"Why can't we get around?"
Travelling Under Constraints in Metro Vancouver

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Résumé

Des chercheurs ont récemment observé la diminution du nombre d'enfants et d'adolescents qui se rendent à l'école à pied ou à bicyclette. Mais peu d'entre eux se sont penchés sur les jeunes adultes et les recherches sur les jeunes en général ne tiennent pas compte du transport en commun, bien que dans les municipalités canadiennes les jeunes l'utilisent abondamment. Comment, où et pourquoi les jeunes se déplacent-ils? Cette étude a examiné les habitudes de déplacement à caractère social des adolescents (17-21) et des jeunes adultes (22-25) en région métropolitaine de Vancouver. Des sessions de discussion et des cartes de déplacement produites par des jeunes ont révélé certaines contraintes pour les déplacements des jeunes, mais aussi une conscience des enjeux environnementaux plus larges relatifs au transport. S'ils avaient accès à un système de transport en commun viable, les jeunes pourraient différer l'achat d'une voiture, ce qui aurait des conséquences importantes pour l'aménagement durable du transport dans les municipalités et les régions.

Mots clès: adolescents, jeunes adultes, transports en commun, déplacement sociale

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Abstract

In recent years, many researchers have studied the decreasing prevalence of walking and cycling among children and youth. Little research has focussed on young adults, however, and studies of younger age groups tend to ignore public transit ridership even though young people show high public transit use in Canadian cities. How, where, and why do young people travel? This small-scale, exploratory study examined the non-work, non-school travel patterns of youth (17-21) and young adults (22-25) in Metropolitan Vancouver. Focus groups and social mapping revealed several constraints upon young people's social travel, but also demonstrated participants' awareness of larger issues around transportation planning (including the high costs of gasoline and the environmental consequences of driving). The research suggests that in large cities with viable public transit systems, young people may delay car ownership, which could have positive implications for urban regions.

Keywords: youth, young adults, public transit, non-work travel

Introduction

> *I just wonder, why don't we have a [good] transit system? Why can't we get around?* (Victoria, 24, Vancouver)

Recent concerns about active lifestyles have led to a wealth of studies focusing on the use of active transportation modes for the commute to school, leaving significant gaps in the literature in terms of public transit ridership and non-school/non-work travel for young people. Active transportation studies tend to focus on children and school-aged youth; young adults are rarely discussed in the literature. This paper explores how youth (17-21) and young adults (22-25) travel for non-work, non-school purposes in Metro Vancouver, drawing upon in-depth qualitative data from a small sample. It suggests that young adults' transition to driving may be delayed in large cities due to access to U-Passes, high costs of parking and insurance, and environmental attitudes that favour active lifestyles.

The paper begins by highlighting sociological and psychological research on youth behaviour, which suggests that young people make different choices from adults. A review of studies focusing on youth and transportation follows, examining the growing body of literature on active transportation for the commute to school, and noting gaps in the literature. Next, data from focus groups and social mapping conducted in Metro Vancouver is presented. The paper concludes with observations about youth and young adults' constrained travel behaviour in the region, highlighting inadequacies in public transit service in the evening and at

night. Signs that young adults in many regions may be delaying car ownership (Kageyama 2009; Zimmerman 2009) confirm the utility of detailed studies like this one that clarify the opportunities and challenges for municipalities seeking to encourage higher public transit ridership.

Youth and Young Adults' Travel Behaviour

In the fields of sociology and psychology, "youth" is an expanding demographic with unclear boundaries. The literature provides no definitive age limits for youth or young adults, and acknowledges diversity in youth behaviour (Hollands 2002). Young people have different understandings and needs than adults, and divergent values around environmental awareness (Turcotte 2007) and political activism (O'Neill 2007). Youth tend to socialize with those their own age, particularly at night (Rice 1999, Malone 2002, Epstein 2007). They are subject to greater constraints than adults, such as curfews, high drivers' insurance rates, and parental concerns about safety. Young people are becoming increasingly aware of transportation and land use issues, climate change and peak oil: in many cities, youth and young adults participate in government committees, non-profit groups and activist organizations that promote sustainable transportation, such as organizing to advocate universal transit passes (U-Passes) for college and university students (Thomas 2008). It is not surprising, then, that young people have travel patterns that differ from those of adults.

Youth and young adults seem to show differences in travel behaviour related to their stages in the life cycle, their legal rights, and parental constraints. High school-aged youth still living at home and attending school full-time generally depend upon their parents for transportation, with the exception of short walking or cycling trips; some may not be allowed to take transit on their own (TransLink 2006). They may face driving restrictions: several Canadian provinces employ graduated licensing procedures that mean that young people cannot obtain full drivers' licenses immediately. Affordability is a major factor, with high gas and insurance prices, as well as parking costs in large cities. Young adults may be more independent socially and financially, may have access to a car or transit pass, and may be working full- or part-time. They may be living on their own, used to travelling independently, and may have been exposed to transportation systems in other cities.

