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There and Back Again: How Labour Mobility Impacts Community Development in Source Communities

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Abstract

Across Canada, mobile workers are involved in a variety of commute patterns, ranging from short, daily periods of travel by car, to longer commutes lasting an hour or more each way. Increased emphasis on labour mobility within the social sciences over the past two decades has led to new understandings of how the commute impacts workers and families, although there has been particularly little noted on how labour mobility impacts communities. Using Vale's nickel processing facility in Long Harbour, Newfoundland and Labrador, Canada as a case study, this research identifies how labour mobility impacts community development in source communities. Literature has suggested that people involved with extended daily commuting have less time to be actively involved in the communities where they reside (source communities). While there are exceptions, this research primarily supports these claims, and discusses how mobile workers that commute over 50km to their worksite are less involved in volunteering, community engagement, and charitable giving in their source communities.

Keywords: Community Development, Community Engagement, Labour Mobility, Volunteering, Charitable Giving, Philanthropy

1. Introduction

An ever-growing number of North Americans are involved in various commute patterns for work, ranging from positions that involve being mobile while working, such as truck drivers, pilots, and deckhands, to those that travel to get to a worksite, such as athletes, health care professionals, miners, as well as otheroccupations involved in resource-based industries.These commutes often involve multi-modal travel arrangements across a region, province, country, or internationally, and can last for a period of days, weeks, or months.

Historically, workers employed in the Newfoundland and Labrador (NL) fisherywould travel to Labrador during the summer months for work and subsequently return home to their Newfoundland communitiesfor the winter.Further cases of mobile work arrangements increased over the decades that followed, commonly tied to the province's rich resource-based sector (MacDonald et al., 2012; Skeard, 2014; Hall, 2014).More recently, however, the Government of Canada enforced a cod moratorium in 1992 to halt the offshore cod fishery, resulting in the layoff of 30,000 NL workers, predominantly located in rural communities (Bavington and Kay, 2007; Higgins, 2008). This policy shift had significant negative repercussions for NL, where the province's population declined by over 10 percent over the 10 years that followed, as residents were forced to find employment elsewhere (Shrimpton and Storey, 2001; Higgins, 2008; Statistics Canada, 2010). In an effort to address the critical economic void left by the cod moratorium, the Government of Newfoundland and Labrador utilized two key economic development strategiesto diversify the economy: extractive development, seen through the development of the offshore NL oil and gas sector; and attractive development, where the development of tourism opportunities in rural NL were emphasized (Stoddart and Sodero, 2014). Despite these opportunities, employment options started becoming increasingly unavailable, and to provide for their families, residents had no choice but to engage in mobile work arrangements and travel outside the province for work (Storey, 2010).

Scholars have noted that commuting for work has been used as a strategy for survival in many rural communities as it provides an opportunity for residents to continue living where they desire within the province (MacDonald et al., 2012; Skeard, 2014). This paper seeks to reaffirm these claims, and evaluates the implications of extended daily commuting on community development in predominantly rural source communities.

2. Theoretical Considerations

The increased emphasis of labour mobility, particularly in the social and cultural context of mobility, led to what has been referenced as the 'mobilities turn' in literature throughout the 1990s and 2000s (Van Den Abbeele, 1992; Kaplan, 1996; Clifford, 1997; Urry, 2000, Sheller, 2011; Urry, 2012). Developing new knowledge on mobility studies has gained interest internationally, with research institutes in Australia, the United Kingdom, Canada, and the United States devoted to understanding mobility and its implications on society. As such, scholars have noted many theoretical conceptions of labour mobility, on a spectrum that can differ from daily commutes – albeit shorter or longer lengths – to extended absences which can involve international, oversea travel (Haugen, 2005; Temple *et al.*, 2011).

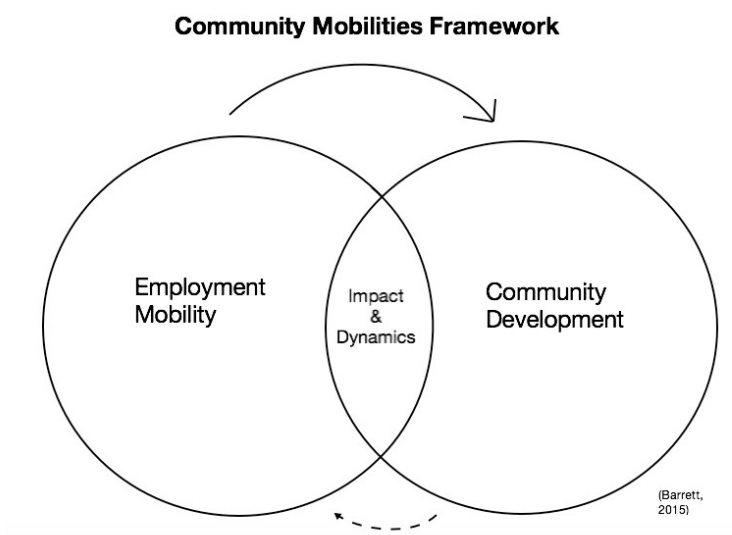


Figure 1. *The Community Mobilities Framework (Barrett, 2017).*

Particularly useful for this research is the framework established through employment-related geographical mobility (Haan et al., 2014; Roseman *et al*., 2015) and it's intersections with theories of community and regional development (Minnes and Vodden, 2019), which ultimately seeks to understand how places and regions are transformed by residents engaged in labour mobility. While frameworks to assess the intersection of labour mobility and community development continue to evolve, the 'Community Mobilities Framework' (CMF) established by Barrett (2017) is notably important for this study. As noted in Figure 1,the CMF acknowledges the overlap oflabour mobility (i.e. fly-in fly-out, drive-in drive-out, daily commuting) and community development, whether it be top-down or bottom-up approaches to community building or economic investments. The CMF suggests that much is known across literature about labour mobility and community development in each of their respective fields. Yet, once the two fields overlap, further consideration needs to be provided through the impacts and the dynamics in which labour mobility has on community development. Alternatively, further consideration could be provided on whether community development in fact affects labour mobility in future study. Through the lens of the CMF, this research will assess the capacity individuals engaged in labour mobility have to positively contribute to community development in their source communities.

