The Social Stratification of the Voiced Interdental /ð/ in the Battery Dialect

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1. Introduction

This study investigates the factors that contribute to the social stratification of /ð/ in the small Newfoundland community outside of St. John's, known as the Battery. Speech samples of 12 community members who are native to the Battery have been analyzed via *Goldvarb X* for their use of /ð/ and the commonly substituted [d] variant. In addition, the samples include responses to a questionnaire, which contain items that reflect concepts from *Social Network Theory* (Milroy 1976, 1982) and *Social Identity Theory* (Tajfel 1978) to further analyze the participants on social grounds. *Social Network Theory* and *Social Identity Theory* form the core of this study's theoretical framework; it is believed that the former represents an objective and spatial notion of group affiliation, whereas the latter represents a more subjective and personal notion of affiliation.

In order to understand the dynamic social structure and dialect of the Battery community, the distinctiveness of Newfoundland as a province in the wider Canadian context will also be addressed. Newfoundland drastically differs from the rest of Canada through its historical, economical, geographical and social circumstances. It is no wonder, then, that its dialectal characteristics have enjoyed the same uniqueness based on these contributing factors. The use and stratification of /ð/ is the feature of interest in the current study based on its pervasive nature in Newfoundland speech but, most importantly, on its characterization as a low-status identity marker.

2. Introduction to Newfoundland

2.1. History

In order to gain a greater understanding of the Battery community dialect, it is important to look at the wider social landscape to which it belongs. Newfoundland's distinctiveness from the rest of Canada is evident by looking at its rich historical past dating back over five centuries. The abundant supply of fish was what initially attracted Portuguese, Basque, and Spanish fishermen to the island in the 15th century, first named *Terra Nova do Bacalhao* after the codfish

(Orkin 1971). The island was officially discovered by the English explorer John Cabot in 1497 and from then on, was known as *New Founde Lande* (Young 2006). It was claimed as an English colony in 1583 due to its close proximity to England, which solidified Newfoundland's relationship with the British Isles (Chambers 1997). Beginning in the 17th century, Newfoundland became the site of mass immigration and permanent settlement, with an overwhelming number of immigrants coming from Ireland and England (Clarke 1997). What is most remarkable about the wave of immigration to the province is how well documented the sources of migration are as well as the resulting linguistic consequences that have heavily influenced its present day dialects (Clarke 1985, 1997, 1999, Kirwin & Hollett 1986, ỚhỨrdail 1997, Orkin 1971).

2.2. Geography

In addition to the historical influence on present-day Newfoundland dialects, its geographical isolation has helped constitute it as somewhat of, what Clarke terms "a linguistic relic area" (Clarke 1997: 22). Although mobility has increased in the present day, its harsh climate and distance from mainland Canada has impeded travel to the province which sits in a different time zone from its neighbouring provinces. As a result, immigration to the province has always been sparse, which has allowed the dialect to remain relatively uninfluenced. In 1956, only 2% of the population was born outside Canada (Orkin 1971) and in 2006, Statistics Canada again reported that only 2% of those living in Newfoundland were non-Canadian born.

2.3. Economy

Perhaps the lack of immigration and diversity among those living in Newfoundland has been compounded by the bleak economic situation that has plagued the province. Since Newfoundland's discovery over five centuries ago, the fishing industry has been the main contributing source to its economy. The province has experienced many ups and downs with the fishing industry, and when immigration drastically slowed in the 20th century, it had little choice in joining Canada's Confederation in 1949. However, joining Canada did not guarantee economic prosperity; in the last two decades, the collapse of the fishing industry has had devastating effects on one in four Newfoundlanders who rely on the cod fishery for sustenance (www.cdii/cod/histor10.htm, accessed 08/18/08).

2.4. Linguistic Aspects

Because Newfoundland's geographical isolation and economic instability have fostered a homogenous population, many of its historical linguistic features have been preserved. These features cover the language spectrum and can be found in the lexicon, morphology, syntax and phonology of Newfoundland dialects. Perhaps the most overt dialectal characteristics of Newfoundland English are the distinctive phonological features that have also been investigated at length.

Among those studied and characteristic of Newfoundland speech are: the interdental fricatives /θ/ and /ð/ variably pronounced as [t] and [d] respectively (Clarke 1985, Colbourne 1981, Kirwin & Hollett 1986, Paddock 1981, Riach 1969, Reid 1981); the alveolar [l] variant of the standard postvocalic approximant [ɫ], often described as an Irish lilt or drawl (Clarke 1981, 1985, Paddock 1981); deletion of the glottal fricative /h/ in word initial position (Kirwin & Hollett 1986, Riach 1969); low back /ɑ/ pronounced as [æ] where *caught* is pronounced more like *cat* (Chambers 1997, Clarke 1981, 2004, D'Arcy 2005); and /oj/ fronted to [aj] where *toy* is pronounced more like *tie* (Clarke 1997).

2.5. Social Aspects

It is this linguistic distinctiveness coupled with the isolation and low socioeconomic status that have combined to perpetuate the stereotype of the *Newfie* as an unintelligent, dim-witted, jovial fisherman, and help grant it low social status within the Canadian context. King and Clarke (2002: 537-538) posit that the ethnic label of *Newfie* is used widely in mainland Canada to describe Newfoundlanders and "serves as a vehicle of social marginalization [...] associated with laziness and stupidity". Interestingly, this label divides Newfoundlanders because some view it as a derogatory term that is highly offensive, while others embrace it as a term of endearment that signifies their solidarity and regional pride.

The social issues which have greatly affected the province have had a significant impact on some of the smaller out-port communities, specifically on socioeconomic and sociolinguistic grounds. Uprooting out-port community members has meant exposure to more standardized Canadian English dialects which is why a shift towards the standard dialect is anticipated for these communities in the future (Clarke 1997).

2.6. Introduction to the Battery

Just outside of the downtown core of St. John's is a community that used to closely resemble many an out-port community found across the island. The Battery, an old fishing village on the eastern edge of St. John's, sits on the side of a cliff at the footholds of historic Signal Hill and rests along a channel known as the Narrows which overlooks St. John's Harbor. The plethora of charming coloured houses and exquisite rock façade make the Battery one of the most photographed places in Newfoundland by the Department of Tourism (Downhome Traveller 2005). This enclave community is fast becoming an urbanized extension of the city of St. John's which now has some of the most expensive real estate development in the city. This is a stark contrast from only a few decades ago where all that was sought after about the Battery was its breath-taking views of both the city and the Atlantic Ocean.

