

Walkability Studies in Suburban Apartment Neighbourhoods in Toronto, Canada

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Abstract: This paper reports on a study conducted with residents living in the inner suburbs of Toronto. These areas contain large clusters of modernist apartment towers, a basic housing form that is common in Europe but is largely an anomaly in North America. When these areas were designed and built in the 1960's and 1970's, it was assumed that most residents in the new apartments would not have children, would move to houses as soon as they could, and would be able to drive to the places they needed to go. Today, a different population is living in them, often people with limited incomes, people with children and complicated travel needs, and people who do not own a car or who only have part time access to a car. In other words, places that were designed for cars now house people that must rely on walking and transit to carry out their lives.

To understand how residents walk in these environments the study used participatory workshops conducted in eight neighbourhoods. Three basic methods were used: 1) a facilitated social mapping exercise where residents discussed good and bad environmental attributes as their ideas are recorded on a shared community map; 2) an individual mapping exercise where residents marked all their usual walking routes, and 3) a survey that include socio-demographic and transport questions, and questions where residents were asked to evaluate their walking environment. Pre- and post-workshop field audits were also conducted in each place.

The main finding of the research is simply the existence of a large, walking-dependent population living in these places. Of the 250 residents we worked with, 42% were from households that do not have a car, and many more share cars between several adult household members. Walking is clearly the most important way they travel to shop, do errands and bring children to school. Sixteen percent also walk to work, and 41 percent walk to transit as part of their work trip. These suburban neighbourhoods are far from being devoid of pedestrians and do not resemble standard images of empty suburban streets.

These, largely low-income pedestrians, however, walk in hostile conditions. The paper briefly describes issues of social security, crossing arterial streets, and the use of informal, often rough paths across private lands. Because of the way they were squeezed between single-family subdivisions organized as neighbourhood units and large arterial roadways that prioritize moving traffic, many of these conditions were planned into these suburban apartment areas. The research takes the opposite approach used by many North American studies that investigate characteristics of the environment that are positively associated with walking to improve new development. Instead, we examined how people walk in the unsupportive conditions in existing areas.

Author Biographies:

Paul Hess is a Professor of Geography and Planning at the University of Toronto. His research focuses on urban and suburban form from historical, planning, and behavioural perspectives. Current work exams how planning shaped the post-war Toronto suburbs, local mobility as a social justice issue, and the politics "automobility."

Jane Farrow is the Executive Director of Jane's Walk, the Jane Jacobs' community walking tour initiative that promotes urban literacy, walkable neighbourhoods and cities planned for and by residents by creating a space for residents to talk about what matters to them in the places they live and work.

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Study Background and Objectives

Toronto's post-war suburbs contain many of the features of their American analogues including expressways, huge multi-lane arterial streets, and single-family subdivisions planned around local streets and school sites. Unlike the US, however, large-scale apartment development was integral to the suburban transformation of the region. These post-war apartments were neither primarily social housing, nor were most developed in the central areas of the older city, but were, instead, distributed in clusters across the expanding suburbs in high-rise buildings with modernist formats. Containing some 300,000 housing units in almost 1,200 high-rise buildings, these vast areas of post-war development represent a hybrid suburban form that relates to the ideas of the post-war modernist housing estates of Europe, but built within a transportation and property context more similar to that of the US (see figure 1).¹