Public transportation authorities have devoted little research to transit-dependent riders, those who do not have access to a car. Transportation authorities often assume that youth and young adults use sustainable transportation modes out of necessity rather than choice. Few transportation authorities study youth travel patterns to identify the factors which might increase transit ridership among young people with choices. Krizek et al. (2004) argue that youth merit a special focus in the field of transportation because of key differences in social

activities, their low rates of car ownership, and restrictions on their travel. Weston (2005, 29) writes that

> Since teens are clearly more mature and developed than primary school children, but not yet viewed as a problem to society as crash-prone drivers, they have been largely overlooked in transportation research, and to some extent, by social science in general.

Although teens, youth, and young adults are understudied groups in terms of transit ridership, interest has recently increased among planning and public health researchers along with the growing interest in active transportation. Most of this research has taken place in the US where the National Household Transportation Survey provides quantitative data on transportation trends. Transit ridership peaks in the 21-25 age group: ridership for teens varies with city size (Cain et al. 2005).

Canada has little national, publicly-available data on transportation trends. The Canadian Census has one question about the transportation mode used to and from work for persons aged 15 and older. A myriad of transit agencies publish summary reports but do not make their data publicly available. The Transportation Tomorrow Survey (TTS), a comprehensive travel survey conducted in the Greater Toronto and Hamilton Area once every five years, produces summary reports on the employment rates, general trip origins and destinations, and general demographic breakdown for municipalities in the region. TTS data is not available to the public and the summary reports do not show statistics about travel patterns of specific age groups. The Canadian Urban Transit Association also produces summary reports: in 2004 it noted that young people account for one-third of transit ridership nationwide (CUTA 2004). Transit ridership may be higher in particular cities, even small ones: in Red Deer, Alberta, Moose Jaw, Saskatchewan, and Cornwall, Ontario, youth constitute over 65 percent of transit ridership (CUTA 2004). In Vancouver, 16-34 year olds represented 55 percent of all bus users, 52 percent of SkyTrain users, and 45 percent of cyclists; they are the group who said they were most likely to increase their transit use within the next year (TransLink 2003). Cooper (2009) found that young adults who had used a U-Pass during their time as students were much more likely to be regular transit riders after they had graduated.

Recent research has focussed on active transportation for the trip to school, in part due to an observed decline in walking and cycling to school among school-aged children in the UK (Pooley et al. 2005), the US (Ham et al. 2008), and Canada (Buliung et al. 2009). Panter et al. (2008) reviewed 24 international studies, concluding that among youth (aged 5-18), active travel is positively associ-

ated with social interactions, facilities to assist active travel, urban form in the neighbourhood (such as higher residential density and mixed land use), shorter route length, and road safety (such as the presence of sidewalks). Perceptions of safety may affect younger children more than adolescents. Despite an overall decline in walking home from school in the Greater Toronto Area from 1986-2006, Buliung et al. (2009) reported higher walking rates in the afternoon than in the morning. There were some differences between the age groups: 11-13 year olds were more likely to walk to school than 14-15 year olds, who have higher rates of transit use. Pabayo and Gauvin (2008), in a study of 9, 13, and 16 year olds in the province of Quebec, and Robertson-Wilson et al. (2007), in their study of grade 9 to 12 students in Ontario, also found age to be a significant predictor. Several studies have noted lower active transportation rates among rural students (Robertson-Wilson et al. 2007; Pabayo and Gauvin 2008) and suburban students (Buliung et al. 2009); in the latter study, 14-15 year olds were more likely to take transit home if they lived in Toronto than in the suburban municipalities. Urban sprawl is significantly associated with increased driving among teens (Trowbridge and McDonald 2008). Although several studies mentioned weather as a possible predictor of active transportation, Robertson-Wilson et al. (2007) were among the few to report decreased active transportation in the winter. Many researchers advocate increased active transportation trips as the simplest way to increase activity levels and overall health in children and youth; however, given the impact of the built environment on active transportation, many also advocate changes in land use guidelines. Bungum et al. (2009), for example, recommended increasing street connectivity near schools.

Outside of built environment factors, some authors have found that gender and ethnicity affect rates of active transportation trips to school (Hohepa et al. 2009; Bungum et al. 2008; Pabayo and Gauvin 2008; McDonald 2008; Kerr et al. 2007). Pabayo and Gauvin (1999) found higher public transit rates and lower walking rates among children of immigrants in Quebec, while youth in developing countries show much greater rates of walking and cycling (Tudor-Locke et al. 2003a; 2003b).