The Battery's rich historical past dates back to the island's discovery and its claim as an English colony in the 16th century. In 1680, it was fortified by the British to protect St. John's from the French and later used as part of the British

defense in both WWI and WWII. The municipal government made it officially apart of St. John's in 1888 (The Telegram, Dyer 29/03/2006), but surprisingly, it was not until 1969 that the *Neighbourhood Improvement Program* (NIP) invested one million dollars of federal money into the community to provide it running water, sewage lines, and garbage collection (Benson unknown). Despite the basic improvements, when housing conditions were assessed in 1971, it was estimated that over 40% of the homes were in need of upgrading and almost 15% were identified as beyond repair (CBCL Report 1978).

The Battery still lagged far behind St. John's in basic facilities and services; therefore, in 1979 and 1980 an even grander NIP project, which doubled the cost of the initial program, was undertaken. This project included the improvement and installation of a water distribution system, sewage services, road and street repair, retaining wall reparation, and community development. By far the most urgent of matters was the existing sewer system which was considered "archaic, unhealthy, and an eye-sore to both residents and visitors alike" (CBCL Report 1978). Perhaps the disparity in amenities, which kept the Battery behind St. John's in many respects, is why the Battery was always looked down upon as a low class, poor community. Because many Battery residents of that time relied on sanitary disposal trucks from the city, known to the locals as the "honey buckets", it has been remarked upon by some Battery natives that their status was directly linked to whether or not they had a toilet.

Ironically, the Battery has historically occupied the same position in St. John's as Newfoundland has in Canada – as an isolated, low status, economically impoverished, tight knit community. However, the Battery's social segregation and low status did not hinder daily life in the community because it was economically sustained by the thriving fishing industry, stores, church, school, wood mill and clubhouse. In addition to the community services and social segregation that encouraged Battery residents to remain in their community, the strong social networks and community bonds strengthened their ties to one another and to the neighbourhood. As the Battery played host to numerous regentrification initiatives, many St. John's residents began to look to this neighbourhood for its low housing costs and ideal location. As a result, this community that used to be socially segregated and home to successive generations of known "Battery" families, was fast becoming home to artists, academics and tourists as the changes in the community prompted a change in resident composition. Although the Battery has been in the process of change for some time now, there are still some remnants of the old Battery that once was. Many of the houses are still colourful and quaint and some of the current residents are still native to the area, although both novelties may soon be distant memories.

3. Social and Linguistic Factors

3.1. The Characteristics of /ð/ and its Variants

In this study, the phonological feature under investigation is the voiced interdental fricative /ð/. The most commonly used non-standard variant for /ð/ in most

English dialects is [d], although [v] has been noted in some English dialects (Dubois & Horvath 2003, Trudgill 1988). With respect to the interdental fricative /ð/, the variant [d] has been well documented as highly characteristic of Newfoundland English and its array of dialects (e.g., Kirwin & Hollett 1986, Orton 1962, Paddock 1977, Paddock 1981, Riach 1969). Occurring most often in low-status dialects, the use of the less prestigious variant carries with it a definite "lack of social clout", whereby those that use it in high numbers are often stereotyped and relegated to the lower strata of society (Clarke 1997: 19) Accordingly, the /ð/ variable was chosen for this research because one of its variants, [d], is seen as a social identity marker in many low-status Newfoundland English dialects.

3.2. Newfoundland Studies of /ð/

Riach (1969) conducted a study that looked at the dialectal variation of the interdental fricative /ð/ in fifteen small communities across the island as well as in St. John's. As expected, those from St. John's used the [d] variant the least and those from smaller out-port communities used the [d] variant more frequently. What is most significant about this study is that it was one of the first in Newfoundland to relate social factors to language standards and dialect markers.

Reid (1981) conducted a sociolinguistic study in the small out-port community of Bay de Verde, located 150 miles from St. John's. He looked at six phonological variables, one of which was /ð/, and matched them with the social variables of sex, age, religion and style. Results showed that males used the stigmatized [d] variant more than females, and older males used the [d] variant more than any group. The most surprising result was that the younger female group used the [d] variant almost as much as the older male group. Reasons for this finding were attributed to the possible shift towards a more traditional role for this group or, perhaps, the use of [d] itself is becoming less stigmatized.

Colbourne's (1981) sociolinguistic study took place in the small out-port community of Long Island, Notre Dame Bay. Results showed that age was an important factor because the most non-standard speakers were the older males and the most standard were the older females. Style proved to have a significant effect on variant use, with the greatest variation found in the casual speech of the younger generations. His results also showed that because the younger speakers displayed a greater range of speech styles and command of standard variants, a shift towards bidialectalism may have been taking place.

Clarke's (1985) sociolinguistic study focused on St. John's English and the influence from the main ethnic origin that settled on the Avalon Peninsula, the Hiberno English (HE) Irish dialect. Results showed that age and sex emerged as significant because the [d] variant was used more frequently by older male speakers. In addition, [d] was found to be linked to low SES made up largely of unskilled labourers. Surprisingly, the [d] variant did not seem to be on the decline despite the variant's social stigmatization; rather, there seemed to be evidence of a

certain amount of neutralization of the [ð] and [d] contrast in casual speech, which reiterates the [d] variant as an identity marker.

3.3. Social Networks

The theory of social networks was developed by Milroy (1976, 1982) as part of her study on the vernacular spoken in Belfast working-class neighbourhoods. She investigated the notion of language maintenance with respect to low-status stigmatized forms and how they were able to persist in vernacular speech despite pressure from the standard forms. The *Network Strength Scale* was used to calculate the relationships within the community which consisted of family, work, and friendship for their *density* and *multiplexity* (Milroy 1980). A network is characterized as maximally dense when everyone knows everyone else in the neighbourhood and as multiplex when, for example, person A interacts with person B in multiple capacities such as church group members, friends and workmates (Milroy 2002). In the current study, social network will be operationalized according to Milroy's composite definition of density and multiplexity (1980) which is calculated using the following conditions:

(1)   Membership of a high-density territorially based cluster.

