of NCS speech could be slightly altered. A larger pool of participants, who all will have spent all of their lives as Southwest Michigan residents, would produce more accurate results. Third, though there were an equal amount of male and female participants as well as an equal amount of participants with and without college education experience, there were not equal numbers of participants from various age groups. The majority of participants were between ages 20 and 29, with only one participant representing the 30s age group, no participants representing the 40s age group, and only three participants representing the 50s age group. This means that measuring the differences in NCS speech perception amongst the different age groups is rendered impossible, or rather the results of such measurements are inconclusive or otherwise inaccurate. Larger numbers of participants from each age category would make the results of this study more accurate. Finally, there were several instances where participants left part of the questionnaire blank, such as drawing an incomplete

map, not marking the region where they believed a speaker came from, or forgetting to circle a number when analyzing the personality traits of the speaker. Though this is not a large limitation of the study, it does have a slight impact on the accuracy of the results.

Other limitations include the fact that only one sound file for each speaker was used in this study. As Chicago and Detroit, for example, are very large areas, it is impossible to generalize the accents and dialects found here. There also was no systematic study of the extent of the NCS in the sound files of the Chicago and Detroit speaker. Due to this fact, it is difficult to determine if one speaker was more advanced in their NCS speech than the other. Perhaps a systematic analysis of the extent of the NCS in other speakers' speech could also prove useful in a further study.

The following section will take a closer look at the results found in the study, and will compare them with results found in previous studies.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1. ANALYSIS. The results of this study have provided additional data on the perceptions that many Michigan residents have about the Northern Cities Shift. As mentioned previously, much of the research associated with the NCS in Michigan has been limited specifically to the Detroit region. This study, despite its limitations, has added to this research by examining the other side of Michigan's lower peninsula, specifically the Grand Rapids area.

Since much of this study was designed as mimicry of Dennis Preston's 1986 study in Detroit, it is imperative to compare their respective results. Preston's 1986 study also asked participants from Michigan (along with participants from other regions) to identify American English dialects on a map of the United States. Like the results of his study, the most common dialect boundaries identified in this study were of a 'Midwestern' and 'Southern' sort, though, interestingly, Preston's results indicated a northernmost boundary at the states of Kentucky and Virginia for the region labeled 'Southern' (1986: 226), while the participants in this study typically placed the northernmost boundary at the states of Tennessee and North Carolina.

One interesting difference to note is that Preston's Detroit participants were the only ones of his study to create a 'Canadian' boundary label (1986: 232), yet only two participants in the current study gave any sort of label to a 'Canadian' region. This could perhaps be due to the types of maps used in either study, though this is mere conjecture.

Perhaps the most important difference found in the two studies is that the Michigan participants in Preston's study gave no indication of a separate dialect boundary around Michigan (1986: 228; 232), while a few participants of this study did in fact create a separate boundary around the state. As this study took place about 27 years after Preston's study, it could

be hypothesized that this result indicates a shift in Michigan residents' perceptions, and that they are now beginning to become aware of the sound change that is causing many of them to speak differently than people in other, surrounding states. Another possible interpretation of these results is that people located in the southwest region of Michigan are more aware of the fact that people in Michigan have a unique way of speaking than residents of the southeastern part of the state. Either one of these interpretations would require further, extensive research in order to be conclusive.

Some of the comments given by the participants for their 'Midwestern' or 'Michigan' type boundaries give some insight into just how different, or how similar, they believe Michigan speakers' accents to be with the accents of surrounding regions. For example, some participants noted the state of Michigan as falling into a category noted 'normal to me', while others pointed out specific differences that they perceived, such as 'stressing flat "a"', 'dropping of the final consonant', and 'Northern Vowels Shift'. These comments, though inaccurate in terms of the actual sound change in progress happening in the region, do provide an indication that some people in Michigan are starting to notice some phonetic variation in the region.

The results of the second portion of the study, which required participants to listen to different speakers, confirms that many southwest Michigan residents are able to recognize the Northern Cities Shift to the extent of it being a phenomenon affecting the Midwest, though not as many were able to correctly identify the NCS speakers as being specifically from the Chicago or Detroit areas. Interestingly, the participants were more successful at identifying the region of the Detroit speaker than they were at identifying the Chicago speaker. This result could be due to two reasons: 1) Being Michigan residents, perhaps the participants were more familiar with the manner of speaking and speech patterns of the Detroit speaker more than they were with the

Chicago speaker, or 2) The Chicago speaker was perhaps slightly more advanced in the NCS than the Detroit speaker, which the participants were able to pick up on and use to make a distinction.

Building on this, it appears as though the female participants were more successful at identifying NCS speech than the males were, at least in terms of identifying the Detroit speaker. It is a commonly held belief by many linguists that females tend to 'take the lead' when it comes to sound changes, and this result builds on that belief. If females are more likely to initiate and/or spread a sound change than males, it could also be hypothesized that they are more likely to recognize speech that is affected by the sound change, though further study and evidence of this is necessary before any conclusions are made.

Though many participants indicated that the states of Michigan and Illinois fell into a dialect region that included other, non-NCS states and therefore believed there to be no distinguishing characteristics of the speech of Michigan and Illinois residents, the results of the perceived personality traits survey show otherwise. The Detroit and Chicago speaker received the lowest ratings in five of the eight personality traits, indicating a noted distinction made between these speakers and the two other Midwestern speakers (from Ohio and Wisconsin). It appears as though subconsciously the participants were able to distinguish NCS speech from non-NCS speech and judged it in a slightly more negative way.