A few researchers have conducted participatory action research (PAR) studies to determine whether it is possible to change travel behaviour among school-aged youth. In several countries, these PAR projects have demonstrated that youth attitudes towards transportation modes are plastic, changing drastically when young people helped create educational materials highlighting the benefits of sustainable transportation (Pilling et al. 1999), participated in educational programs promoting sustainable transportation (Bonet 2004), or helped organize events and programs promoting active transportation (Orsini 2003). Student behaviours and social stigmas are changing, becoming more positive towards public transit, walking, and cycling (Corrigan 2003) and in some cases, negative towards

cars (Kageyama 2009; Zimmerman 2009). Kageyama (2009) and Zimmerman (2009) report decreasing car ownership among youth in Japan and the US.

Transportation research illustrates the conflict between youth's emerging independence and parental control. Weston (2005) found young teens depend on rides from parents. In their review of active transportation research, Panter et al. (2008) wrote that youth who are motivated to use active travel modes because of perceived independence and freedom from parents are more likely to walk or cycle, or to influence their parents' decision about travel mode: however, they do not differentiate clearly between the 5- to 18-year olds in their study. Other researchers have found differences between younger and older youth. In their study of 13-15 year olds, 16-19 year olds, and the parents of these two groups, Cain et al. (2005) found teens' transportation choices constrained by their parents' concerns that traveling by transit, walking, or cycling may be unsafe: parental concerns were lower among the older age group. In their study of 11-13 and 14-15 year olds in several Canadian cities, Buliung et al. (2009, 511) said that older youth "appear to make greater use of modes that could require autonomous decisions and actions," including taking transit rather than school buses for the trip home after school. In Vancouver, TransLink (2006) identifies major differences between the teens (aged 14-16) and youth (aged 17-21), with teens facing greater parental constraints. Teens commonly assumed they would own a car once they turned 16; young adults realized the high costs of car ownership, were more aware of the larger issues of climate change, had experienced efficient transit systems in other cities or countries, and understood urban planning issues, all of which affected their travel decisions. Pabayo and Gauvin (2008) and Robertson-Wilson et al. (2007) showed that walking trips to school decreased with age, while trips by transit increased with age. Some studies touched on the issue of parental influence among teens, youth, and young adults; however, no single study has examined the way in which parental influence changes as children grow older. It remains unclear whether parental constraints upon travel affects young people's future travel behaviour.

In summary, gaps remain in the literature, particularly with regard to transportation trends and behaviours among youth and young adults. Consequently, this research seeks to provide insight into the factors that influence youth and young adults as they make the choice of travel modes for their non-work travel. In doing so, it hopes to contribute knowledge to the field.

Method of the Study

The goal of the study was to explore non-work travel trends among older youth and young adults in Metro Vancouver: more specifically, the research explored the motivations of young people whose main modes of transportation were walking, cycling, and public transit. As the study commenced in 2007[1], the 2006 Census

data had not yet been released, and little quantitative data was available. Considering these factors, and the relatively unexplored travel patterns of youth and young adults, the decision was made to conduct an exploratory study using focus groups and social mapping. This would facilitate dynamic engagement with the issues, permit depth of analysis, and identify prospects for future study.

Several researchers (Axhausen 2003; Clifton and Handy 2001; Gaber and Gaber 1999; Handy et al. 1998; Poulenez-Donovan and Ulberg 1994) have called for the use of qualitative methods in transportation research, but such approaches prove relatively uncommon in academic research on transportation issues. Cain et al. (2005) used focus groups with 32 participants, both parents and their children, for their study of teenagers' attitudes and behaviour. Handy et al. (1998) conducted focus groups following surveys in six Austin neighbourhoods; focus group results "supported the survey results" and "helped to identify factors not included in the survey that explain travel choices" (Clifton and Handy 2001, 7). Focus groups have become useful in institutional research, particularly long-range planning studies conducted by transportation authorities. When seeking input on new services and routes, transportation authorities regularly conduct focus groups with passengers, and key informant interviews with transportation planners, engineers, and operators. Surveys or other quantitative analysis may follow once issues are better understood (TransLink 2006, WDOT 2003, CRTA 2001). Social mapping has become a useful tool for illustrating social networks and connections (Travlou et al. 2008); it is an ideal method for exploring non-work or social travel patterns. In an earlier study, TransLink (2006) used social mapping along with focus groups to explore the travel patterns of different age groups.

The Metro Vancouver region includes 22 municipalities with a population of 2.1 million: more than 280,000 residents are between the ages of 15 and 24. Public transit in the region includes light rapid transit (SkyTrain), local buses, express buses (B-Lines), and community shuttles. TransLink, the regional transportation authority, funded the recruitment of participants and scheduling of focus group sessions in Vancouver and Surrey, the two largest municipalities in the province. The two municipalities vary in transportation characteristics, populations, land use characteristics, and land area. The City of Vancouver—with a population of 579,000, high-density land uses, and relatively compact land area—has good bus, express bus, and SkyTrain service. The City of Surrey, an outer suburban municipality with a population of 395,000, has a larger land area and dispersed land use pattern. Surrey has less frequent transit service and earlier ending times than the City of Vancouver and no express bus service; the northern part of Surrey does have several SkyTrain stations. The topography of Surrey is flat, and the area has less rainfall than Vancouver: the differences suggest some variation in walking, cycling, and public transit ridership.