(2)   Having substantial ties of kinship in the neighbourhood (more than one household).

(3)   Working at the same place as at least two others from the same area.

(4)   The same place of work with at least two others of the same sex.

(5)   Voluntary association with workmates in leisure time. This applies in practice only when three and four are satisfied.

This factor was utilized in the present study because of its important role in determining the vernacular maintenance in previous studies. For example, Edwards (1992) examined the strength of social networks and their connection to the vernacular in his study of inner-city Blacks in Detroit and Lippi-Green (1989) also looked at social network integration in an economically impoverished community, the rural village of Grossdorf, Austria, which closely resembled the Battery in terms social structure and size.

3.4. Social Identity

Tajfel (1978) defines social identity as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group together with the value and emotional significance attached to that membership" (63). What came to be known as *Social Identity Theory* includes an individual rather than group focus which is self-conceptualized as opposed to attributed by society

(Joseph 2004). Adapting criteria outlined by Tajfel (1978), we operationalized the notion of social identity by incorporating his concepts of social categorization, (the social stereotyping of the in-group norms and value distinctiveness); social identity, (the knowledge of the group membership and its emotional significance); and social comparison, (links the categorization and identification aspects with reference to outside groups).

3.5. Gender

The Battery community has historically had very traditional and definite gender roles based on the division of labour of the sexes. Men have always been the primary wage earners of the family while women stayed home and raised children. It is not to say that women occupy an inferior position than that of the men in the Battery. It appears to be the opposite scenario because due to the average size of the families (often 10 or more children), limited resources (lack of indoor plumbing) and economic status, women appeared to be strong heads of the household that occupied an equally important position in the family as did their husbands. Milroy (1976, 1982) believed that a group's strength and cohesion may help in determining the gender roles. In the lower class Irish communities she investigated, men achieved a particular status level though their occupation and the solidarity gained by working predominantly with other men from the community. The social structure of the Battery mirrors the setting of the Milroy studies in many respects, especially in the old Battery era. Therefore, variation between the genders' application of /ð/-stopping may in fact represent the social structure of the community as a whole.

3.6. Style

The inclusion of style in variationist studies was first introduced by Labov (1972), who posited that the concept of stylistic variation allows speech to be investigated in both formal and informal uses. The hypothesis is that as the formality increases in speech, so too will the accuracy of the target variable. Ideally, researchers like to collect tokens in a wide range of stylistic levels to model Labov's five-level hierarchical distinction of formality. However, due to the cautious attitude of the Battery community members towards outsiders, it was decided upon that exploring the formality continuum at length by having participants read various text types may have compromised securing the interviews.

3.7. Production Problems with /ð/

Along with its voiceless counterpart /θ/, this phoneme is considered segmentally marked in the world's languages (Maddieson 1984, Wester, Gilbers & Lowie 2007). Maddieson (1984) posits that according to the *UCLA Phonological Segment Inventory Database* (UPSID), /ð/ and /θ/ are rare amongst the class of fricatives and are the least occurring fricative type at just 7%. Interestingly, the most frequently occurring and least marked sounds in the UPSID languages are

the dental and alveolar stops /t/ and /d/, which occur in 99.7% of the 317 documented languages. It comes as no surprise then that substitution for the /ð/ is typically the [d] variant for those languages that contain both the interdental and alveolar phonemes.

The dental fricative /ð/ is infamous for posing problems for L1 and L2 learners with respect to production and perception (Wester et *al.* 2007). The common substitutions are the [d] or [v] variants depending on whether the source of the substitution is influenced by cross-linguistic or developmental factors. The avoidance of /ð/ in favor of /d/ can be accounted for via markedness theory, which predicts that the least marked and more frequently crosslinguistically /d/ will be preferred over the more marked and considerably less frequent /ð/ (e.g., Lombardi 2003). On the other hand, because /v/ and /ð/ share the same manner of articulation [+continuant], it could be assumed that the substitution of /ð/ would result in a /v/ instead of /d/, a phenomenon that is observed in some English dialects. For example, it is well documented in many AAVE dialects that [f] and [v] are substituted for /θ/ and /ð/ respectively (Bailey & Thomas 1998, Rickford 1999). This is often explained by the articulatory similarity with respect to manner between the two sets of sounds. Kjellmer (1995) makes this claims that the interdentals (/θ/ and /ð/) tend to shift to the labiodentals ([f] and [v]) because of the 'nearness' of articulation. However, this is not the case for Newfoundland dialects because there appears to be a preference for the unmarked feature, resulting in the use of [d].

3.8. Linguistic Factors: Manner and Place of Articulation, Position within the Word, and Word Status

The Manner of Articulation factor group (MOA) describes the environment preceding the /ð/ in terms of manner of articulation. This factor group consists of nasals, liquids, voiced fricatives, voiceless fricatives, voiced stops, voiceless stops, laterals, vowels and pause (included simply to ensure it was accounted for – see also the POA factor group below). Because /ð/ and vowels carry the feature [+continuant], it is commonly accepted in the literature that the most optimal output for the target [ð] variant is when it occurs in intervocalic position, also known as a *heavy* context (e.g., Trofimovich, Gatbonton & Segalowitz 2007). A *heavy* context is one in which the relevant form is surround by [+continuant] segments, or when preceded by another [+continuant] consonant (e.g., a fricative).

The Place of Articulation factor group (POA) describes the preceding environment of where /ð/ occurs in terms of place of articulation. The POA factor group in the present study includes labials, coronals, dorsals, vowels and pause. The inclusion of this group is based on the assumption that the place of articulation of a segment (e.g., that of a given preceding environment) may affect the production of other sounds within the same prosodic domain (a type of assimilation process).

Another linguistic factor group included in this study is the position of /ð/ within a word: whether the /ð/ falls word-initially (e.g., *the*, *though*) or word-medially (e.g., *mother*, *other*). Word-final position (e.g. bathe) was eliminated as a potential environment due to the relatively limited number of words ending in /ð/. The final linguistic factor group included in this study describes the class of the word containing a /ð/: either a lexical word (nouns and certain pronouns; e.g. *father*, *other*), or a function word (determiners, pronouns; e.g., *those*, *they*).