Contrary to Preston's 1999 study, which found that participants gave the highest score of most 'correct'-sounding English to the state of Michigan, the participants in this study gave the highest 'correct' ranking to the Delaware, Ohio speaker. However, Preston's study did not incorporate the use of actual speech; he provided a map to the participants and asked them to label different dialect boundaries with personality traits. It could be hypothesized that, if the

participants were asked to simply mark personality traits of speakers within a dialect boundary on a map without listening to actual speech, the participants in this study would provide similar responses to Preston's study. However, as the majority of participants in this study included the state of Michigan within the same dialect boundary as the surrounding states, it could also be argued that they would assign the region the personality trait of 'correct'-sounding rather than the state of Michigan on its own.

5.2. CONCLUSION. Though there were many limitations in this study, it still has provided additional data to the field of sociophonetics in terms of analyzing the Northern Cities Shift in the state of Michigan. The perceptions of this linguistic phenomenon have thus far been limited to residents in larger cities within the boundaries of the NCS, but this study has attempted to move outside of these commonly studied areas. The Grand Rapids and Kalamazoo regions of Michigan are important to the study of both NCS production and perception. Further research is essential to understanding how and why the shift is affecting these areas, and could possibly be used to predict the future of the Northern Cities Shift.

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APPENDICES

Appendix A – Correspondence

Interview with “Renee”. Conducted via e-mail April 25, 2013.

S. Daniels: Before moving out to California, did you think that you had an accent? Did you think that any of your friends or family in MI had an accent?

Renee: The first time I realized I had a Michigan accent was in college. I went to school in Grand Rapids, but I met people from all over the country and they informed me I had an accent. Before that I thought we spoke like the rest of America and only thought those in the south had a different accent. Then I met Braden, who was from Washington, and his whole family made fun of me. Not in a bad way though. My accent is not as strong as others I've been told but I never thought any one in MI had an accent until I was informed.

S. Daniels: Before moving out to California, how would you have described the way people in MI speak?

Renee: Before I would have said that people in MI speak normally. I did know we had an accent before California but only because of my Washington family.

S. Daniels: When did you first become aware that you might have an accent?

Renee: Again, I already knew I had an accent before California. I first became aware when someone made fun of the way I said something. I believe it was the word "talent". I said it really nasally.

S. Daniels: What are some of the comments that people have made about the way that you speak?

Renee: They say I sound nasally. I was at the doctor’s office telling the MA I had just moved to California because my husband got a job. She asked if I was from Wisconsin. I said why Wisconsin and she said it was because of the way I said "job" and she really emphasized the

accent. I also get made fun of for saying pop because they say soda in California but in Washington they say pop just not as obnoxious as I do.

S. Daniels: When you travel back to MI, do you pick up on the accent? Or do people sound "normal"?

Renee: People in MI sound normal to me and people in California sound normal to me. I don't really pick on the accent from other people but I do make a conscious effort not to say certain words with my weird accent in California.

S. Daniels: How would you describe the way people speak in MI now, after having spent a considerable amount of time on the West Coast?

Renee: I would say we sound more nasally and slur our words together more.

S. Daniels: What is your opinion about the way that people in California speak? Have you noticed any differences in pronunciation or vocabulary from the way that people in Michigan speak?

Renee: They really sound the same to me. No different. They might pronounce their words better but I'm only aware of my accent when they mention something I say.

Appendix B – Biographical Questionnaire

Please answer the following questions to the best of your ability.

Gender: _____

Age: _____

Highest Level of Education Completed (circle one):

Grade School (Grade: ____)	Associate's Degree	Master's Degree
High School	Bachelor's Degree	Ph.D

Occupation: _____

Place of birth (city and state only):_____

Place of current residence (city and state only): _____

How many years have you resided in Southwest Michigan? _____ years

Have you resided in any other location within or outside of Michigan? Yes No

If yes, please indicate where you have resided and for how long:

Location	Duration

Do you speak any languages other than English fluently or near-fluently? Yes No

If yes, please indicate what languages you speak:

Language(s)

Have you studied any language other than English for a significant period of time?

Yes No

If yes, please indicate what languages you have studied and for how long:

Language	Duration

Thank you for your cooperation and participation in this study.

Appendix C – Dialect Boundary Map

Please draw lines separating all the areas where you think people speak differently. If you have a name for each area, or if you have any impressions about the way of speaking in each area, please indicate this as well.

Notes/Comments:

Appendix D – Perception Questionnaire

Note: Participants received seven identical questionnaires to represent the seven different speakers.

Directions: After listening to the passage, please answer the following questions:

Passage 1

1. Where do you believe the speaker comes from? Please be as specific as possible.

_____

2. Please rate the following personality characteristics of the speaker:

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
The speaker sounded friendly.	1	2	3	4	5	6	7
The speaker sounded polite.	1	2	3	4	5	6	7
The speaker sounded educated.	1	2	3	4	5	6	7
The speaker sounded casual.	1	2	3	4	5	6	7
The speaker's accent sounded standard.	1	2	3	4	5	6	7
The speaker's accent was pleasant.	1	2	3	4	5	6	7
The speaker's accent represents "correct" English.	1	3	3	4	5	6	7
The speaker sounded trustworthy.	1	2	3	4	5	6	7

3. How would you rate the resemblance of the speaker's accent to your own accent?

4. Did any words appear to have a stronger accent than others? Yes No

If yes, please list the words:

Comments:

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Thesis Title:
A Sociophonetic Study of the Northern Cities Shift in Southwest Michigan

Major Professor: Bryan Crow