Figure 1. Metro Vancouver

Metro Vancouver Region

The South of Fraser municipalities are Delta, Surrey, White Rock, and Langley City and Township. Bold lines indicate SkyTrain lines. The City of Vancouver and City of Surrey are shaded.

The author randomly recruited participants using public telephone listings. The selection criteria specified participants who biked, walked, and/or took transit as their main mode of transportation; and who fit into one of two age groups: 17-21 (youth) and 22-25 (young adults). Participants were sorted into four focus groups: Vancouver youth, Surrey youth, Vancouver young adults, and Surrey young adults. Youth and young adults are known to be difficult to recruit for research studies (Mustel Group 2007; TransLink 2006). Despite attempts to recruit eight participants for each group, the total number of participants only reached 21. This included ten youth and eleven young adults, eleven females and ten males. Most were full-time students; four worked full-time. Eight lived with their parents and six of these had access to a parent's car; only two of the eight lived in car-free households. Thirteen participants lived independently in their own apartments.

Focus groups were held in two transit-accessible locations, one in Vancouver and the other in Surrey, in early 2007. Each of the four sessions had two parts: a social mapping exercise, and a focus group discussion. Social mapping allowed

the participants to visually communicate their travel patterns and destinations using large regional maps and coloured markers. Each focus group worked with its regional map; each participant had an assigned colour and used it to draw their unique travel routes, indicating their main destinations for shopping, entertainment, visiting friends, and participating in sports or recreational activities. Each participant mapped their home, work, and school locations. This served as a preliminary technique to stimulate discussion for the focus groups and created a composite map for each group representing participants' social travel patterns. The composite map facilitated discussion about the most common routes and destinations, and highlighted some unique patterns for each group. Following this step, which lasted about 40 minutes, the researcher facilitated focus groups discussions using the map and open-ended questions. The discussions were recorded, transcribed, and analysed to identify common themes and issues raised by the participants. The participants are identified by pseudonyms throughout this article.

Research Results

The participants mapped their school and work locations as well as their non-work travel destinations, but discussion focussed on travelling for shopping, meeting friends, going to restaurants or movies, and going to bars or clubs. The maps reflected key differences between Vancouver and Surrey: typical urban-suburban differences that resulted in longer travel distances, infrequent bus services, and earlier end times for those living in Surrey.

Participants said they gravitated towards well-served transit corridors; several met friends daily in these areas. Transit frequency and reliability complicated non-work travel, since most non-work travel happens in the evening and at night. Public transit was overwhelmingly the most-used transportation mode, with walking used for shorter distances such as the trip to the bus stop. Although Metro Vancouver has fairly high rates of cycling among youth and young adults (Thomas 2009), participants rarely mentioned cycling for social activities. Generally, participants expressed frustration with travelling around the region using public transit, but seemed committed to transit for affordability and environmental reasons. The recruitment method, which selected participants who mainly used transportation modes other than the automobile, likely contributed to these results.

Travel Destinations

Land use patterns affected participants' travel within the region. The travel destinations mapped and discussed in the focus groups concentrated in five areas: the downtown peninsula, Commercial Drive, 4th Avenue, Broadway Avenue, and the Metropolis Mall at Metrotown SkyTrain Station in Burnaby: the latter is the