It has been found in other studies (Dubois & Horvath 1999, 2003, Cardoso 1999) that function words typically favour the neutralization or weakening of segments. Also termed lenition, this phenomenon may increasingly occur in function words due to what has been termed the *functional hypothesis* (Kiparsky 1972). This theory posits that because function words merely indicate grammatical function and they lack semantic content, they are more likely to undergo a phonetic process such as substitution as opposed to lexical words. Conversely, the *frequency effect* (Bybee 2001) attributes the production of [d] for /ð/ in function words to the high frequency of these words in our everyday language (such as *the, there*, etc.), which makes them a greater target for the the production of [d].

4. Methodology

4.1. Research Questions and Hypotheses

Based on previous literature, the use of [d] for /ð/ is known to be a highly stigmatized social marker in various Newfoundland dialects. The current study, which is semi-exploratory in nature, sought to uncover the relevant social and linguistic factors that are linked to the stratification of /ð/ among Battery community natives. It was assumed that the strength of these factors would be shaped by the changing community structure, which may ultimately have affected their speech. The pertinent research questions included a wide range of factors to be statistically analyzed. For instance, the extralinguistic factors include social network, identity, style, gender, and group status. The linguistic factors include the phonological environment (specifically manner of articulation and place of articulation of the preceding segments), word class and word position of where /ð/ is located. The research questions that were addressed in this study are:
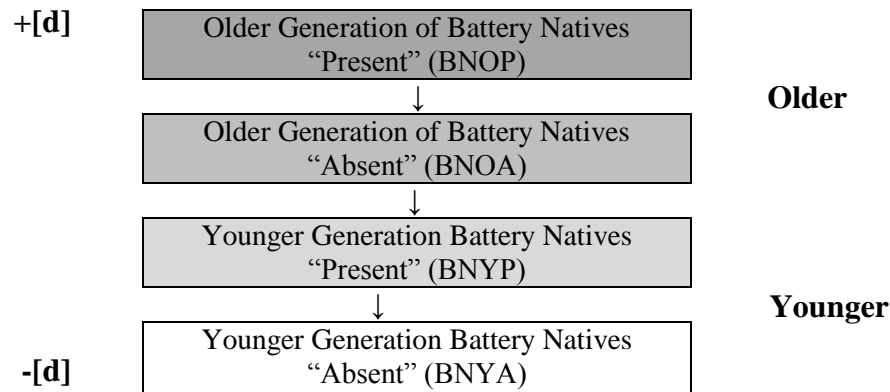
(1)   How does the variable /ð/ behave across the four Battery groups under investigation, namely BNYP, BNYA, BNOP, and BNOA?

(2)   What extralinguistic and linguistic factors trigger the production of /ð/?

The general hypotheses are based on previous research and general theoretical knowledge of phonology and phonetics, as outlined in the previous section. It was also speculated that there would be evidence of an intergenerational dialect shift

from the older to the younger generation. Moreover, it was believed that there would be little to no difference between the older generation's groups (BNOP and BNOA) because having spent that much time in such a segregated community, there might not be a significant difference in their use of the [d] variant. On the other hand, it was hypothesized that there would be stratification in the younger generation of Battery natives (BNYP, BNYA).

Specifically, the younger generation of Battery natives still residing in the Battery (BNYP) would likely align themselves with traditional social networking and identity, characteristic of the old Battery natives. Moreover, their use of the [d] variant was expected to approximate BNO norms as a result of the closed network and social identity they share, as well as the diminished contact with outside communities. Conversely, the younger generation of Battery natives who have left the Battery to live elsewhere (BNYA) and break from the strong community ties would exhibit less variation in the use of the /ð/, similar to the typical variation of St. John's natives in other studies (Clarke 1985). The following diagram in Figure 1 details the anticipated continuum of [d] usage by group status and generation.

Figure 1: Anticipated continuum of the decrease in [d] usage by group

+[d]

| Older Generation of Battery Natives "Present" (BNOP) |

↓ **Older**

| Older Generation of Battery Natives "Absent" (BNOA) |

↓

| Younger Generation Battery Natives "Present" (BNYP) |

↓ **Younger**

-[d]

| Younger Generation Battery Natives "Absent" (BNYA) |

4.2. Participant Groups

There were 12 Battery participants included in this study. In this study, it is important to see age from the perspective of the *linguistic life course* as opposed to discrete stages that are often assumed with chronological age (Eckert 1997). For example, one's life course involves changes in family, social and employment status, social networks, place of residence, and community and institutional participation. As a result, the participants were made up of the older generation of Battery natives (BNO) along with the younger generation of Battery natives (BNY). The BNO participants are all be over the age of 70, which means that in the *old* Battery era, these individuals were all adults with families and established jobs. In addition, they all experienced life in the community when it was still a segregated area with little to no "outside" families residing there. On the contrary, the BNY participants are all between the ages of 35-55. This group were all

children in the *old* Battery era which means they were all raised and schooled in the Battery and also experienced life pre-NIP and, consequently, before the collapse of the fishing industry.

It is important to clarify what is meant by *old* Battery era. Prior to the NIP project in the late 1970s and early 1980s as well as the collapse of the fishing industry in the early 1990s, this neighbourhood was a self-contained unit that, despite its shortcomings, was strong and cohesive. However, as the face of the community changed, the faces in the community changed as well, which has escalated moving into a *new* Battery era.

4.3. Interview Procedure

In order to elicit natural, spontaneous speech from the participants and make them as comfortable as possible, the informal interview was the first elicitation technique used in this study and included an orally administered questionnaire. The questionnaire consisted of four parts with both structured and semi-structured questions as well as statements that require Likert-scaling responses. Part 1 of the questionnaire consisted of pertinent demographic questions such as age, gender, education and employment status. Part 2 was a less structured section that consisted of questions regarding the participants' opinions on life in the Battery, past, present and future (e.g. *How do you think the Battery has changed over the last few decades?; What do you think the Battery will be like in twenty years.*

Part 3 was based on the five pertinent criteria from *Social Network Theory* called the *Network Strength Scale* (Milroy 1982). Questions were in regards to kin, relatives and friends in the community, past and present employment and frequency of interaction with other community members *(e.g. How many of your family members still live in the Battery, within the same household or in different households?*; *Do you currently work at the same place with any other people from the Battery?*).