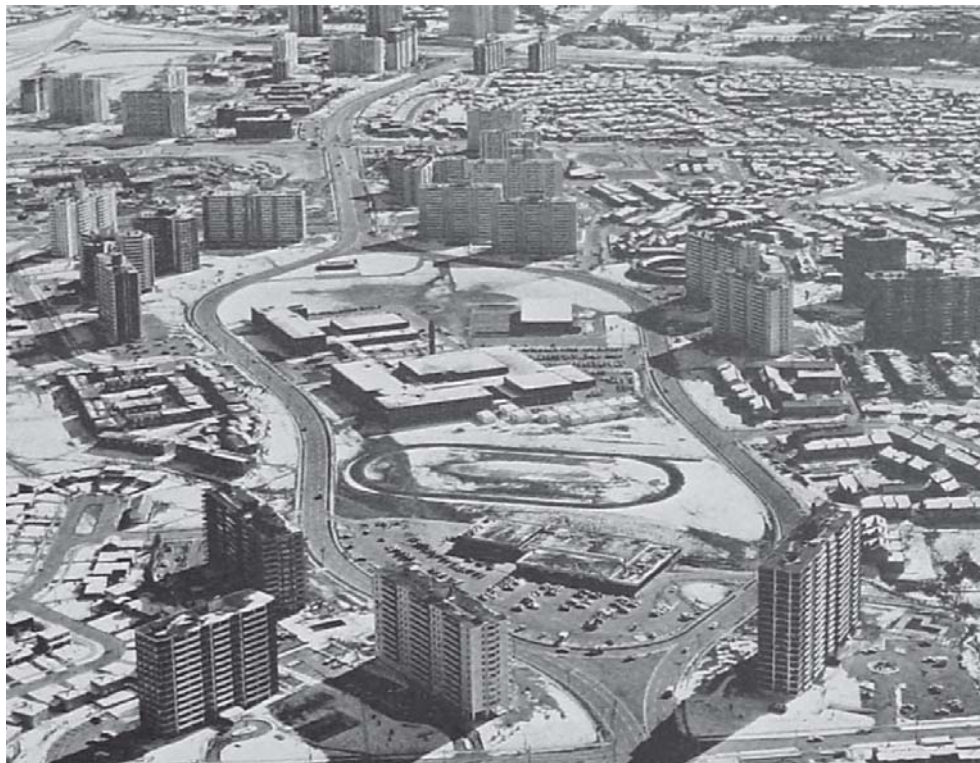


Figure 1. A planned inner suburban apartment area, late 1960's.

¹ The particular situation in Toronto is more pronounced but not completely different than in other North American cities. Moudon and Hess (2000) for example, found suburban apartment clusters in the Seattle area, albeit using low-rise forms, to be a normal part of suburban development.

The goal of the research project discussed here was to better understand the ways people get around these high-rise apartment neighbourhoods, especially by walking. Building on the arguments Jane Jacobs espoused more than 40 years ago, the importance of creating good places for people to walk is now widely recognized by North American transportation experts and public officials. These discussions, however, are almost always focused on downtowns or on areas of new suburban development. In the automobile-oriented inner-suburbs, many researchers and planners assume that little walking takes place.

Certainly, this was a key assumption when these suburban apartment areas were developed. Planned for working singles and couples with no dependents, apartment residents were originally assumed to be middleclass and able to afford cars. While single family areas, were, at least, designed to allow children to walk to school, apartment areas were built adjacent to larger arterial streets, with little thought about accommodating people who would have to get around on foot.

Over the decades, however, these areas of apartment buildings have become the city's *de facto* low-income housing stock. With half of the metropolitan area's population born outside of Canada, many suburban apartment neighbourhoods now house an extremely diverse array of ethnic communities, faith and language groups. Households in the towers are often comprised of a population of new immigrants, large multi-generational families, the working poor or unemployed, seniors with mobility limitations and single parent families. Many of these suburban households do not own cars, or if they do, one car is likely shared among two or more adults. This diverse inner-suburban population, needing to walk to get to work, to shop, to socialize and take care of their children, has been largely unacknowledged in the academic literature or government policy.

This project was intended as a step to changing this and to work towards improving the daily lives of this population. The authors strongly believe that better information about how residents use their neighbourhoods is crucial for making positive change. For these efforts to be successful, we believe that the residents themselves must have a strong voice and play a central role in decision-making and advocating for local changes. We are doing this work to provide both residents and the city with information to help foster this objective.

Methodology

The study was carried out in eight apartment neighbourhoods in the current City of Toronto (see figure 2).² The research was designed to be community-focused, working directly with residents to understand their experiences of their walking environments. Local organizations helped recruit residents to participate in the study, offered a location to meet and provided volunteer assistance for running workshops that were used to collect information. Neighbourhoods were selected, in part, because we had developed working relationships with these groups. We also sought to have a good geographic distribution of areas and tried to include a range of environments, from highly planned neighbourhoods with apartment towers carefully laid out around community facilities, to unplanned areas comprising towers strung along six-lane arterials with no direct connections to basic services.