Much research on labour mobility has examined the implications of the commute on health (Dembe et al., 2005; Henry et al., 2013)and family life (Carrington,Hogg, and McIntosh, 2011; Joyce et al., 2013). Of existing research on communities, much work has been done on how host communities – communities where the worksite is located – are impacted by labour mobility (see, for example, Storey, 2010;Ferguson, 2011; Walsh, 2012). Source communities, or communities where workers permanently reside, have been evaluated less closely, although there has been some research ongoing in recent years in Australia (see, for example,Haslam McKenzie&Hoath, 2014; Milbourne and Kitchen, 2014). Notable impacts for source communities suggest that mobile workers can reside where they choose and continue to earn an income despite limited options for employment available locally. Yet, often there is the perception that families of mobile workers have increased disposable income, creating tensions particularly within rural communities among residents and business owners and as a result negatively affect community cohesion (Sibbel, 2010). While these findings may be true for Canada and for NL, there is a resounding gap regarding the implications of labour mobility on source communities(Vodden, 2015; Porter and Vodden, 2012) and virtually no information available regarding how mobile workers participate in their source communities while home (Esteves, 2008; Hall, 2014) despite being a noted gap in literature (Markey et al., 2015; Porter, 2016) further warranting the justification for this study.For the purposes of this research, given its potential to impact the livelihood and wellbeing of source communities, community developmentrefers to the many social, economic, cultural, physical, environmental, and occasionally political circumstances that occur and how these circumstances affect the development of a community or region (Minnes and Vodden, 2019).

This paper focuses on three primary methods to build communitydevelopment in any given source community: through volunteerism, community engagement, and charitable giving. Volunteering brings residents of all lifestyles in a community together to work on a common project or objective, thereby increasing the reciprocity, social trust, and sense of belonging to a community (Turcotte, 2015).Scholars have previously documented that active engagement in the community, through events or community services such as recreation and entertainment, can positively contribute to social development within communities (Barrett and Gibson, 2013; Turcotte, 2015; Gibson and Barrett, 2018). Engagement in the community – whether it is through volunteering, recreational activities, community events, or other modes of involvement, also helps develop a sense of place in communities (Sandow and Westin, 2010) which can also develop a greater propensity for community development (Sivan and Ruskin, 2000; Bertotti et al., 2012). However, those involved with mobile work typically have less time made available for volunteerism, church, and participating in organized sports from mobile workers(Besser and Ryan, 2000; Francis, 2012; Ryser et al., 2015; Markey et al., 2015). Other studies have suggested there is a correlation between the hours an individual works per week and the amount they participate in extra-curricular activities, suggesting workers that work more hours typically spend any remaining spare time with family and maintaining the household instead of participating in organized community activities (Ezzedeen and Zikic, 2015; Hilbrecht and Lero, 2014).

Charitable contributions to community groups and non-profit organizations also have positive implications for communitydevelopment (Gibson and Barrett, 2018). In NL, using Canada Revenue Agency (CRA) data, residents have the highest percentage of the population aged 15 and older contributing to philanthropy, when compared to all other provinces and territories in Canada, since 2007. This includes 92% of the population making a applicable donation in 2010, and 87% donating in 2013, compared to the national rates of 84% and 82%, respectively (Barrett and Gibson, 2013; Turcotte, 2015). Moreover, researchers have documented that individuals are more likely to donate if they have higher incomes (Clerkin *et al.*, 2013; Turcotte, 2015).

3. Case Study and Context

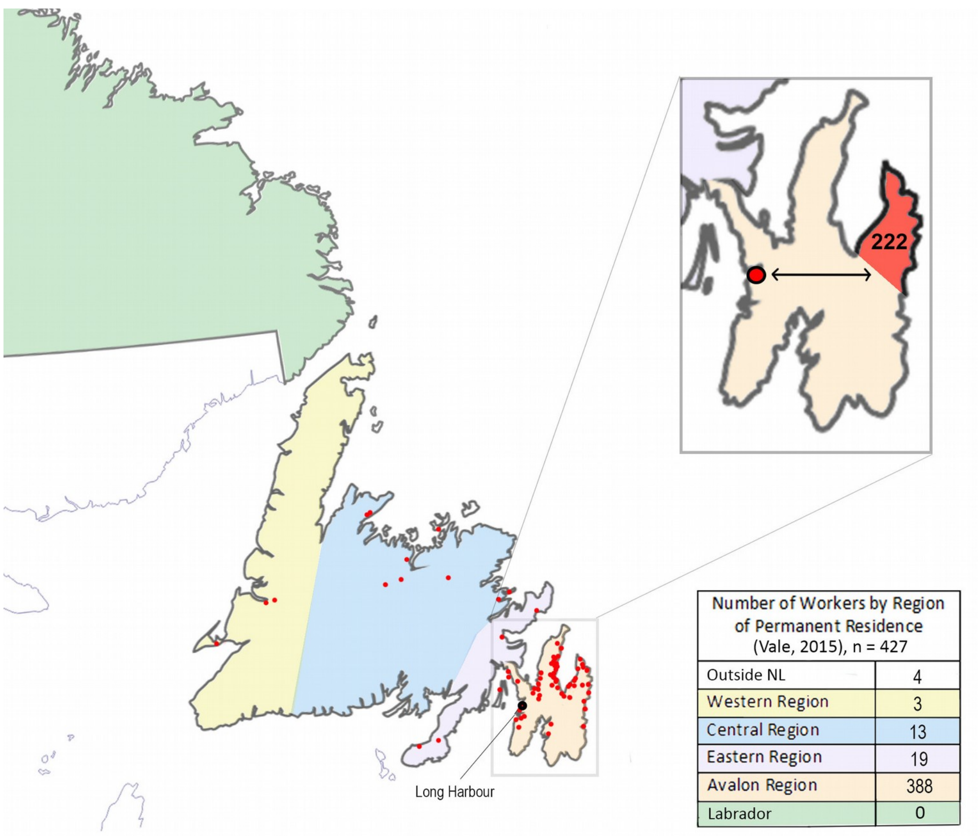
The case of reference is the workers employed at Vale's nickel processing facility located in Long Harbour-Mount Arlington Heights, Newfoundland and Labrador, Canada (hereafter referenced as Long Harbour). The community was settled between 1810 and 1812, and during the 1970s it reached its peak population of close to 700 residents (Legge, 1983; Hall, 2014). Since then, however, the population has gradually declined: by 2006, the population had fallen to 211, and while it had increased to 298 citizens in 2011 (after the establishment of the nickel processing facility) it has since decreased once again to 185 residents by 2016 – its smallest population in decades (Statistics Canada, 2017). Approximately

11km from the Trans Canada Highway (TCH) and 113km from St. John's – the capital city of NL and the most populated community in the province – the road infrastructure and proximity of a major urban centre makes it possible to commute to Long Harbour on a regular basis.