Part 4 focused on the criteria outlined by Tajfel (1978) based on *Social Identity Theory.* There were statements regarding the notion of social identity, categorization, and comparison and rely on the perception of the participant (e.g. *I think people from the Battery have different values systems than people from St. John's; People from St. John's negatively stereotype people from the Battery*). It is important to note that the question responses in Part 3 were supplied by the interviewees; however, it was the interviewer who determined, based on those responses, whether or not the participants fulfilled the five conditions based on *Social Network Theory*. In Part 4, the statements were based on the concepts of *Social Identity Theory* and were supplied by the participants who shared their beliefs about each statement on a traditional five-point Likert scale.

4.4. Reading Task

The second elicitation technique used was a reading task of approximately 415 words in length and was adapted from a previous study to measure the use and production of /ð/ (Trofimovich et *al*. 2007). The reading task was employed in

order to probe the use of /ð/, which utilizes an additional style in the formality hierarchy outlined by Labov (1972). Both tasks were recorded via a *Marantz* PM660 portable solid state recorder. Both the questionnaire and the reading task took an average of thirty minutes to complete; however, some of the interviews went on for over an hour. Although the primary means with which the data was collected was through spontaneous conversation and only one task of higher formality, it is assumed that the nature of the questions and length of each interview provided the necessary amount of data to show some semblance of social and/or dialectal representativeness.

4.5. Data Analysis

The ethnolinguistic data were collected via the questionnaires in the recorded interviews. Each participant answered the questions verbally which were recorded and analyzed by the interviewer at a later date. For part 3, which represented the *Network Strength Scale* (Milroy 1976, 1982), there were 18 questions that covered the five indicators. Part 4 of the questionnaire dealt with the *Social Identity* variable (Tajfel 1978). With four primary concepts outlined in the theory, the statements were designed to capture the participants' social identity on a 5-point Likert scale. The linguistic data were analyzed using the *Goldvarb X* statistical program (Sankoff, Tagliamonte, & Smith 2005). All tokens extracted from the interviews were entered into the *Goldvarb* program and investigated in reference to all previously mentioned social and linguistic variables.

5. Results and Discussion

5.1. Results of Goldvarb Runs

In the corpus under investigation, all words containing an underlying /ð/ in either word initial or word-medial position were coded and analyzed. There were 3,795 tokens that were coded as either [ð] or [d]. Of the total number of tokens utilized in the statistical analysis, 1,219 (32%) were realized as [ð] and 2,063 (54%) as [d] (cases of progressive assimilation such as *and then* produced as [æn.nɛn] were discarded from the analysis because this is not a feature characteristic of the Battery). The first Goldvarb run contained all eleven original factor groups and their specific factors. Because of the need to address the persistence of interaction between certain factor groups, various Goldvarb runs were performed. The final significant Goldvarb results ($p > .05$) after the various runs performed are illustrated in Table 1.

Table 1: /ð/-stopping in the Battery Dialect: Final Results

Groups	Factor	Weight	%	N
MOA	Nasals	.23	31	249/792
	Voiceless fricat.	.45	47	110/234
	Voiced stops	.64	61	137/225
	Pause	.49	53	305/575
	Voiceless stops	.68	75	440/589
	Vowels	.67	63	468/741
	Liquids	.67	71	270/381
	Voiced fricat.	.27	33	84/258
POA	Labials	.59	56	97/172
	Dorsals	.53	57	96/170
	Coronals	.45	51	1097/2137
	Vowels	.67	63	468/741
	Pause	.44	53	305/575
Word Position	Word Initial	.52	55	1903/3465
	Word Medial	.35	49	160/330
Word Class	Lexical	.23	46	120/263
	Function	.52	55	1943/3532
Group Status	BNOA	.69	68	266/393
	BNOP	.60	65	615/942
	BNYA	.48	52	432/1013
	BNYP	.36	43	450/1447
Gender	Male	.57	60	1304/2163
	Female	.41	47	759/1632
Formality	Informal	.57	60	1892/3179
	Formal	.21	28	171/616

Table 1 shows that, of the *MOA* factors, the voiced and voiceless stops as well as vowels and liquids preceding /ð/ garner the highest incidences of [d] substitution. In addition, the final results for *POA* show that vowels, labials and dorsals favour the application of /ð/-stopping. Regarding the factor group *Word Position*, word-initial environments prompted the use of [d] as did function words for the factor group *Word Class.* For the factor group *Formality*, the use of [d] was favoured in informal speech significantly more than in formal speech. The social grouping of *Gender* illustrates that men significantly use [d] more frequently than women.

5.2. Discussion of Linguistic Factors

From a phonological perspective, the results obtained for the *POA* and *MOA* factor groups were inconclusive as there were no observable patterns based on natural phonological classes or phonetic phenomena. Let us start with a discussion of the results involving *POA* which, in the spirit of sociolinguistic research, was included in order to comprehensively investigate the application of /ð/-stopping,

and not because we believed it would have an effect on the phenomenon, since the two /ð/ variables share the exact same articulator: the coronal node. As described earlier, this factor group included preceding labials ([p, b, m, etc.]), coronals ([t, d, n, l]), and dorsals ([k, g, ŋ, vowels]) as well as pause. It remains unclear why vowels (.67), labials (.59), and dorsals (.53) favoured the [d] variant in this study, while coronals had the opposite effect with a factor weight of (.45). In sum, whatever *POA* analysis is proposed for the *coronal* [d] variant can also be extended for the other *coronal* [ð].

With regards to *MOA*, there were also no discernable patterns based on the final results. For instance, it was initially hypothesized that forms that share the continuancy feature with /ð/, that is liquids, fricatives and vowels, would facilitate the production of the more standard [ð] because they share the [+ continuant] feature. Conversely, we also predicted that the *MOA* factors characterized by a [-continuant] feature such as stops and nasals would disfavor the production of the [ð] variant, as there would be instability in continuancy between the [-continuant] stop or nasal and the following [+continuant] [ð]. This hypothesis based on continuancy can be explained from an ease of articulation perspective: preserving manner (i.e., the continuancy feature – e.g., "spi[l] [ð]e") is assumed to be comparatively easier than producing two consecutive sounds that differ in continuancy (e.g., ha[d] [ð]e). In this study, the *MOA* factors that favoured [d] production were stops (both voiced (.64) and voiceless (.68), vowels (.67) and liquids (.67), which do not all conform to the predicted pattern.