Information was collected in a series of workshops conducted in 2009. About 250 people participated in the study. We attempted to recruit a wide range of residents in terms of age and background and made sure that childcare and some translation support was available if needed. In some areas, where we didn't get the numbers or range of people we hoped for, we went back to the neighbourhood several times. Still, results should not be treated as representative and readers should interpret findings as giving a general impression of conditions in these types of areas. Workshops were also supplemented with fieldwork and by following up with community members to get further information on particular conditions.

² In 1998 The Province of Ontario amalgamated the old City of Toronto with its surrounding municipalities of Etobicoke, York, North York, East York, and Scarborough to create a new City of Toronto with a combined population of about 2,500,000 people.

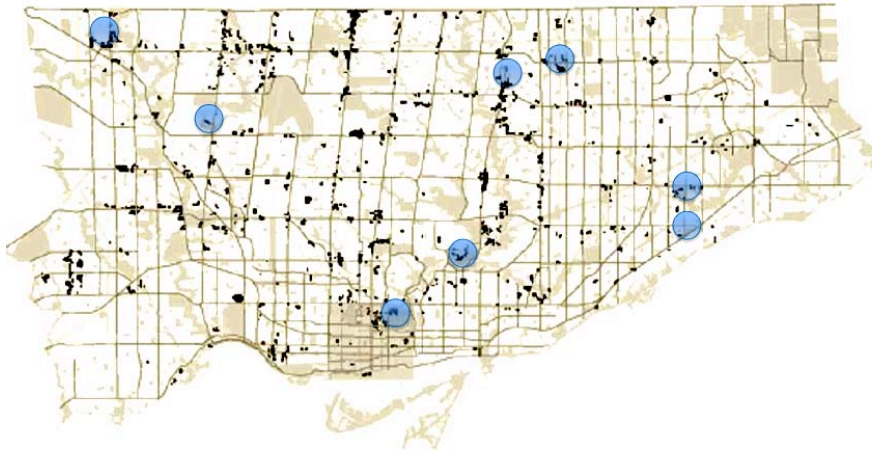


Figure 2. Location of study areas. Black areas are clusters of high-rise apartments.

Each workshop consisted of three types of data collection activities:

(1) Survey

Each participant filled out a survey consisting of roughly 40 questions. The survey contained questions about socio-demographic information such as age, household income, whether or not there are children in the household, etc. The survey also asked more directly about walking and other travel behaviour, and asked a series of questions about how people found the walking environment in their area, whether they felt safe walking, whether traffic was a problem, and so on. In certain study areas, the survey was translated into Bengali and Tamil and in others, interpreters were provided in Spanish, Mandarin, Tamil.

(2) Individual maps

Participants were also asked to create maps that showed how and where they travelled. This information is currently being analyzed and is not discussed in this paper.

(3) Focus group discussion

Finally, participants were asked to discuss their neighbourhood and its walking environment as part of a small group of six to ten people. Each group was seated around a large display map of the area. Their comments were noted directly on the maps as well as transcribed by a note taker. For instance, participants pointed out where they felt it was dangerous to cross a street, where a sidewalk was missing, where shortcuts were used, and where they felt unsafe.



Figure 3. Workshop participants.

Who Participated?

The survey respondents were 66% female. Ages covered a broad range, with the most common age category being 40 – 64 years old. On average, participants had lived in Canada between 4 - 10 years. The length of time respondents had lived in their neighbourhood varied widely but a full 60% reported having been at their current address for less than 10 years.

Eighty percent of participants were renters. Thirty-nine percent were married and living with children, and 17% were single parents. About a quarter of respondents stated that they lived with seniors. Average household size was generally larger than that for Toronto as a whole.

Survey participants report low levels of personal and household income. Seventy-nine percent of participants, versus 38% for the city as a whole, reported their annual household income at less than \$40,000. Only 5% reported household incomes of over \$80,000. Recent work by Hulchanski (2007) suggests these incomes were not atypical of the types of areas we worked in.

The study sample reflects a fairly even split between people who speak English only (33%), English plus another language (31%) and No English (36%). Reflective of the diversity of Toronto, the range of languages spoken by respondents was impressive. In the eight communities studied, we encountered over 35 languages including Twi, Yoruba, Somali, Tamil, Tagalog, Igbo, Hindi, Amharic, Japanese, Russian, Pashta, Dari, Ounjabi, Korean and Kikuyu.