In 2006, Vale NL announced that it would establish a nickel processing facility at a former phosphorous site in Long Harbour (VBNC, 2006). The agreement between the Province of Newfoundland and Labrador and Vale legislated that a research and development program must be conducted prior to the development of the new plant, which lasted from 2005 to 2008 and took place in Argentia (RSNL, 2014). However, with increased accessibility to the harbour and dock, Long Harbour was ultimately selected for the establishment of the permanent facility (VBNC, 2006; VBNC, 2007). Construction of the plant started in 2009, employing up to 6,000 people at its peak (Hall, 2014). The facility is now fully operational and employs approximately 475 people in operations.

Long Harbouris in proximity of other industrial activity in the Avalon Isthmus region. Examples of ongoing activities in the region include an oil refinery located in Come by Chance, a transshipment port for oil and gas in Arnold's cove, the current construction of the GBS for the West White Rose offshore oil project at Argentia, and the Bull Arm Fabrication Site, which is crown land dedicated for industrial activity near Sunnyside. These projects employ thousands of individuals in a variety of capacities, many of which are involved in alternative commute arrangements, ranging from daily commutes to multi-week rotations. Prior to the increased emphasis of industrial activity throughout the region post-2005, close to 40% of the labour force worked in predominantly seasonal positions, which include employment in the fishery, agriculture, fish processing, tourism, and the service sector (Lysenko and Vodden, 2011). Despite the significant contribution the increased industrial activity has on local employment, the required skills for these positions and what is available within the local labour market (i.e. Long Harbour) are not always available, contributing to the large presence of labour mobility associated with projects across the region (McQuaid, 2006; Devins and Hogarth, 2005; Lysenko and Vodden, 2011).

Figure 2 presents a map of the source communities of the Vale plant workers. This map features the source communities of all 429 nickel processing plan employees as of July 1, 2015 using data provided to the research by the company after the data collection process was complete. The St. John's Census Metropolitan Area (CMA)[1] is the permanent place of residence for 222 Vale plant workers, or 52% of the workforce. In comparison, 58% questionnaire respondents indicated they commute from the CMA to the worksite. Depending on the length of the commute and their work schedule, the way an individual contributes to the community development of their source community will differ.



Number of Workers by Region of Permanent Residence (Vale, 2015), n = 427	
Outside NL	4
Western Region	3
Central Region	13
Eastern Region	19
Avalon Region	388
Labrador	0

[1] The St. John's CMA consists of 13 municipalities: St. John's, Mount Pearl, Paradise, Conception Bay South, Portugal Cove-St. Philips, Petty Harbour-Maddox Cove, Torbay, Logy Bay-Middle Cove-Outer Cove, Bauline, Pouch Cove, Flatrock, Bay Bulls, and Witless Bay.

Figure 2. *The permanent place of residence of nickel processing employees as of July 1, 2015. The St. John's CMA, the source communities for 222 workers, is highlighted in red in the top right. (Map developed by Leanna Butters)*

The daily commute of Vale plant workers can range from less than 15 minutes one way, to greater distances (over 50km) and lengths lasting up to and over one hour in each direction. Commutes are also compounded with work schedules -at Long Harbour, shifts include a standardized 8am-4pm Monday to Friday workweek (typical for managerial staff), to a compressed roster-based work schedule, which include rotating 12-hour day and night shifts and weekend work. For these rotations, the shift operates on a 28-day cycle, where an individual works four days on, has six days off, works four overnights, followed by another four days off. The next six days includes three day shifts followed by three night shifts, with another four days off to finish the 28-day cycle.

Much literature has suggested different interpretations when measuring labour mobility. These thresholds can include distance to the worksite, ranging as low as 35km (Sandow and Westin, 2010) and upwards to 400km (Skilton, 2015), while some authors consider the time spent travelling to the worksite more significant (Storey, 2010). Previous research has also monitored patterns of the commute in NL. Freshwater (2008) noted that rural Newfoundland residents commute between 5 and 135km daily. Predominantly, over 90% of the NL population travels under 50km to their place of employment one way and that for those who commute within NL, "virtually no workers commute over 100km" (Freshwater et al., 2011: 13). Those that do travel over 100km to work are the exception, where people are primarily involved in industrial projects on the Avalon Isthmus such as the Long Harbour project, as well as other ongoing activities at the Bull Arm site near Sunnyside and the Argentia site near Placentia (Hall, 2016; Barber, 2016). This research uses the 50km threshold to determine whether workers are involved with long or short commutes. This threshold backs up previous literature, particularly in the NL context as well as across Canada, and aligns with Vale's definition the company uses to report on their workforce (Stevens, 2014). Union contracts and negotiations also use the 50km radius – notably in trades that are involved in industrial development – as well as provincial industrial development agreements (Keating and Synard, 2016).

Undeniably, the nature of rural studies is not a cookie cutter approach, and that what may be considered rural in NL may not be considered rural in Europe, or Asia, or even other parts of Canada. Two primary tenants often used to understand rural is the density of the community and its distance to a more metropolitan area. For the case of Long Harbour and its surrounding communities, it is a predominantly rural context. As such, all things associated with rural are involved, such as lack of transportation to the worksite, long drives on the highway, lack of infrastructure near the worksite – all motivators of the commute. For this particular research, for this understanding of rural, the 50km threshold is a useful understanding of shorter versus longer commutes. Hence, this study will separate those that commute more than 50km and those that commute less than 50km to the worksite, and comparatively contrast how workers are involved in community development between the two groups.

4. Methodology

To determine the extent to which Vale plant workers affectcommunitydevelopment in their source communities, a mixed methods approach was utilized. Mixed methods are used throughout the social, behavioural, and health sciences which allows researchers to obtain both quantitative (closed-ended) and qualitative (open-ended data). By integrating the two datasets, there is increased strength to drawing interpretations and understanding complex research problems (Cresswell, 2015). In particular, this case study gathered information through triangulation by conducting an employee questionnaire, semi-structured interviews, document review, and engaging in participant observation. Gathering and analyzing data from the questionnaire helped determine key gaps that the semi-structured interviews were subsequently able to address. Similarly, the qualitative interviews provided opportunities for research subjects to explore their ideas in greater detail without the limitations of closed-ended questions. Combining the use of both quantitative and qualitative research methods has been noted as particularly useful when studying people in socio-economic research, which enhances the reliability and validity of this study (Abusabha and Woelfel, 2003; Bogdan and Biklen, 2006; Othmar, 2009).