For the factor group *Word Class,* function words favoured [d] usage (.52; 55%) over lexical words (.23; 46%). Interestingly, Dubois & Horvath (1999) also found similar results in their study on /ð/-stopping in the speech of Creole African American vernacular English (CAAVE), namely that function words favoured a higher usage of [d] (87%) as opposed to lexical words (33%). The likelihood that function words promote greater use of the [d] variant over [ð] can be explained by looking at the *functional hypothesis* (Kiparsky 1972). The *functional hypothesis* predicts that forms that carry semantic meaning (i.e., content words) are more likely to be preserved than those that do not (e.g., function words such as the definite article "the"). In the case of the function word "the", for instance, it is likely that the form would undergo /ð/-stopping simply because it does not carry any function in the language besides that of a definite marker. Bybee's *frequency approach* (2001) has a similar prediction with regards to "the". In her approach, it is assumed that forms that are highly frequent (and therefore highly predictable) in the language are more likely to undergo changes such as /ð/-stopping: their change (deletion or stopping in this case) does not lead to a communicative breakdown, so speakers simply substitute /ð/ because they know that the loss of /ð/ will not cause a lack of understanding.

Regarding the factor group *Word Position,* word-initial environments favoured the production of [d] (.52; 55%), whereas word-medial /ð/ did not (.35; 49%). Due to the high interaction between the factor groups *Word Position* and

Word Class, it was expected that the results of these two variables would be relatively equivalent because there were no significant changes over the course of the analyses when one was not included. In addition, they were also comparatively similar in both their percentages and factor weights. In the current study, there was an overwhelming number of function words as opposed to lexical words (3532 versus 263 respectively) as well as word-initial against word-medial /ð/ words (3465 versus 330 respectively). This highlights the sheer number of function words as opposed to lexical words in everyday conversation as well as the high likelihood of /ð/-stopping in function words in the speech community under investigation.

5.3. Discussion of Social Factors

Based on prior sociolinguistic research, it was speculated that in terms of gender, women would be more conservative in their use of the /ð/ variable, thus favouring the more prestigious [d] variant (e.g., Wodak & Benke 1997). In the results obtained, there was a clear indication that males did use the [d] variant overwhelmingly more than females, with a factor weight of .57 (60%) versus that of females at .41 (47%). Similar patterns have been confirmed in other sociolinguistic studies (Labov 1966, Lippi-Green 1989, Milroy 1980, Trudgill 1972) and specifically in those conducted in a variety of communities across Newfoundland (e.g., Clarke 1985, Colbourne 1981, Reid 1981).

Why this phenomenon occurs in a population such as the Battery can be explained by examining the gender roles of this community. It is likely that women tend to be more conservative with their use of the vernacular because of the different occupational roles of the genders. Until the past few decades, men have typically always worked in the fishing industry in various capacities and women have traditionally been the primary caregivers in the home looking after their children. This is definitely the case for the older Battery natives in this study, where all three of the older female Battery natives never worked outside of the home. In addition, the two older male Battery natives worked in the fishing industry and come from families where fishing goes back generations. On that note, because the men all worked together, there may have been more pressure for men to display their solidarity through vernacular forms (e.g., Eckert 1989, Trudgill 1972). For instance, it could be the case that because the Battery was socially segregated from the rest of St. John's and its residents were often stereotyped negatively, the men may have felt the need to exert their unity by an increase in vernacular speech, specifically a high percentage of /ð/-stopping.

Even though the younger generation of Battery natives does not abide by the same conventional gender roles as the older generation did, they were all raised in such households. However, there is still some semblance of the traditional gender roles found with the younger generation of community members. It was found that the younger generation of Battery women did make the choice to stay home for a number of years to raise their children, and the younger generation of Battery men in this study has similar occupational roles as the previous generation, as general labourers. A number of the men still do work

together, as one Battery native explained to me that there are about half a dozen current natives that work together at a shop in St. John's.

It has been widely accepted in standard sociolinguistic research that, with regards to formality, less prestigious forms are more likely to occur more frequently in informal stylistic environments. As discussed in the previous section, this is exactly what happens with the variable phenomenon of /ð/-stopping, in which [d] usage increases in less formal speech (in this study characterized by free conversation). Moreover, there were only two types of style from the style continuum explored because it was speculated that some of the older natives might not be able to read and that some participants may be unwilling to complete tasks of this nature. Although this was the case because half of the participants did not take part in the reading task for various reasons, results confirmed that the non-standard variant [d] is heavily favoured in informal rather than formal speech (with factor weights of .57 versus .21 respectively). This finding corresponds to the results of other sociolinguistic studies that looked at speech style (e.g., Eckert 1989, Trudgill 1983).

It was evident that there were noteworthy interactions between the factor groups *Formality* and *Gender.* Figure 2 shows that in informal speech, men and women had high (and relatively comparable) percentages for their use of [d] at 64% and 54% respectively. However, there was a substantial difference in formal speech, with men using the [d] in 42% of the words and women using the [d] variant at only 9%. It is important to note that of the twelve participants, three females and two males did not do the more formal reading task, leaving only three females and four males having participated in that portion of the study. Accordingly, the results of *Formality* are possibly less reliable based on the unbalanced number of participants who took part in the reading task.

