

ENV399Y5 Y Summer 2012 – Written Report
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Introduction

Within cities and suburbs exists a relationship between human and natural processes. Ecology and the urban environment mutually impact one another's growth and development through their interactions. Human activities directly affect the physical environment and primary productivity, while the environment influences many of our lifestyle choices, patterns, and so forth. Thus, it is important to focus on the mutualistic relationship between trees and the urban environment. A lot of what residents choose to do with their yard depend on their personal opinions towards the environment (biocentrism) as well as their personal intentions in how they want to use their yards. Certain aspects that residents take into consideration are esthetics, the level of maintenance or their yard, their financial situations, safety concerns, preferences, the surrounding environment (ie. neighbors influence neighbors), the benefits and disadvantages of their yard choices, home ownership and types of housing.

In this research project I addressed the types of conflicts residents have identified that relates to trees on their property. Throughout the report I will be discussing the following: Describing and discussing the four areas of study within Mississauga (Mineola, Meadowvale, Rathwood, and Lakeview), present the methods used to carry out the project and transcription analysis, the results from the collected data about conflicts regarding trees and activities, trees and edible, trees and plants, trees and other, and interesting or intriguing quotes from the conducted interviews.

Study Area Description

Four neighborhoods in Mississauga were observed in this study. Each neighborhood was divided into two main categories: The newer neighborhoods and the older neighborhoods, and residents with low income and high income.

Lakeview

This neighborhood is located south of the Queen Elizabeth Way, between Cawthra and Dixie Road. Lakeview consists mostly of residents with low income. The average income is approximately \$66,447. A great majority of the houses were built prior to 1970 and was considered one of the older neighborhoods of the four study areas. Due to it being an older neighborhood, the sizes of the properties varied in size and the majority of the residents in the area had permanent settlement. 94% of the individuals that were interviewed owned their property. A greater majority of the population in the neighborhood averaged around the age of 30 to 59. A low number of residents in this area had university education or higher.

Rathwood

This neighborhood is located 5km northeast of Square One mall and the Mississauga City Centre between Cawthra, Central Parkway, Burnhamthorpe Road, and Highway 403. The neighborhood consists of residents with low income and has the lowest income of all four areas

of study with an average income ranging between \$60,000 and \$89,000. Rathwood is one of the newer neighborhoods of the four study areas. The majority of the houses were built after 1971 and most of the residents were not the original owners of their property, and thus were new residents. Due to it being a new neighborhood, not too many mature trees are present and the size of the property limits the amount of trees that can be planted around the area. The majority of the population consisted of residents that ranged between the ages of 30 to 59. Rathwood has the least number of residents with a university education or higher. Most of the population consisted of individuals of the “working class” while 14% of the residents had university level education or higher. The majority of the residents rent their property.

Mineola

This neighborhood is located south of Queen Elizabeth Way, between Cawthra and Mississauga Road. Mineola consists of residents with high income, having an average income of \$138,000. Most of the houses in the area were built prior to 1970 and contains a lot of mature trees. The average age of residents that were interviewed in the neighborhood was 59. 54% of the population had a university level of education or higher. 89% of the residents owned their property.

Meadowvale

This neighborhood is located in northwestern Mississauga and is surrounded by highway 401, Mississauga Road, Ninth Line, and Britannia Road. Meadowvale consists of residents with the highest income of all four areas of study with an average income of \$153,000. It is also the newest neighborhood with 94% of the housing in the area was built after 1971 and consists of a lot of new, younger families. The population mostly fell between the ages of 30 and 49 and the second largest group falling between the ages of 0 and 9. 33% of the population had a university level of education or higher and is the most diverse neighborhood of the four areas of study.