Access To Automobiles

Most discussions about the North American suburbs assume that auto access is nearly universal. In a previous project (Hess, 2009) that interviewed planners about how they try to accommodate pedestrians, we were told that pedestrians are not an issue in the inner-suburbs because everyone has a car and drives. The population we worked with does not conform to this image.

Indeed, the majority of participants (56%) reported that they do not have a driver's licence. For women, only 36% reported having a license. Likewise, 42% of respondents reported their household does not have a car, and another 43% have less than one vehicle in their household. Focusing in on participants aged 25 or over, 84% of households have fewer vehicles than potential drivers. In single parent households 67% have no car.

As expected, car ownership rates increase with income. Yet, most higher income households still only owned one. More surprisingly, newer immigrants owned cars at the same rates as other longer-term residents with similar incomes. In other words, the data suggests that there is no adjustment period to Canada's automobile-oriented culture.

The data suggests that income is the chief barrier to car ownership. When asked who wanted a car in the focus groups, almost every person would raise their hand. This was also reflected in the survey data, where more than half (52%) the respondents said that they were hoping or planning to get a car at some time in the future

Walking Dependence

With low auto ownership rates, study participants rely heavily on walking and transit. For women in particular, walking is extremely important to the quality of their daily lives as many reported not having access to a vehicle and also as being responsible for most household maintenance activities.

In general, walking was the most important mode for grocery shopping, doing general errands, and for getting children to school. For grocery shopping, for example, 82% of participants report doing their shopping locally with walking being the most common mode of transport (32%). This was equalled by the combined total of those who drove (25%) or were driven by a family member or friend (7%). It does not include, though, the 21% of people that use multiple modes. This was

done mostly by people saving expense by walking to the store in one direction and then taking transit or a taxi on the return trip with their load of groceries.

For the work trip too, residents are highly dependent on walking with 16% of participants reporting walking to work as their principal mode and another 41% using transit, which, of course, includes a walk trip to and from the transit stop. This compares to only 21 percent who drive or are driven to work.

In sum, these suburban neighbourhoods are far from being devoid of pedestrians and hardly resemble standard images of empty suburban streets (see figure 4).



Figure 4. Pedestrians on an inner suburban arterial

Conditions

Study participants expressed a range of opinions about the pedestrian environments where they live. For example, when respondents were asked to rate the statement "My neighbourhood is a good place for walking." 61% agreed or agreed strongly. On the other hand, when parents were asked to respond to the statement "I feel comfortable letting my children walk to places on their own," responses were dramatically different, with 67% disagreeing or disagreeing strongly. In general, participant's evaluations were more critical when asked about specific issues, or when discussions took place in the focus groups.

We collected a great deal of information on many issues including the repair and cleanliness of sidewalks, snow clearance and drainage, the availability of seating, and the availability and quality of playgrounds and parks. We only present only three themes here: social safety, arterial roadway crossings, and issues of connectivity.

Social Safety

Social safety was a significant issue that affects travel in all the study areas. It is worth noting that many participants felt that their neighbourhoods have been stigmatized as places of high crime and they were often very sensitive to the use of negative stereotypes. For example, in some areas, residents felt recent increases in police have made their neighbourhoods safer, but others expressed more ambiguous opinions. As one participant stated:

"There's too much police presence at times. It feels as if something is about to happen, makes people suspicious of others or intimidated."

Nevertheless, in the survey participants were asked to mark off reasons they "feel unsafe walking." The following table lists some of the features of the social and built environment that were noted:

Table 1. Environmental features that contribute to residents feeling unsafe walking.

<i>Feature</i>	<i>Percent Respondents</i>
Poor lighting	40
Scary people	31
Too few people	19
Narrow spaces with fencing	22
Obstructed sightlines	17

Participants were also asked to check off strategies they used for reasons of safety. These are listed in the following table:

Table 2. Safety Strategies

<i>Strategy</i>	<i>Percent Respondents</i>
Use car instead of walk	13
Avoid certain streets, places	30
Avoid walking at night	42
Keep to areas with lighting	33
Keep to main streets	29
Walk with others	32
Cross streets to avoid people	13
Carry mobile phone	22

Many clearly avoid walking in certain parts of their neighbourhoods or at night. These anxieties limit people's mobility and create serious barriers to carrying out basic activities.