Figure 2: /ð/-stopping by Gender and Formality
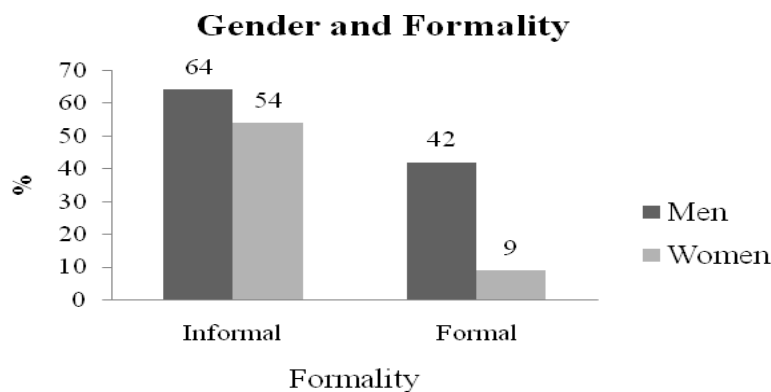
In addition, there appeared to be an interesting relationship between *Gender* and *Word Class.* Males and females patterned relatively similarly in their percentage of [d] usage in function words (60% versus 48% respectively). However, there was an overwhelming difference between males and females with respect to the use of [d] in lexical words, with 67% of males' lexical words using the localized

form compared to that of only 23% of the females' lexical words. This stark difference illustrated in Figure 3 shows that women of both generations, may potentially make more of an effort to pronounce lexical words with greater caution or concern with mirroring the standard /ð/.

Figure 3: /ð/-stopping by Gender and Word Class

Gender and Word Class
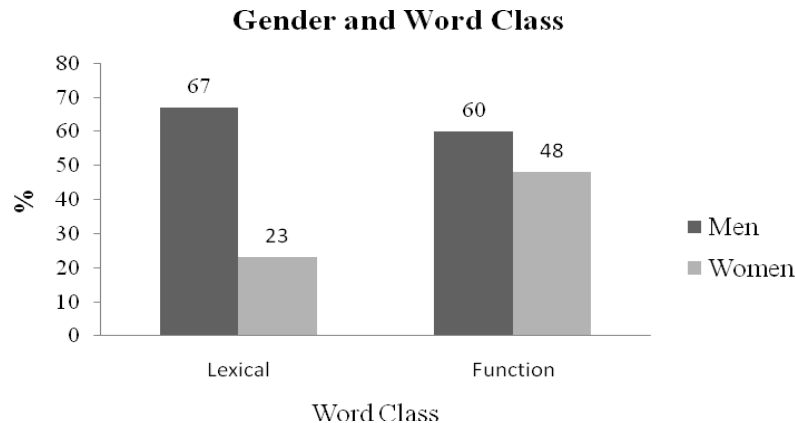
Turning now to the *Group Status* factor group, it was hypothesized in this study that the use of the less prestigious [d] would vary depending on one's *Group Status*. The use of [d] would decrease from the older Battery natives to the younger Battery natives, demonstrating an intergenerational shift. In addition, it was expected that the decrease in their use of [d] would also be evident in groups living outside of the community as opposed to those that have remained in the community so that the use of [d] decreases from BNOP to BNOA to BNYP to BNYA (see the continuum illustrated in Figure 1). This hypothesis was motivated by the *weak tie model* (Milroy 2002), which posits that the most mobile individuals have weak ties, and "as a consequence of their mobility occupy a position marginal to any given cohesive group, [and] are in a favourable position to diffuse innovation" (219). Thus, we anticipated that each participant's questionnaire responses would determine their *Social Network* and *Social Identity* and, accordingly, there would be a move towards a more standard speech of the weak members, those with a periphery status.

The factor group *Group Status,* however, posed a number of problems in the analyses and proved to be an unreliable independent variable. The BNOA group only contained one individual, a male, which may explain that his tendency to use [d] more frequently than the BNOP group (which contained three women and one man), was possibly based on gender and not his group status. Accordingly, the group status classification itself is questionable because even though the BNOA participant has lived outside of the Battery for almost 30 years and raised his family in St. John's, he still frequents the area on a daily basis to "escape the city life of St. John's". Based on my conversation with the BNOA participant, it was obvious that this participant is as connected to this community

as anyone else in the area, which was also evident by his classification as having a closed social network and a community-based identity.

In general, *Gender* proved to be a more reliable social factor group than *Group Status*. For instance, one's gender was presumably not subjectively decided upon as was *Group Status*: each participant was categorized as male or female without question. In addition, gender was evenly distributed in this study such that there were six males and six females as opposed to *Group Status* which had four groups and an uneven distribution of participants in each of the respective groups. The classifications of absent versus present might have been unfruitful based on the imbalance of gender as well as the subjectively derived concepts of group affiliation and contact. However, the intergenerational differences found in /ð/-stopping were still quite evident based on the factor weights of [d] usage in the second Goldvarb recode, as is illustrated in Figure 4.

Figure 4: /ð/-stopping by Group Status

Group Status and [d] Usage
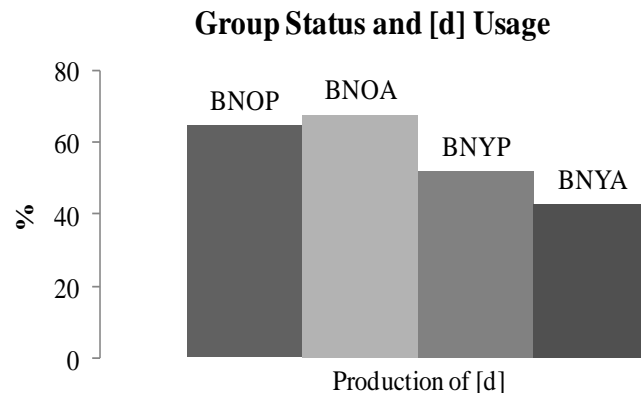
The elimination of the factor groups *Social Network* and *Social Identity* warrants further explanation due to their theoretical significance in this study yet lack of significance in the Goldvarb analyses. At the conception of this study, one of the goals was to take a comprehensive look at the Battery community and investigate the community networks, social identities and dialect of this once socially isolated community. The assumption that the breakdown of the *old* Battery community and relocation of some of the natives would potentially affect the network strength and individual identities were disproven based on the questionnaire responses. Of the twelve participants, only two (one BNOP and one BNYA) were categorized as having neutral social networks and social identity. The other ten participants were categorized as having closed social networks and community-based identities. None of the participants were categorized as having open social networks or individually-based identities.

The BNOP individual with the two classifications in question was not born in the Battery and spent the early part of her formative years in a small town outside of St. John's. Although she married a Battery native, raised her four children in the community and still lives there after more than 40 years,

interestingly, she considers herself less "native" than many of the other older community members. Moreover, the BNYA male with the same two classifications revealed he had a somewhat tumultuous childhood which may have potentially caused his social network and identity to be compromised and become less stable as those of the other participants. While the factor groups *Social Network* and *Social Identity* were proven less useful when looking at them in terms of the stratification of /ð/, they were seen as ideal in terms of analyzing this community and its members as being part of a cohesive unit, regardless of residence. In the same way, *Social Network* and *Social Identity* were not linked to residence and consequently one's *Group Status*, nor did the two factor groups determine the amount of /ð/-stopping.