Summary of each Study Area

Neighborhood	Location	Age of Neighborhood	Average Income (\$)	Average Age of residents	Residents with University Education or Higher (%)
Lakeview	Between Cawthra Rd and Dixie Rd	Old	60,000 to 90,000	30 to 59	30
Rathwood	Surrounded by Cawthra Rd, Central Parkway, Burnhamthorpe Rd, and Highway 403	Old	60,000 to 89,000	30 to 59	14

Mineola	Between Cawthra Rd and Mississauga Rd	New	120,000 to 149,000	59	54
Meadowvale	Surrounded by Highway 401, Mississauga Rd, Ninth Line, and Britannia Rd	New	150,000 to 179,000	30 to 49	33

Methods

Transcription and coding

Earlier in the project, semi-structured interviews were conducted with residents in each neighborhood who have agreed to an interview of their property, yard uses, and presence of trees. Each interview that was conducted was recorded. The students used the NVivo software to transcribe and code all of the recorded interviews. The sections that were transcribed were placed into four major categories known as “parent nodes” which was composed of: Government involvement, edible gardens, conflicts with trees on the property, and activities strictly regarding trees on the property. Within each category were sub-categories for more specified information regarding the four major topics known as “child nodes”. A node chart was created to outline the topics and sub-topics for transcription. New categories and sub-categories were added to the list during the transcription process when it was found necessary for more categories. All the audio files were organized into their corresponding neighborhood and were individually transcribed in random order by neighborhood. The interviews were transcribed by two students and each student was assigned a different neighborhood. A master sheet/entry log was created in order to keep up with the transcription process which included the student’s name, the neighborhood of the audio file they were transcribing, the name of the specific interviewee, the start date of transcription and the end date of when the audio file transcription was completed. Once both students had completed the transcription for all their assigned neighborhoods, each student would review the other’s transcriptions for any errors or overlooked information.

Analysis

Once all of the transcriptions were completed, the students used the summary of each node and child node in NVivo to analyze the transcriptions. The tree map function provided on the NVivo software was used in order to calculate the total number of times each conflict was transcribed, coded, and essentially was mentioned per neighborhood. The generated total per conflict on the NVivo software was divided by 2 because the transcription of each conflict accounted for the section recorded in the audio file and the actual transcription of the conflict placed into a child node. An Excel spreadsheet of the compiled data that was collected from the mail based surveys that were sent out and conducted earlier in the study was then used to calculate the averages and percentages to compile the demographic data.

Results and Analysis

Here is a summary of the demographics and ethnicities of each of the four areas of study. It is important to take note that there may be some inaccuracy with the information formulated in the tables based on the data that was compiled from the mail-based surveys. This is due to the possibility that the sample population that was selected from each neighborhood could have been skewed and generated a misrepresentation of each neighborhood. It has been observed that the percentage of the sample population with a university education or higher in Rathwood was calculated to be 75%, however it is known from previous studies that the neighborhood consists mostly of a working class individuals.

Table 1A

Demographics of each Neighborhood

Neighborhood	Average Age	Male (%)	Female (%)	Median Household Income (\$)	University Education or Higher (%)	Home owners (%)	Children Present (%)
Lakeview	62	29	71	60,000 to 89,000	43	100	14
Meadowvale	49	54	46	120,000 to 149,000	50	85	38
Mineola	59	40	60	90,000 to 119,000	50	100	21
Rathwood	46	25	75	60,000 to 89,000	75	50	25

It is interesting to note that Meadowvale is the most diverse neighborhood consisting of a total of five different ethnic origins with Rathwood being the second most diverse neighborhood with a total of four different ethnic origins (refer to table 1b). With regards to Lakeview and Mineola, they are the least diverse of the four neighborhoods and are mostly composed of residents from European and British descent. Overall it appears that the older neighborhoods were more dominated by European and British ethnic origins whereas the newer neighborhoods are more diverse. This may be due to original settlement prior to 1970 and an increase in immigration post 1971.