Prior to distributing the questionnaire, the researcher was informed that 400 individuals were currently employed at the nickel processing facility in Long Harbour. As such, 400 questionnaires were distributed and 131 completed questionnaires were mailed back, providing a completion rate of approximately 33%. A study conducted by Hardigan, Succar, and Fleisher (2012) indicate that 26% is an average response rate for mail-out surveys, making a 33% responses rate appropriate for this research. Of these 131 respondents, 105 travel more than 50km to get to Long Harbour, with 26 individuals travelling less than 50km to get to the worksite. Following the questionnaire, 21 semi-structured interviews took place to allow individuals to explore their perspectives in detail. Pseudonyms are used throughout this paper to protect the identity of respondents. Other methods used over the course of the research include participantobservation, where the author would commute to and from the Long Harbour site, and document review, particularly local, national, and international company materials and reports. Subsequent to completing the data collection process, data analysis was utilized. This involved using descriptive statistics to measure the quantitative data, while thematic coding of the interview transcripts determined key trends and results from the qualitative data, a best practice noted by several scholars (Howitt and Cramer, 2007; Othmar, 2009; Mistry, 2012). All methods complimented the research design and enhanced the analysis and results.

The development of the data collection tools was based on previous research, ongoing research in the region, and the research questions. The questionnaire was broken into four sections: commuting and work, non-work time, spending, and demographic information. The duration of the interviews ranged from 17 minutes to 61 minutes. Interview transcripts were manually coded into nine themes: community, commute, family, government, labour market, money matters, safety, sense of place, time spent home, and Vale.

Particular limitations from the research findings includenon-responsesand not applicable responses from the quantitative data, which may not provide a full representation of the questionnaire respondents. 'Not applicable' was a response provided forvarioussurvey questions to allow respondents an option to choose in the event the question was not relevant for them. However, it is possible that respondents selected not applicable for other reasons that are not identified in this study. Further, rationale for non-responses on various questions were not provided by respondents, and could suggest that they did not understand the question, it was not relevant to them, or other factors which could potentially limit this study.

5. Results and Discussion

The following section discusses the way mobile workers impact communitydevelopment in source communities is complex, ultimately depending on not only the length of their commute but their work schedule and pre-existing relationships within the community.

I. Volunteerism

Scholars have noted how volunteerism brings community residents, regardless of their background, to work towards a common goal or objective (Bertotti et al., 2012). For this research, volunteers are individuals that provide a service, without financial compensation, to organizations such as schools, religious institutions, sports, or community associations. As this section notes, labour mobility does have negative implications for volunteer rates in source communities, particularly for those with longer commutes.

Of the 131 questionnaire responses, only 28% noted they had volunteered in their local communities in the past six month. When evaluated separately, 22% of those that commuted over 50km to the worksite were active volunteers compared to those with shorter commutes (under 50km) at 54%. It is interesting to note that the national volunteer rate is at 44%, with the rate in NL slightly higher at 46% (Turcotte, 2015). By these standards, individuals with shorter commutes have better-than-average volunteer rates compared to both provincial and national rates, whereas those with longer commutes are typically well below the national and provincial averages. Here, one can see how those engaged in longer commute arrangements affectcommunitydevelopment in source communities. Highlighted in Table 1 is the different types of volunteer activities Vale plant workers are involved.

Table 1.*Have you volunteered in your local area in the past six months?*

Response	Activity	Total Respondents (N=131)	Respondents that commute more than 50km (N=105)	Respondents that commute less than 50km (N=26)
Yes		37 (28%)	23 (22%)	14 (54%)
	Recreation	23 (18%)	13 (12%)	10 (38%)
	Church	9 (7%)	3 (3%)	6 (23%)
	School programs	6 (5%)	5 (5%)	1 (4%)
	Fire department	6 (5%)	3 (3%)	3 (12%)
	Lions/Service Club	2 (2%)	0	2 (8%)
	Municipal politics	2 (2%)	1 (less than 1%)	1 (4%)
	Canadian Blood Services	1 (less than 1%)	1 (less than 1%)	0
	Special Events Committee	1 (less than 1%)	1 (less than 1%)	0
	Bowl for Kids	1 (less than 1%)	1 (less than 1%)	0
	First Lego League	1 (less than 1%)	1 (less than 1%)	0
	Psoriasis Society of NL	1 (less than 1%)	1 (less than 1%)	0
	Fundraisers	1 (less than 1%)	1 (less than 1%)	0
	Scouts	1 (less than 1%)	1 (less than 1%)	0
	SPCA	1 (less than 1%)	1 (less than 1%)	0
	Musician	1 (less than 1%)	1 (less than 1%)	0

No		94 (72%)	82 (78%)	12 (46%)

Another avenue to determine the extent in which mobile workers are engaged in volunteerism in their source communities is to understand whether they spend more, less, or the same amount of time volunteering since being employed at the nickel processing facility.As Table 2 suggests, most respondents spend the same amount of time volunteering in their source communities before and after starting a position at the Vale plant. Another relevant response is the number of individuals that specified not applicable, which could likely indicate that they do not volunteer at all and thus has not changed based on their employment. Perhaps most striking from this data is when those with longer and shorter commutes are compared, where 29% of respondents that travel more than 50km to work suggest they have less time to volunteer whereas 15% of those that commute less than 50km have less time to volunteer. In fact, 8% of those with shorter commutes actually spend more time volunteering in their source communities since starting their employment at the nickel processing facility.

Table 2. Do you spend less, the same, or more time volunteering since you have started working at the nickel processing facility?

Amount of Time	*Total Respondents (N=131)*	*Respondents that commute more than 50km (N=105)*	*Respondents that commute less than 50km (N=26)*
Less time	34 (26%)	30 (29%)	4 (15%)
Same time	47 (36%)	33 (31%)	14 (54%)
More time	2 (2%)	0	2 (8%)
Not applicable	44 (34%)	40 (38%)	4 (15%)
No response	4 (3%)	2 (2%)	2 (8%)

There are several reasons survey respondents and interviewees provided to explain this phenomenon. The reason cited most often by those who have spent less time volunteering since beginning work at the plant was their lack of available time in the evenings due to a combination of their work schedule and length of commute. With a 12 hour work day and a journey to and from work lasting more than one hour each way, other workers indicated that they are simply too tired to be active in the evenings. The available time they do have in the evening is usually spent maintaining the household and spending time with their immediate family. These responses are consistent across those involved in both shorter and longer commutes. Others have suggested that they have more time to engage in volunteerism due to their commute, even those that commute over 50km one way, as previous work arrangements would require them to travel outside the province and keep them away from their source communities for longer periods of time.

While there is little existing research to reaffirm if this is similar across other case studies, literature has suggested how actively volunteering in your community builds social development and positively contributes to community development (Bertotti et al., 2012). In some cases, the commute patterns and work schedule of Vale plant workers allows them to volunteer. In most cases, as scholars have noted in the past, increasedlabour mobility leaves less time for volunteering,which can have a detrimental impact to community development in source communities(Besser and Ryan, 2000; Francis, 2012; Ryser et al., 2015; Markey et al., 2015).