Figure 2. Sample Social Network Map Showing Vancouver Youth Travel Patterns
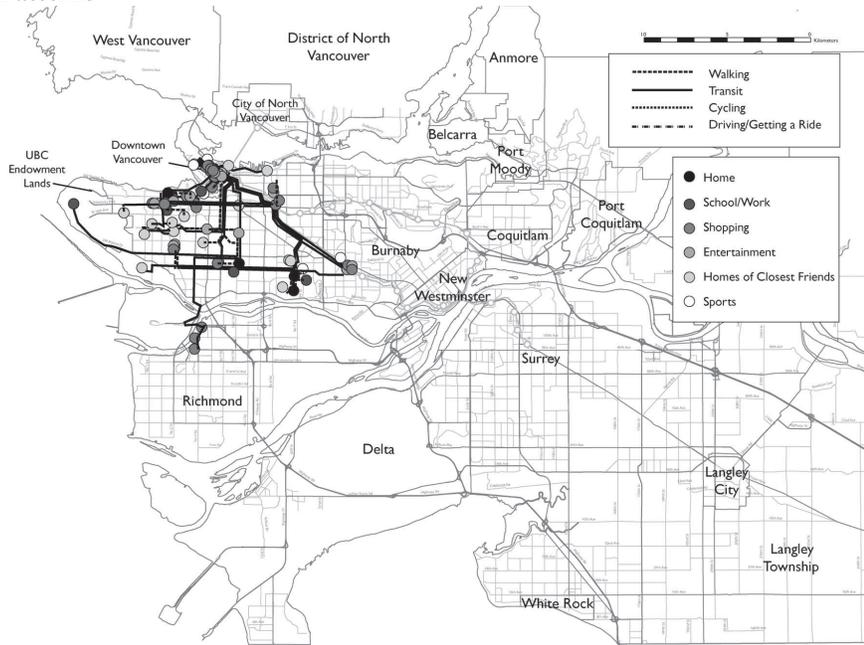
Figure 3. Sample Social Network Map Showing Surrey Youth Travel Patterns
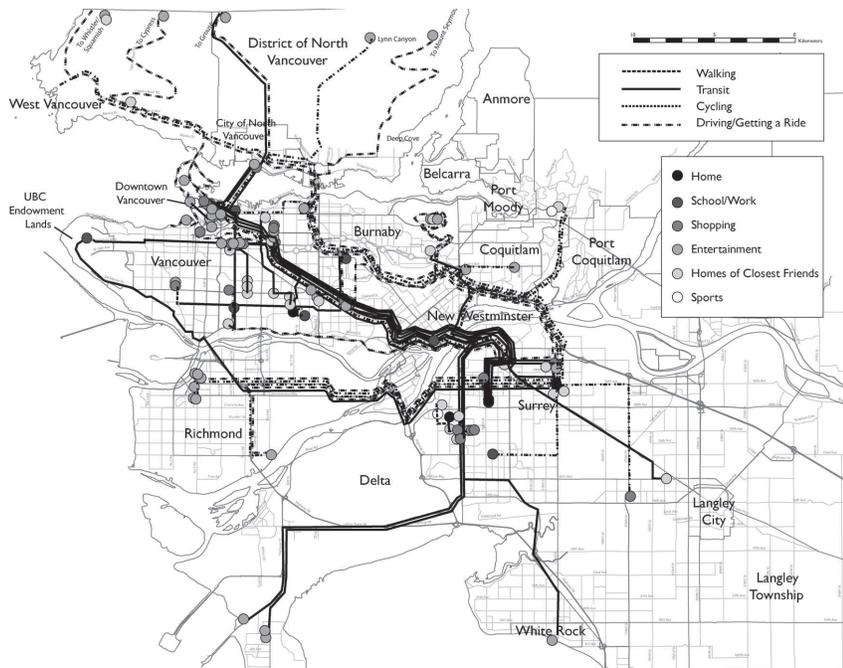
only one of the five nodes outside the City of Vancouver. A closer look at these activity areas (see Figure 2) reveals how small each is: four- to ten-block sections of major streets. This concentration of social activities in Vancouver reflects the small number of dense, mixed-use streets in the city.

Figure 4. Social Activity Corridors
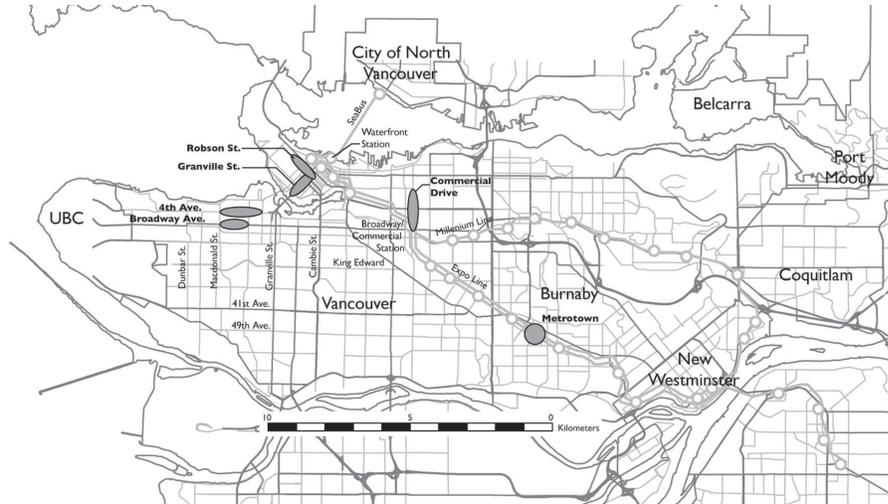
Downtown (Granville and Robson Streets), Commercial Drive, 4th Avenue, Broadway Avenue, and Metrotown.

While downtown proved the most popular destination for participants, Metropolis Mall was an important destination for Surrey participants because it was much closer for them. Travelling downtown from the end of the SkyTrain line in Surrey takes 40 minutes, while Metrotown can be reached in half the time. Metropolis Mall offers shopping, movies, restaurants, a library, and a community center, all within walking distance of the SkyTrain station. Predictably, Surrey participants travelled much further than Vancouver participants to access attractive destinations. As shown in the composite maps, the participants gravitated to areas with a variety of shops, restaurants, and social destinations with excellent transit service. Surrey participants complained that the buses stopped too early or were too infrequent to be reliable for those heading to the city center for social activities. As Larry (aged 19 from Surrey) explained,

> One of the reasons I'm not really likely to take transit at night, because let's say I want to go clubbing downtown, then by the time I'm out everything's stopped.