These fears are also more pronounced for some elements of the population. In particular, our data showed that youth had the highest levels of fear about "scary people" and "too few people." Households with children also reported higher levels of fear, and women and the elderly reported they were more likely to avoid walking at night and keep to well-lit areas if they do. In general, men felt more secure, with 26% reporting they "don't do anything special to keep safe" compared to only 10% of women.

Arterial Traffic and Crossings

Crossing large multi-lane arterial roadways is a daily necessity for many inner-suburban pedestrians to get to the bus stop, to go shopping, and to access other basic services. The Toronto Road Classification System, mirroring standard traffic planning principles, states that arterials are "intended to serve primarily a traffic movement function" (Toronto, 2000), but this comes with a direct cost to pedestrians.

And there are many pedestrians. In one study area where the City of Toronto did counts on two closely spaced intersections, more than 6,000 pedestrians crossed the roadway between 8:00 am and 6:00 pm (compared to 12,000-18,000 vehicles through the same intersections) (City of Toronto, 2010).

In the surveys, resident's opinions varied when asked to rate statements about traffic and crossing streets:

Table 3. Participant Ratings of Statements about Traffic and Crossing Streets

<i>Statement</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>
I feel safe from traffic when I'm in my neighbourhood	16%	43%	14%	22%	6%
There are enough places to safely cross the large streets	16%	43%	14%	22%	6%
To make my walk shorter, I often cross large streets even where there is no light or crosswalk	19%	21%	14%	20%	25%

Ratings for “feeling safe from traffic” and having “enough safe crossings” were nearly identical, with, the majority of participants feeling safe. In both cases, though, parents gave lower safety ratings and newcomers slightly higher ones than average.

Only 40 percent agreed or strongly agreed that they crossed large streets where there is no light or crosswalk. Again parents were less likely to agree, but newcomers were also less likely to report that they engage in this activity. This is despite the fact that protected crossings on arterial streets are often several hundred meters apart. Field observations suggest that many people regularly “jaywalk” across busy arterials.



Figure 5 Pedestrian crossing at an “unprotected” location.

In focus groups, some residents even suggested that such crossings could be safer than “protected crossings” at intersections with lights and crosswalks. This is illustrated by the following comment:

“You’re at greater risk standing at this corner [pointing at an intersection] than you are here [pointing at well-used informal crossing]. There have been three hit-and-runs at this corner.... The pedestrian has an expectation of safety here [at the intersection]... because it’s a crosswalk. The pedestrian has no expectation of safety here [mid-block]. If you’re crossing at the middle of the block, you use the centre median. You make damn sure it’s safe. Drivers are careless.”

In general, the comments of focus group participants belied the general positive responses they gave in surveys. Residents repeatedly pointed to places where lights did not give them enough

time to cross, where crosswalks were needed, where they considered crossings dangerous, or even where people had been hit and killed.

Certainly, residents expressed complex attitudes about the very large roadways on which they live. Many felt resigned or pessimistic about the potential of making them safer for pedestrians. Some even accepted the attitude that these roadways are for cars, even questioning whether more crosswalks should be installed since they disrupt traffic.

Connectivity, Fencing and Shortcuts

Walking along and across arterial streets is a standard part of the pedestrian experience in these neighbourhoods, but most of the suburban high-rise residents we worked with were also heavily reliant on shortcuts, especially routes that crossed private land. Because apartment development did not create new streets and were not designed with pedestrians in mind, residents often force connections across property boundaries and through and around fences to get to basic destinations such as the local school, the grocery store, or the bus stop.

Even though many of these routes are of very poor quality, more than 67% of participants agreed or agreed strongly that they use shortcuts and unpaved paths. Some shortcuts are so heavily used that residents might not even recognize them as such, and rates are likely higher than reported.

Such informal routes are often rough and have no lighting. For example, without making a distinction between the property status of a private driveway used as a heavy pedestrian route and the adjoining, public subdivision street, one resident noted the difference in their lighting infrastructure:

“This whole road needs more lighting. Where the houses are on the next street from here—those lights, perfect. But here....it can be better lighting. And then all the cars that park... they cast a shadow across. So it’s jet black.”

Pedestrians use these routes because formal routes are often several times the distance, but they are also vulnerable to them being shut down by landowners. As a participant explained in one study area:

“In ’69 there was a path, and they put [in]a fence and I was bloody mad. I had to walk all the way up Goodview to take my kids to the pool. And then they built a path, and we used to scramble up the path.”