II. Community Engagement

Similar to volunteerism, literature has documented that community engagement through the participation in community events and activities can contribute to social development within communities and nurtures a residents' sense of belonging to their community (Sandow and Westin, 2010; Barrett and Gibson, 2013; Turcotte, 2015). This study suggests that, similar to findings related to volunteerism, those involved with longer commutes have less time to engage in their source communities.

The way residents engage in their community is also contingent on the nature of their commute. While 73% of respondents indicated that they actively engage in various community activities and events in their source communities, the rates differ depending on the length of the commute.Participation rates were as high as 81% for those that commute less than 50km to work, yet fall to 70% for those that commute over 50km. Noted in Table 3 are the various activities workers take part in their source communities.

Table 3. *Types of local activities questionnaire respondents participate in.*

Activity	*TotalRespondents (N=131)*	*Respondents that commute more than 50km (N=105)*	*Respondents that commute less than 50km (N=26)*
Recreation	68 (52%)	52 (50%)	16 (52%)
Community Festivals	50 (38%)	38 (36%)	12 (45%)
Holiday Parades and Festivities	43 (33%)	31 (30%)	12 (46%)
Fundraisers	27 (21%)	17 (16%)	10 (38%)
Church	20 (15%)	12 (11%)	8 (31%)
Bingo	2 (2%)	1 (less than 1%)	1 (4%)
Red Cross	1 (less than 1%)	1 (less than 1%)	0
Social Events	1 (less than 1%)	1 (less than 1%)	0
Hobbies	1 (less than 1%)	1 (less than 1%)	0
Outdoors	1 (less than 1%)	1 (less than 1%)	0
Tourism	1 (less than 1%)	1 (less than 1%)	0
No response	36 (27%)	31 (30%)	5 (19%)

Participants noted recreation most often as an activity they participated in in their community, regardless of commute. Other notable forms of engagement include participation in community festivals, holiday parades and festivities, as well as fundraisers. Individuals commuting shorter distances are more likely to be engaged with churches than those that commute over 50km to work. Research has noted the historically significant role churches play with rural communities (as all communities within 50km to Long Harbour being considered 'rural'). Rural residents are typically engaged in church on a weekly basis and regularly volunteer and participate in various fundraising or community activities in which they host. This can also be attributed to there being fewer options to volunteer with other organizations (Francis, 2012). Similarly to churches, rural residents are, in general, more likely to be engaged in their communities compared to urban centres (Diaz-Puente et al., 2009). Research findings from the Long Harbour case study reaffirms what has been previously documented – that rural residents are more engaged in their communities than urban dwellers.

The quantitative data backs experiences discussed by interviewees. For example, Philip lives in Blaketown and travels 35km to get to the worksite, where he works 7:30am to 4:00pm every weekday. On Wednesday evenings, Philip plays recreational basketball, and during the summer months, he and his partner are active in the local community's softball league. He volunteers with programs at his child's school and is a leader at a local church. He enjoys taking his family to community outings and festivities such as bonfires and community festivals.

Stephen, on the other hand, has been living in the Town of Paradise with his family for the past 35 years, which is approximately 108km from the worksite. Previously, Stephen was active in the community and took part in local festivals and recreational tournaments. Within a year of employment at Long Harbour, Stephen is unable to keep up with his community engagement. As a rotational shift worker the 12-hour shift and the extended daily commute leaves little time for extra-curricular activities. Other interviewees have reiterated this scenario, where a longer commute leaves little time to engage in their source community.

Overall, findings from the quantitative data suggest most respondents spend the same amount of time engaged in their community prior to starting employment at the facility as they do now (41%). This is higher for those with shorter commutes (46%) compared to those with longer commutes (40%). A portion of total respondents (29%) suggested they have less time participating in community events – the rates are higher among workers with longer commutes (31%) compared to those with shorter commutes (19%). Table 4 illustrates these differences below.

Table 4. Do you spend less, the same, or more time participating in community eventssince you have started working at the nickel processing facility?

Amount of Time	*Total Respondents (N=131)*	*Respondents that commute more than 50km (N=105)*	*Respondents that commute less than 50km (N=26)*
Less time	38 (29%)	33 (31%)	5 (19%)
Same time	54 (41%)	42 (40%	12 (46%)
More time	7 (5%)	4 (4%)	3 (12%)
Not applicable	29 (22%)	25 (24%)	4 (15%)
No response	3 (2%)	1 (less than 1%)	2 (8%)

The rationale for these patterns of community engagement are similar to the ones provided for the trends of volunteerism. The combinations of the work schedule and commute time leaves little time or energy to engage in the community. Rotational shift workers also work weekends periodically during times where events may be occurring, preventing them from engaging in certain activities. While this has been noted across respondents, the data shows that those engaged in the weekday shifts with the weekends off actually have less time for community events. In comparison, rotational workers have longer blocks of time off, but are required to work some weekends.

These trends reaffirm the research of Ezzedeen and Zikic(2015) and Hilbrecht, and Lero(2014), which suggest that the more hours that an individual works a week, including weekends, the less time they have for community and family life. Yet, as the data shows, depending on the context of the individual's family and living arrangement, some mobile workers have more time for community engagement activities because of their commute and work schedule. These findings are largely undocumented in daily commuting literature, where, in predominantly metropolitan areas, individuals have less time to participate in community activities due to their commute (Bissell, 2015).

III. Charitable Giving

Charitable giving (used interchangeably with philanthropy in this paper) is an important facet of communitydevelopment for communities. Philanthropy is known to increase the ties a resident has with their community, which is more common among those with increased income (Clerkin et al., 2013). Extensive research has documented, however, that while those involved in mobile work arrangements typically have higher incomes, it leaves less time for volunteerism and community engagement (Ezzedeen and Zikic, 2015; Hilbrecht and Lero, 2014). Studies of philanthropy have been seldom documented in North America, and in particular, Canada (Gibson and Barrett, 2018). As this paper indicates, however, there appears to be little correlation between labour mobility and philanthropy.

Historically, residents of NL were active participants in charitable giving. As noted earlier, NL has had the highest percentage of the population aged 15 and older engaged in philanthropy compared to all other provinces and territories in Canada since 2007. 92% and 87% of the population made charitable donations in 2010 and 2013, respectively. By comparison, the national rates in 2010 and 2013 were 84% and 82%, respectively (Barrett and Gibson, 2013; Turcotte, 2015). These rates do not include informal donations of time or money to institutions that do not meet the CRA criteria as a registered charityand researchers have suggested that this rate could be in fact much higher (Gibson, Barrett, and Vodden, 2014). It has also been documented that, generally, people are more likely to donate if they have a higher income (Clerkin et al., 2013; Turcotte, 2015). In this research study, most research participants indicated that the salary they currently receive is higher than they made previously, thereby making charitable giving an important facet of community development to note.