Other destinations included outdoor recreational areas north of Vancouver, such as Grouse Mountain, Cypress Mountain, and Lynn Canyon. For residents in south Vancouver, the City of Richmond was a popular destination, with its mix of Asian and western stores, restaurants, a multiplex movie theatre and casino. Richmond is just a short distance from the south part of the City of Vancouver, accessible via several bus routes[2].

Half of the participants said they never socialized at friends' houses, because their friends did not live nearby or in transit-accessible locations. They chose instead to meet their friends in one of the five social activity corridors, adding a significant cost to their social activities, since they meet at restaurants, coffee shops, and clubs.

Transit Frequency and Reliability

Transit frequency and reliability were the most influential issues for youth and young adults in the study. Most non-work travel among the participants happened in the evening or at night, when transit is less frequent and less reliable. Evening bus frequencies can be as low as 30 minutes in Vancouver and every 60 minutes in Surrey; express buses drop down to every 12-15 minutes after 9pm. Most buses end between midnight and 1am, with 12 night bus routes running from 1:30 until 3-4am depending on the route. These night bus routes are widely spaced geographically, with only one route to Surrey and one to UBC in Vancouver. The last SkyTrain leaves downtown at 1:15am.

> Tonight if I take the bus home from Langara [College], I'd be coming back around 9:30 or 10, which is a brutal time to take the bus around there anyway, and there's lots of people waiting out there. (Rick, 24, Vancouver)

> It's always late. It's *always* late. I don't think I've ever come home…like Broadway, the B-Line is never late, but then when I get back to Surrey and take the bus back to my house, I don't think it's ever been on time…you go there expecting to wait. You're like, it's probably going to be late, like every other day. (Victor, 19, Surrey)

> At night the buses aren't as frequent, or…if it takes me longer to wait for the bus than to get there, then I just usually drive. (Keith, 22, Vancouver)

Each participant had missed buses late at night, waited up to an hour for a transfer, and been late for social activities; many expressed difficulties getting to and from

work or school on weekday evenings. Weekend nights, when young people may stay out later, require extreme solutions to the problem of early transit ending times. Most participants adjusted their activities to fit within the infrequent transit schedules, but all participants recalled incidents where they missed the last bus home and had to walk: every Surrey participant had taken the night bus home to Surrey Central SkyTrain Station and then walked up to 45 minutes home.

Because they tended to travel at off-peak times, the participants spent a lot of time planning and coordinating trips. Most planned their activities according to trip length, weather, traffic conditions, and travel times of their friends. Weekly trips or occasional outings were planned well in advance by consulting transit schedules, the TransLink website, or the telephone information line. Spontaneous travel proved more difficult: most participants acknowledged having to adapt their social activities to a schedule.

> You're trying to get somewhere and you're on a schedule, and it matters that you get there, because once you miss one bus, then you know, you miss the next one and then the next one, and it can be…when you're trying to do a trip plan it's like plus or minus an hour. (Victoria, 24, Vancouver)

> It's not usually terribly spontaneous.…It makes it a little harder I guess, a little more complicated…to some degree a little more frustrating. (George, 24, Surrey)

Participants reported difficulties in finding bus schedules for the return trip home: the information line switched from a live operator to an automated service after 11:30pm. The service worked on voice recognition and had problems recognizing the names or streets or bus routes; ambient noise often made the service ineffective for cell phone users.

Other Transportation Options

Because of the long travel distances between downtown and residential neighbourhoods in the Vancouver region, taking a cab was not an affordable option for young people. Almost every participant said they would sleep at a friend's house rather than take a cab. One young adult stayed out until the buses started running the next morning while another said she hitchhiked home.

> The buses stop at like 12, so…I'm usually hitchhiking home [from UBC to Dunbar] because there's no all night bus….I can't get to my house after 12, which is ridiculous. It's not terribly safe, but there's no other option because I'm a student and I'm broke, I don't have a job. (Victoria, 24, Vancouver)

Getting a ride from parents or friends was a relatively infrequent option, and only happened when a friend had a car or the weather was particularly unfavourable. Given Vancouver's rainy climate, travelling by transit, walking to bus stops, and waiting for buses can be particularly unpleasant for four to six months of the year. Travel times are longer, buses are more crowded, and many participants chose to avoid travelling altogether in bad weather. Some adjusted their travel choices to leave earlier or later to avoid crowds.