Far from being “built,” the latter path mentioned is simply the trodden ground formed by constant use that leads up a short, steep hill and through a fence hole that is used by residents to get to an arterial roadway (see figure 6). When asked who uses the route, some focus groups participants were clear: “We all do, of course.”

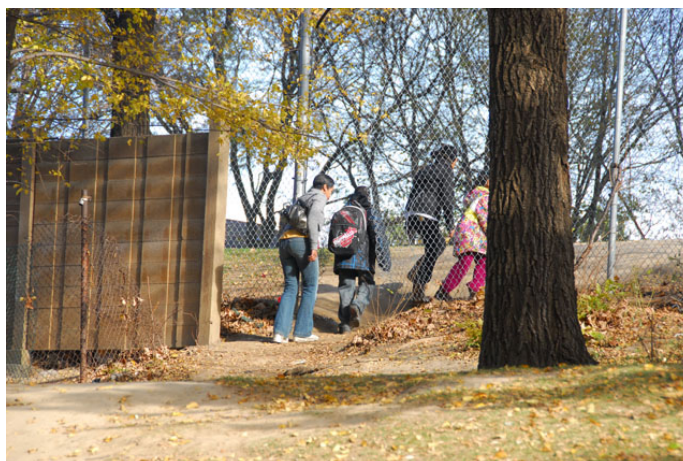


Figure 6. Pedestrians using the informal route referred to in the text above.

Routes to the local primary school are often problematic because they were planned for surrounding single-family areas and not apartments. In one study area apartment residents have forged a direct route to the school across a property with an abandoned house. Not using this route requires a walk that is about three times the distance, partly down a long poorly maintained driveway that provides access to the parking lots of a large apartment block. The landowner is continually repairing the fence to dissuade use, but children build ladders and make new holes to renew the connection.



Figure 7. A makeshift "ladder" used to by children to get to school.

In many areas, residents work hard at improving these connections, but even in the rare instances where they receive City support, it is exceedingly difficult because of property issues. In one recent case, residents worked for several years and were finally able to remove a short piece of fencing and cut a few trees to improve sight-lines on an important short-cut. To make these modest improvements required several years of organizing and the support of City of Toronto Planning and the Toronto Police. According to the planner, it all had to be done "off-budget," because of the property issues.

Summarizing many of the conditions may suburban apartment dwellers face, one study participant noted:

"They've put unnecessary fences around [the shopping plaza]. Again - the big fence that blocks everyone from walking where they used to. So we have to walk around. There's always walking around."

Discussion and Conclusions

This research takes the opposite approach to many North American studies that investigate characteristics of the environment that are positively associated with walking to improve new development. Instead, we examined how people walk in the unsupportive conditions in existing areas. To the best of our knowledge, these studies are the first of their kind in the US and Canada that work directly with apartment residents and focus on walking conditions in the inner suburbs. The main finding of the research is simply the existence of a large, walking-dependent population

living in these places. Of the 250 residents we worked with, 42% were from households that do not have a car, and many more share cars between several adult household members. Walking is clearly the most important way they travel to shop, do errands and bring children to school. Sixteen percent also walk to work, and 41% walk to transit as part of their work trip.

These largely low-income pedestrians, however, walk in hostile conditions. In this paper, we briefly touched on issues of social security, crossing arterial streets, and being dependent on informal, often rough paths across private land, over which they have little control. Squeezed between single-family sub-divisions that were organized as neighbourhood units, and large arterial roadways that prioritize moving traffic, many of these conditions were planned into these suburban apartment areas. As such, improving these areas for residents should be an important public policy issue.

It is worth noting that many of the residents we talked liked many things about their neighbourhoods, and some worked hard to improve these places. We know, however, that general mobility rates are high in these neighbourhoods and that many people move to better conditions as soon as they are able. For the rest, the issues in these places are clearly much deeper than particular infrastructure fixes. Poignantly, when we asked one woman if she only walked because she had to, she replied:

“Yeah. The neighbourhood is not exactly by favourite place. So I just go out, come back. The kids have limited exposure.”

As the largest concentrations of low-income housing in Toronto, improving the walking conditions in these places is a basic social justice issue. This work is a small attempt to give focus to this issue and make more visible the ways residents try to make their lives under difficult conditions.

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