Table5.*Have your community donations increased, stayed the same, or decreased since starting employment at the nickel processing facility?*

Status	*Total Respondents (N=131)*	*Respondents that commute more than 50km (N=105)*	*Respondents that commute less than 50km (N=26)*
Increased	13 (10%)	9 (9%)	4 (15%)
Stayed the same	85 (65%)	65 (62%)	20 (77%)
Decreased	1 (less than 1%)	1 (less than 1%)	0
Not applicable	30 (23%)	29 (28%)	1 (4%)
No response	2 (2%)	1 (less than 1%)	1 (4%)

As Table 5 notes, two thirds of respondents noted that their level of engagement in charitable giving has remained the same since starting their position at the Long Harbour site. This rate differs slightly when comparing those with shorter commutes (77%) against those with longer journeys to work (62%). The second highest response was Not Applicable, where 23% of total respondents indicated that the question was not applicable, compared to 28% of those that commute over 50km to 4% of those that commute under 50km. It is reasonable to believe that these individuals do not participate in philanthropic activities.

Despite most respondents suggesting that they have a higher income in their current position than they did in previous jobs, only 10% of total questionnaire respondents reported that they had increased their level of charitable giving since starting their employment. Only one respondent noted that they are currently donating less than they did prior to starting their current position. This individual, who commutes over 50km to the worksite, suggested that their decrease in philanthropy was related to the extended workday and commute, leaving little time to engage in charitable giving.

Research has documented the trend that charitable giving rates may typically be lower for mobile workers (Markey et al., 2015). While most workers in this study have indicated that they have an increased income and thus greater propensity to donate, charitable giving rates have remained predominantly the same. Donating to a local organization does not typically require a great deal of time. Many charities now offer opportunities to donate online or through debit or credit transactions. It does take time, however, to become connected to a local organization and motivated to make a donation for to strengthen a certain cause or the sustainability of the charity – thereby linking positively to community development.In this case, the commute, work schedule, and other aspects of the work do not appear to influence the philanthropy of mobile workers. Given this, it is unlikely that labour mobility largely affects community development via charitable giving.

6. Conclusion

The goal of this research was to understand through the lens of the Community Mobilities Framework more full the extent to which community development in source communities is impacted by residents engaged in labour mobility that are employed at the Vale nickel processing facility located in Long Harbour, NL. There has been some previous research noting implications of labour mobility on source communities; however, much of this has focused on the construction phase of major industrial projects, while the Vale operation, studied in this research, can provide sustainable employment for its workers for a longer period. Given these differing scenarios, assessing community development is warranted and fills a noteworthy gap in literature.

Ultimately, the way mobile workers engage in community development in their source communities depends on the context. Many workers have noted that a combination of the work schedule and the commute leaves them less time to engage in community activities. With 12-hour rotational shifts, including day, overnight, and weekend work, in combination with a commute that is over 50km one way, the workday can extend into 14 to 15 hours. The limited spare time that remains is often spent with family and friends instead of formalized activities, or volunteering and engaging within the local community.

In some cases, however, those with shorter commutes actually have more time to enhance community development in their source communities than they did prior to starting their employment at Vale. As this paper has noted, the commute combined with a Monday to Friday work schedule permits some individuals to engage with their local schools, volunteer fire departments, church fundraisers, and other initiatives that enhance the social development of a region.

While this research presented no strong correlation indicating that an individual's mobile work arrangement aligns with the amount they engage in charitable giving, the rationale offered by respondents regarding a lack of engagement in philanthropy is based on context. Some workers no longer have time to participate in this area due to commuting and work schedules. Others did not engage in charitable giving prior to the start of their employment with Vale and have continued this trend.

Findings from this paper largely reaffirm findings from previous research and the Community Mobilities Framework. Many scholars have noted how increased labour mobility is associated with less time for active community participation, whether it's volunteering, participating in local communities festivities or children events, or building social capital within the region (Besser and Ryan, 2000; Francis, 2012; Ryser et al., 2015; Markey et al., 2015; Ezzedeen and Zikic, 2015). The lens provided through the Community Mobilities Framework allows this research to note that labour mobility does, in fact, impact the development of source communities, and while there are exceptions, these implications are primarily negative.

This paper also presents that organizations that rely on volunteers are particularly most vulnerable to labour mobility. Non-profit organizations within source communities may need to reconsider not only how they recruit and retain volunteers, but restructuring their opportunities in a way where residents can effectively engage with the organizations despite their engagement in labour mobility. This may include more flexible volunteering arrangements, or specific volunteer days arranged to cater to the work schedules of mobile workers. This could enable mobile workers to continue volunteering in their community while allowing organizations to avail of human capital needed to assist their operations.

Should corporations decide to utilize findings from this research for their own practices, there are some recommendations for corporate policy. Much research has backed how extended periods of time in certain commute arrangements can have detrimental impacts to health (Harris et al., 2015). Interviewees have suggested that on occasion – particularly in periods of inclement weather – their mental health is impacted due to the stress of the commute. If corporations allow for more flexible work arrangements, such as telecommuting, interviewees noted that this would have positive implications on their mental well-being. Working remotely would also cut down the time of the commute, allowing potential time to engage in additional community development activities. In contrast, telecommuting may benefit managerial staff more so than operations staff, which require being on the worksite 24/7. Such corporate policies, and the potential benefit of flexible work arrangements on communitydevelopment in source communities, are ideas that need be explored further. It is also important to identify how source communities are responding to labour mobility, and whether voluntary organizations are adapting their operations to adjust for a mobile workforce.

In an ever-growing globalized world, structures of labour market and development continue to change. Depending on the situation, an individual may travel short distances to work by foot, bicycle, car, bus, train, subway, or ferry, or decide to engage in longer travel across a region, province country, or internationally. Given how the majority of workers employed at the Long Harbour facility commute over 50km to work one way, their commute (in combination with their work schedule) can impact their level of involvement in their source communities. This research has argued that while, in most cases, longer mobile work arrangements prevent less time for community development in source communities there are some exceptions. Some workers are able to effectively balance their work commitments while maintaining a positive livelihood in their source communities. Source communities and regions will need to continue exploring ways in which they can respond to mobile workforces, as the number of people involved in mobile work arrangements continues to rise, and will likely continue doing so in the future.

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References

Abusabha, R., and Woelfel, M. L. (2003). Qualitative vs quantitative methods: Two opposites that make a perfect match. *Journal of the American Dietetic Association, 103*(5), 566-9.

Barber, L. (2016). Construction-phase extended commuting and uneven regional development: Work, households and communities in Newfoundland and Labrador's new extractive economy. *The Extractive Industries and Society, 3*(3),640-8.