> I tend to leave earlier…I'll take transit anyway. I leave an hour earlier, I get there usually half an hour earlier than I would normally taking the bus, but that's because nobody's there. Everybody seems to want to go, like, unnecessarily at the last minute. But they all seem to go at the same time, so…I try to avoid those situations and not be lazy and get up that extra hour earlier. (Jeremy, 18, Surrey)

Safety

Safety was an issue largely ignored by youth and young adults. Travelling at night, waiting for buses in the dark, or walking home alone were rarely discussed as concerns, even among young women. This may seem surprising to older adults, who are often concerned about safety, but it is consistent with TransLink's findings (2006). TransLink has increased security around SkyTrain stations in recent years, introducing closed-circuit television, attendants at each station, and the first transit police force in Canada. These changes may not always benefit young people, who are often targeted by authorities. Youth behaviour such as socializing with friends and loitering in the station areas is actively discouraged at stations. During TransLink's (2006) study, many teen and youth participants expressed frustration at having their tickets and youth discount cards checked while other patrons were not scrutinized.

Attitudes and Perceptions

The focus groups confirmed TransLink's (2006) finding that young people understand the larger issues of land use that affect transportation planning. Many participants had travelled to other cities and experienced public transit in other contexts.

> [Vancouver] wasn't designed to be a big city. One reason why Toronto has such a good system is because they've got their high density living like right along Yonge Street. And so, you've got your subway, and they've got just people on top of people all along Yonge Street. So you can get around because it's a high-

density population, whereas like you know, you go up to North Van and you've got one person on a big hill by themselves. I think Toronto has a larger surface area, but the people are piled on top of each other. [In Vancouver] it's just houses everywhere. (Victoria, 24, Vancouver)

The main city in Cuba doesn't even allow cars in the core area. (Rick, 24, Vancouver)

Transportation options often influenced participants' housing locations.

When I moved out, I always tried to pick central locations… when I went to Langara [College], I lived right across the street….it was pretty close to transit. I lived on 12th and I picked that because it was close to Broadway, and Broadway's close to every major transit route you can find. (Joanne, 24, Vancouver)

The participants showed rather cautious attitudes towards car ownership, even though most had parents and friends who drove. The youth participants were more likely (four out of ten) to say they would get a car as soon as they got their driver's license: two owned cars already. Of the eleven young adults, one wanted to buy a car eventually, one owned a car, one owned a scooter and motorcycle: the other eight said they did not want to own cars.

I really have no desire to own a car. I'd rather have a good transit system. Not even for environmental reasons, it's just that cars are just stupid. It's such a waste of energy. (Pete, 22, Vancouver)

I'd rather take transit….I'm all for a green alternative. I'd definitely take it over a car. I've taken transit for years and years and years and I've never owned a car. I'm 24 now. I've always taken transit… (Rick, 24, Vancouver)

Even the car owners in the sample showed restraint in using their cars: most limited driving to recreational and evening activities while commuting to school or work by transit. Seven of ten youth participants mentioned the high costs of gas and insurance as barriers to car ownership, and six of eleven young adults found high costs an issue. Three mentioned car sharing as an option they might consider. The participants were well aware of environmental issues, the consequences of driving, and the rising cost and uncertain future supply of gas, since these issues were often raised at school or at home.

Analysis

The underlying theme from the participants was "travelling within constraints." Towards the end of the focus group discussions, participants were asked how travelling affects their social lives. Most participants said they would stay out later, travel further, and be more independent if they could get to places more easily. They felt they were subject to a "transit curfew" and had to cut their activities short to make the last bus home.

> I mostly hang out around my neighbourhood because I get stressed…well, I don't get stressed, but I don't like knowing that I have to keep looking at my watch. (Karla, 17, Vancouver)

> It means I have to leave at 10:30 to get home at midnight, which is lame…it's sort of like, well, why bother? (George, 24, Surrey)

Participants were unable to control when, where, and how long they could stay out with friends; they could not travel or socialize spontaneously; they were forced to get rides, take expensive cab rides, or walk long distances when transit failed. The areas where they socialize are commercially-oriented, meaning that they must spend money to hang out (Hollands 2002). And although participants seemed unconcerned about safety, the fact that young people often travel alone at night increases their vulnerability.

These constraints affect young people's transportation choices. Failing to provide young people with sustainable transportation alternatives could encourage car ownership at a younger age. The high costs of gas, insurance, parking, and repairs do reduce the likelihood of car ownership among young people in large Canadian cities. Efficient and reliable public transit service contributes to lower car ownership by enabling young adults to travel using transit. Within large Census Metropolitan Areas, car ownership grows more rapidly in suburban areas than in urban areas. For example, there were over 260,000 licensed passenger vehicles in Vancouver and over 192,500 in Surrey in 2008 (BC Stats 2008). From 1998 to 2008, the number of licensed passenger vehicles increased by 11 percent in Vancouver and 42 percent in Surrey. While vehicle ownership in Vancouver kept pace with estimated population growth during this period, it far surpassed population growth in Surrey (BC Stats 2006). Lower car ownership leads to fewer trips by car and lower emissions in Vancouver, a major goal of the City of Vancouver. Ensuring viable public transit service, including higher evening and night frequency, can be a significant step towards promoting more sustainable cities.