With a plethora of factors and factor groups to work with, there were noticeably a number of Goldvarb runs and a host of methodical issues to address during the analysis. Furthermore, it is acknowledged that there are presumably a host of additional intervening variables not investigated here that play a part in the speech of the Battery natives. However, the results obtained here clearly show a number of significant factors that have emerged as contributing to the variable phenomenon of /ð/-stopping, both extralinguistic and linguistic in nature.

6. Conclusion

6.1. Concluding Remarks

The change in the social structure of Newfoundland as a whole has been somewhat mirrored on a micro level in the Battery community. Because of the complexity of this changing community, one of the aims of this study was to investigate whether the Battery natives would pattern like enclave community members in low-status communities or like those living in heterogeneous areas where there is much greater exposure to Standard dialects. The focus of this study was to look at this changing community and uncover what defines the *new* Battery era with respect to community structure, identity and dialect.

While it was a general goal to discover what extralinguistic and linguistic factors would trigger the production of the two variants of /ð/, it was a specific goal to see how this behaved across the four Battery groups under investigation, namely BNYP, BNYA, BNOP, and BNOA. Although some of the findings were less than ideal in terms of reliability, there were numerous results that were quite interesting. The most unexpected results were the significant factor weights and percentage differences in the use of [d] in terms of gender and how the two genders patterned with respect to formality (specifically in formal speech) and word class (specifically in lexical words). The stark differences in formal speech and specifically with lexical words highlights just how different the genders are in terms of [d] production, or perhaps more importantly, *lack* of [ð] production. While men use the [d] variant less in their formal speech, exhibiting that it is common to be more standard in formal speech, women exhibit *much more* careful speech in a formal reading task.

There were some intriguing findings with *Group Status* although this factor group was somewhat capricious. It was believed that due to the change in social structure and mobility of the younger Battery generations, stratification would most likely occur within the two groups of younger natives (BNYP and BNYA over BNOP and BNOA). It was further speculated that not only would the younger groups display less /ð/-stopping, but those participants who have remained in the community would have a stronger link to the core community network. It was shown that the younger generations (BNYP and BNYA) did in fact use the [d] social marker less than the older groups (BNOP, BNOA). However, it was a pleasant surprise that the latter theory was not proven correct. The majority of participants still identified strongly with the Battery community and Battery identity, regardless of where they lived. It appears that weak ties in the physical sense had no bearing on the emotional ties that these community natives shared, despite what they might have thought at a younger age when they left. Although there were some problematic aspects to *Group Status*, further study with a greater number of participants for each group may resolve some of the challenging issues and lend more credibility to the factor overall.

The linguistic results of this study were less than ideal, mainly in terms of confirming my initial hypotheses regarding the *MOA* and *POA* factor groups: there were no observable patterns that fit with pre-existing theories proposed for the analyses of phonological phenomena. For example, the expected results for *MOA* were not confirmed because there was no observable pattern based on continuancy, as we hypothesized. The picture was more promising for the remaining linguistic factors included in this study, namely *Word Position* and *Word Class.* Results for both confirmed typical outcomes from other sociolinguistic studies, whereby the word-initial /ð/ segment undergoes [d] substitution more frequently when it appears word-internaly. In addition, *Word Class* followed a similar predictable pattern showing that function words are more likely to undergo /ð/-stopping as opposed to lexical words, a phenomenon that may be explained via the *functional hypothesis* or the *frequency effect*. Despite some of the inconclusive conclusions, the results, indeed, confirmed that the application of /ð/-stopping is motivated by a variety of linguistic and extralinguistic factors. Accordingly, the phenomena of /ð/-stopping proves to be present in the unique Battery community as it has been in other areas of Newfoundland. Since the future of the Battery is in question due to the changes in both the social and physical structure over the past few decades it remains, for the time being, an ideal enclave for dialectal research.

6.2. Limitations

By far, the greatest limitation of this study is the small number of participants. Although twelve is an adequate number to study certain linguistic phenomena under special conditions (e.g. small speech communities), the fact that there were four groups under investigation meant that each group was only made up of a few individuals. It would have been ideal to have more participants overall, but

specifically for each group observed. This would have allowed for the results to be more reliable, thus making them more generalizable to the community as a whole, as well as other comparable communities across Newfoundland.

Another limitation of this study is that not all of the participants completed the formal reading task. Two BNY and three BNO did not participate in the formal reading task, leaving only five BNY and two BNO to be measured by this factor. Reasons for not completing the task ranged from an inability to read, not having reading glasses on hand and, in one case, simply refusing to do it for unknown, unstated reasons. This issue was anticipated in the conceptualization of the study, which was partly why we chose to have the questionnaire read aloud and have the participants answer orally. A more general limitation commonly found with linguistic studies is the possibility of there being a number of intervening variables that could potentially affect the speech patterns of some or all of the participants.

6.3. Future Research

For further study in this area, it would be interesting to study the next generation of Battery natives. Although this younger generation would presumably not have grown up in the 'old' Battery era, it would be appealing to see how they pattern in terms of network affiliation, social identity and use of the social marker [d]. For example, in another well known study looking at changing communities and the strength of social networks, Dubois & Horvath (1999) looked at a third generation of their community of interest. What they found was a distinct V-shaped pattern, whereby the third generation identified with the older generation, possibly to showcase their pride in their heritage despite not living in the area when it was a socially isolated and marginalized community.

Additionally, it would be ideal to include, in a future study, participants from the Battery who live outside of the community and do not share any community bonds nor have any good feelings about being from the community. Of all the participants interviewed, there was only one who confirmed that they had a family member who had negative feelings about being from the Battery and did not even like to visit the community. Of course, the most important reason for future research in the Battery is that the spate of gentrification and urbanization affecting this community is becoming increasingly evident as time goes on. It is imperative that more community members are interviewed, especially those older Battery natives that will likely be gone in the decades to come.

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