Barrett, J., & Gibson, R., (2013). *Charitable giving and volunteering in Canada and the Atlantic region: A review of secondary data.* Memorial University, St. John's NL.

Barrett, J. (2017). *Commuters and Communities: The Social and Economic Impacts of Labour Mobility on Source Communities*. Masters thesis, Memorial University, St. John's NL.

Bavington, D. and Kay, J. (2007). Ecosystem-Based Insights on Northwest Atlantic Fisheries in an Age of Globalization. In M. Schechter, W. Taylor and L. Wolfson (Eds). *Globalization: Effects on Fisheries Resources*. Cambridge University Press: Cambridge, 331-63.

Bertotti, M., Harden, A., and Renton, A. (2012). The contribution of social enterprise to the building of social capital in a disadvantaged urban area of London. *Community Development Journal, 47*(2), 168-83.

Besser, T. L., and Ryan, V. D. (2000). The impact of labour market involvement on participation in community. *Community Development Society Journal, 31*(1), 72-88.

Bissell, D. (2015). *Understanding the impacts of commuting: Research report for stakeholders.* Australian National University: Canberra.

Bogdan, R. C., and Biklen, S. K. (2006). *Qualitative Research for Education: An Introduction to Theories and Methods (5th edition)*. New York:

Pearson. Carrington, K., Hogg, R., and McIntosh, A. (2011). The resource boom's underbelly: Criminological impacts of mining development. *Australian & New Zealand Journal of Criminology, 44*(3), 335-54.

Clerkin, R. M., Paarlberg, L. E., Christensen, R. K., Nesbit, R. A., and Tschirhart, M. (2013). Place, time, and philanthropy: Exploring geographic mobility andphilanthropic engagement. *Public Administration Review, January/February*, 97-106.

Clifford, J. (1997). *Routes: Travel and Translation in the Later Twentieth Century*. Cambridge, MA: Harvard University Press.

Cresswell, J. W. (2015). *A Concise Introduction to Mixed Methods Research*. Universityof Michigan.

Dembe, A. E., Erickson, J. B., Delbos, R. G., and Banks, S. M. (2005). The impact of overtime and long work hours on occupational injuries and illnesses: Newevidence from the United States. *Journal of Occupational and Environmental Medicine, 62*, 588-597.

Devins, D., and Hogarth, T. (2005). Employing the unemployed: Some case study evidence on the role and practice of employers. *Urban Studies, 42*(2), 245-56.

Diaz-Puente, J. M., Montero, A. C., and De los Rios Carmendo, I. (2009). Empowering communities through evaluation: some lessons from rural Spain. *Community Development Journal, 44*(1), 53-67.

Esteves, A. M. (2008). Mining and social development: Refocusing community investing using multi-criteria decision analysis. *Resources Policy, 33*: 39-47.

Ezzedeen, S. R., and Zikic, J. (2015). Finding balance amid boundarylessness: An interpretive study of entrepreneurial work-life balance and boundary management.*Journal of Family Issues,* 1-17.

Ferguson, N. (2011). From coal pits to tar sands: Labour migration between Atlantic Canadian Region to the Athabasca Oil Sands. *Just Labour: A Canadian Journal of Work and Society, 17/18*: 106-18.

Francis, L. J. (2012). *Rural life and rural church: Theological and empirical perspectives*. Sheffield, United Kingdom: Bristol.

Freshwater, D. (2008). *Active labour market policy: Implications for local labour markets and regional development*. Municipalities Newfoundland and Labrador: St. John's: NL.

Freshwater, D., Simms, A., and Vodden, K. (2011). Defining Regions for Building Economic Development Capacity in Newfoundland and Labrador. *The Harris Centre for Regional Policy and Development Publication Series*. MemorialUniversity of Newfoundland.

Gibson, R., Barrett, J., and Vodden, K. (2014). *Fostering Sustainable Futures for Rural Community and Regions through Philanthropy.* St. John's: Memorial University of Newfoundland.

Gibson, R. & Barrett, J. (2018). Philanthropic Organizations to the Rescue? Alternative Funding Solutions for Rural Sustainability. In Greg Halseth, Sean Markey, Laura Ryser (Ed.), *Integrative Services and Service Infrastructure for 21st Century Rural Sustainability*. London: Routledge.

Hall, H. (2014). *Regional development, nickel processing, &labour mobility: A comparison of Sudbury ON and Long Harbour NL*. Postdoctoral Fellowship Report. Memorial University of Newfoundland, St. John's, NL.

Hall, H. (2016). Exploring the nature, extent, and community impacts and responses to ERGM in Long Harbour, Newfoundland and Labrador and Sudbury, Ontario. *The Extractive Industries and Society, 3*(3), 606-15.

Haan, M., Walsh, D., and Neis, B. (2014). At the crossroads: geography, gender and occupational sector in employment-related geographical mobility. *Canadian Studies in Population, 41*(3−4), 6-21.

Hardigan, P. C., Succar, C. T., and Fleisher, J. M. (2012). An analysis of response rate and economic costs between mail and web-based surveys among practicingdentists: A randomized trial. *Journal of Community Health, 37*(2), 383-94.

Harris, R., Sims, S., Parr, J., and Davies, N. (2015). Impact of 12h shift patterns in nursing: A scoping review. *International Journal of Nursing Studies, 52*(2), 605-34.

Haslam McKenzie, F., and Hoath, A. (2014). Fly-In/Fly-Out, flexibility and the future: Does becoming a regional FIFO source community present opportunity or burden? *Geographical Research, 52*(4), 430-41.

Haugen, K. (2005). PendlingmellanUmeåochÖrnsköldsvik – enstudieavarbets- och utbildningsrelateraderesor. *TRUM 2005*:2. Transportforskningsenheten, UmeåUniversity.

Henry, P., Hamiliton, K., Watson, S. and Macdonald, N. (2013). *FIFO/DIDO Mental Health Research Report*. Australian Institute of Management, Western Australia.

Higgins, J. (2008). Economic Impacts of the Cod Moratorium. *Newfoundland and Labrador Heritage*.

Hilbrecht, M., and Lero, D. S. (2014). Self-employment and family life: Constructing work-life balance when you're 'always on'. *Community, Work, & Family, 17*(10,20-42.

Hoath, A. and Haslam McKenzie, F. (2013). The socio-economic impacts of longdistance commuting on source communities. *Co-operative Research Centre forRemote Economic Participation and Curtin Graduate School of Business*, Perth.

Howitt, D., and Cramer, D. (2007). *Introduction to Research Methods in Psychology,Second Edition*. Pearson Education Canada.