Participants in this study showed considerable knowledge of the transit system and had the desire to use it. They were often quick to point out the benefits they get from using transit, from increased independence to better time management.

Most showed a strong desire to keep taking transit, if frequency and reliability improved.

> I'd probably be more lethargic if had a car…I wouldn't do anything…I don't have my parents living with me, there are no free rides, there are no freebies. I have to take care of myself. Otherwise, it just helps you manage your time in a way. (Karla, 17, Vancouver)
>
> Taking the bus gives you more discipline. (John, 19, Vancouver)
>
> For the most part [my friends and I] are all transit junkies. (George, 24, Surrey)

Transit availability plays a major role in strengthening independence, and frees parents from the responsibility of driving youth and young adults. Epstein (2007) and Graham (2004) argue that infantilizing or over-parenting young people denies them the rights and responsibilities that come along with adulthood and restricts them to socializing with their own peer group. Young people who are able to travel independently for both work and non-work purposes are able to live more independent lives. Thus good access to transit facilitates the transition to adulthood.

Although youth represent a substantial portion of transit ridership, young people are often marginalized in the transportation planning process. In order to facilitate a greater understanding of youth and young adults' travel patterns in Metro Vancouver, transit agencies such as TransLink can benefit from the following recommendations:

- Establish a youth planning committee to assist with data gathering and future studies on youth and young adults' travel patterns
- Develop a participatory teaching module on transportation planning for high schools and universities
- Improve access to route schedules
- Increase service frequencies at night
- Improve connectivity of routes and transfer times
- Enhance service to rapidly-growing areas

Conclusion

Given the small sample size and exploratory nature of this research, the participants' experiences may not reflect trends in the general population. After all, participants were specifically recruited from among those who generally did not use cars for non-work travel. However, qualitative research does provide in-depth

understanding of issues and contextual factors that affect behaviour. As Krizek et al. (2004) predicted, the study reveals key differences in youth and young adults' social activities, the inability to own cars, and legal and social restrictions on their travel and destinations. Further quantitative research could determine how widespread these trends may be.

The young people in this sample clearly traveled under some severe constraints; however, they seemed committed to traveling by public transit because of its affordability and sustainability. A large proportion of the group expressed some distaste for car ownership. These participants are transit users by choice; like the Japanese youths discussed by Kageyama (2009), they are happy to be car-free. In the age of social networking, some young adults may no longer see the car as essential (Zimmerman 2009). Participants' frustrations revealed concerns about the poor frequency and reliability of transit during their peak social travel times. Such restrictions affected their social networks and socialization patterns, discouraging spontaneous travel, forcing them to meet friends in transit-accessible locations, and requiring them to cut activities short or make accommodations to deal with early transit ending times. If transit authorities want to increase or simply maintain ridership within this important age group, participants' concerns may warrant attention.

TransLink and transportation researchers in other cities met these research results with some scepticism in 2007, for several reasons. Qualitative research is generally undervalued in the transportation planning and engineering disciplines, where quantitative methods predominate. Transportation authorities have generally attempted to gain new ridership among older groups, rather than concentrating on services for the younger age groups who already have high ridership. Transportation planners have often assumed that car ownership is inevitable, which suggests that young people are "transitory" transit users at best. As the release of 2006 Census data has revealed, however, the 15-24 and 25-34 age groups have a lower driving modal share than older cohorts in Canada's ten largest cities for the commute to work (Statistics Canada 2006). Younger people also have significantly higher transit, walking, and cycling mode shares than older groups in most cities (Thomas 2009). Such findings suggest that viable public transit systems encourage youth and young adults to use transit for their commute to work.

Over the past two years, TransLink has introduced several initiatives to make transit more user-friendly for youth and young adults, including a service that allows cell phone users to text the bus stop number to TransLink and get the scheduled arrival times for buses, and an iPhone application to allow users to find bus stops. TransLink introduced social media sites to provide transit information to the increasingly mobile "2.0 Generation" (TransLink 2008). A night bus study is underway. Surrey has improved bus service and proposes

to introduce several express routes as the South of Fraser Area Transit Plan is implemented (TransLink 2007).

As municipalities and regions attempt to expand and promote sustainable transportation options, they can benefit from understanding more about the travel patterns and behaviour of all age and user groups. The travel patterns of young people, many of whom choose to walk, cycle, and use transit more than other age groups, may reveal a general shift towards sustainable transportation. Focus groups and social mapping are just two of many methods that have been proven to be useful in mixed-methods research on travel patterns and behaviour.

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Notes

[1] The study was conducted as a master's thesis project at the University of British Columbia, with the assistance of TransLink. The research proposal was approved by the Behavioural Research and Ethics Board at the University of British Columbia in 2007.

[2] Since this research was conducted, a rapid transit line has been completed, linking Vancouver and Richmond.

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