Joyce, S. J., Tomlin, S. M., Somerford, P. J., and Weeramanthri, T. S. (2013). Health behaviours and outcomes associated with fly-in fly-out and shift workers in Western Australia. *Internal Medicine Journal, 43*(4), 440-444.

Kaplan, C. (1996). *Questions of Travel: Postmodern Discourses of Displacement.* Durham, NC: Duke University Press.

Keating, G., and Synard, S. (2016). Best Practices in Community/Industry Benefits Agreements. *Small Towns Big Business Initiative Summary Report*.

Legge, W. L. (1983). *A Social Impact Assessment of the Electric Reduction Company of Canada's Phosphorous Plant at Long Harbour, Placentia Bay*. Masters Thesis,St. John's, Memorial University, Department of Sociology.

Lysenko, E., and Vodden, K. (2011). Applicability of the local labour market development approach in Newfoundland and Labrador: A case study of theAvalon Gateway Region (Econmic Zone 18). *Rural Resilience*. MemorialUniversity of Newfoundland: St. John's.

MacDonald, M., Sinclair, P., and Walsh, D. (2012). Labour migration and mobility in Newfoundland: Social transformation and community in three rural areas. In J. Parkin and M. Reed (Eds.), *The social transformation of rural Canada: New insights into community, culture and citizenship* (pp.110-130). Vancouver, BC: University of British Columbia Press.

Markey, S., Ryser, L., and Halseth, G. (2015). "'We're in this all together': Community impacts of long-distance labour commuting." In *Rural Society*. Taylor & Francis.

McQuaid, R. W. (2006). Job search success and employability in local labour markets. *Annals of Regional Science, 40*, 407-21.

Milbourne, P. and Kitchen, L. (2014). Rural mobilities: Connecting movement and fixity in rural places. *Journal of Rural Studies, 34*, 326-36.

Minnes, S, and Vodden, K. (2019). Introduction. In Vodden, K., Douglas, D., Markey, S., Markey, S., andReimer, B. (eds.). *Canadian Regional Development: A Critical Review of Theory,Practice, and Potentials*. London: Routledge.

Mistry, K. B. (2012). Research and statistics: Qualitative research methods. *AmericanAcademy of Pediatrics, 33*(11), 521-3.

Othmar, W. (2009). *Interpreting Socio-Economic Data. A Foundation of Descriptive Statistics*. Dordrecht: Springer.

Porter, M. and Vodden, K. (2012). *Looking to the future: Assessing current understandings of the impacts of large-scale industrial development in Western Labrador and Isthmus Regions and identification of future research needs and potential mitigation strategies.* Memorial University of Newfoundland: St. John's, NL.

Porter, M. (2016). *Moving home: Narrating place, home and rurality in Newfoundland and Labrador*. PhD Dissertation. Memorial University of Newfoundland: St. John's.

Roseman, S. R., Barber, P. G., and Neis, B. (2015). Towards a feminist political economy framework for analyzing employment-related geographical mobility. *Studies in Political Economy, 95*.

RSNL. (2014). *Chapter M 15.1. An Act Respecting the Operation of Mines and Mills in the Province*. Mineral Act, Government of NL.

Ryser, L., Good, J., Morris, M., Halseth, G., Mochrie, C., and Markey, S. (2015). Lessons learning in work camp – community relations: Practices making a positive difference. *Community Development Institute Publication Series*, University of Northern British Columbia.

Sandow, E., and Westin, K. (2010). People's preferences for commuting in sparsely populated areas. *Journal of Transport and Land Use, 2*(3), 87-107.

Sheller, M. (2011). Mobility. *Sociopedia*. Published by the International Sociological Association with 'state-of-the-art' entries in social sciences.

Shrimpton, M., and Storey, K. (2001). The effects of offshore employment in the petroleum industry: a cross-national perspective. *Community Resource Services*. St. John's: Memorial University of Newfoundland.

Sibbel, A. M. (2010). *Living FIFO: The experiences and psychosocial wellbeing of Western Australian fly-in/fly-out employees and partners* (Doctoral dissertation). Perth: Edith Cowan University.

Sivan, A., and Ruskin, H. (2000). *Leisure education, community development and populations with special needs*. Oxon: New York.

Skeard, J. (2014). *The construction of identities in a mining town: Implications for community development and resilience*. (Master's dissertation). Memorial University of Newfoundland, St. John's, NL.

Skilton, N. (2015). Re-imagining Geographic Labour Mobility through 'Distance Labour.' *Australian Journal of Public Administration, 74*(3), 364-69.

Statistics Canada. (2010). Average commuting time to work and proportion of workers. General Social Survey. Accessed 7 September 2016 from http://www.statcan.gc.ca.

Statistics Canada. (2017). Long Harbour – Mount Arlington Heights. Accessed 24 February 2017 from http://www.statcan.gc.ca.

Stevens, D. (2014). *Long Harbour Nickel Processing Plant – An Update*. Presented at the 2014 Placentia Bay Industrial Showcase in Placentia, NL.

Stoddart, M., and Sodero, S. (2014). From Fisheries Decline to Tourism Destination: Mass Media, Tourism Mobility, and the Newfoundland Coastal Environment. *Mobilities, 10*(3), 445-65.

Storey, K. (2010). Fly-in/Fly-out: Implications for Community Sustainability. *Sustainability, 10*(2): 1161-1181.

Temple, J., Neis, B., Jackson, L., Roseman, S., Romanow, P., and Vincent, C. (2011). Employment-Related Mobility and the health of workers, families, and communities: The Canadian context. *Labour/Le Travail, 67*(Spring): 121-156.

Turcotte, M. (2015). Spotlight on Canadians: Results from the General Social Survey.Volunteering and charitable giving in Canada. Statistics Canada Catalogue no. 89- 652-X2015001.

Urry, J. (2000). *Sociology Beyond Societies: Mobilities for the Twenty-first Century*. London: Routledge.

Urry, J. (2012). *Mobilities: New Perspectives on Transport and Society*. Ashgate: Farnham.

Van Den Abbeele, G. (1992). *Travel as Metaphor; From Montaigne to Rousseau*. Minneapolis: University of Minnesota Press.

VBNC. (2006). Commercial nickel processing plant registered for environmental assessment. *The Gossan*, April, 10.

VBNC. (2007). *Environmental Impact State – Long Harbour Commercial Nickel Processing Plant.* 1 – The Project.

Vodden, K. (2015). *Harris Centre Regional Workshop.* Clarenville, NL.

Walsh, D. (2012). Using mobility to gain stability: Rural household strategies andoutcomes in Long-Distance Labour Mobility. *Journal of Rural and Community Development, 7*(3): 123-43.