Table 1B

Ethnic Origins of each Neighborhood

Neighborhood	British Isles	European	South Asian	East Southeast Asian	Caribbean	Latin American	Other
Lakeview	57	43	0	0	0	0	14
Meadowvale	23	23	15	8	0	0	15
Mineola	69	25	0	0	0	0	13
Rathwood	50	25	0	0	0	25	25

Here is a summary of the total number of times each conflict was mentioned per neighborhood. Table 2a consists of a collection of raw data. It is observed that Mineola and Lakeview had the most conflict with regards to the raw tally of how many times each conflict was mentioned per neighborhood. This may be because they are older neighborhoods and may consist of more mature trees in the area. As well as existing conflict due to mature trees being more prone to dying or may require more maintenance such as trimming or dealing with pests due to rotting wood. Based on the data provided from table 1a, it has been observed that all of the interviewees in both Mineola and Lakeview have ownership over their property. This may be further evidence of old neighborhoods consisting of permanent residence. It was observed through the interviews and transcriptions that the length of settlement on a property influences the tree planting choices that the residents make on their property. Due to long settlement, residents are more willing to plant trees on their yards because trees are a long term commitment on a property, thus leading to a higher number of mature trees in the neighborhood.

Table 2A

Total Number of Conflicts

Neighborhood	Other	Activities	Edible	Plants
Lakeview	18	13	6	8
Meadowvale	2	4	5	3
Mineola	15	15	21	22
Rathwood	3	2	1	6
Total	38	34	33	39

Table 2a provides a summary of the average number of conflicts mentioned per neighborhood. With regards to the average number of conflicts, amongst all of the neighborhoods Lakeview experiences the most conflicts in all four categories. This may be because it is an older neighborhood and has to deal with the effects of having more mature trees in the area. However, it is also good to keep in mind that Lakeview is the neighborhood with the lowest income and highest age average. There may be a lot of conflicts present in this area because residents cannot afford to maintain their trees or have it removed. It may also be because residents are of older age and are no longer in the best condition to be working on yard

work or maintenance for long periods of time. The average number of conflicts mentioned per neighborhood is highest in Lakeview and Rathwood, the two neighborhoods with low income. This may be because these neighborhoods cannot afford to maintain the trees on their property. However, Lakeview has more average conflicts than Rathwood because it is an older neighborhood. Rathwood has the highest average for conflict regarding edible gardens. This may be based on the fact that they are a new neighborhood and could still be figuring out the positioning of their yards and that the property tends to be smaller. This could also be because the neighborhood mostly consists of residents with low income and it requires a lot of financial investment in order to get a garden started. Usually in the first year of gardening there are very low yields with high expenses for fertilizers, pesticides, etc.

In one of the interviews conducted in Lakeview, an interviewee expresses, “I can’t, I don’t - I can’t do it. I’d have to hire a tree removal service which would involve a lot of money. So the finances are stopping it from being done. They’re just little fruit trees that are at the back that have- haven’t been pruned well, can’t do that either so.” This further reinforces that conflict exists because of income level. This suggests as to why most of the people in Lakeview have the most conflict with regards to trees on their property.

Another interviewee in Lakeview stated, “I built this house 50 years ago and then trees have been there right before I started so they’re about 70 years old... they’re too much maintenance. See what happens - see how all the sticks fall out... you see when the bark comes off, you see I don’t know what kind of bugs they are... Well it gets underneath the bark so and bark is always falling off.” This demonstrates the fact that older neighborhoods do contain more mature trees and it requires a lot more maintenance and cleaning. The amount of years that the interviewee has lived on their property can also suggest how old they are and that the interviewee might not be able to keep up with the maintenance of the tree.

Conflict with trees and other plants on the property seem equally present in all four study areas. Mineola and Meadowvale seem to have the lowest average number of conflicts for all four sub-categories. This may be due to the fact that these two neighborhoods have the highest average of residents with a university level of education or higher. In previous studies, it has been shown that residents with a higher knowledge of gardening and yard work face fewer conflicts on their property. Surprisingly, Meadowvale has more conflicts than Mineola. It would have been expected for Mineola to have more conflicts with the trees because the neighborhood is older.

Table 2B

Average Total Number of Conflicts

Neighborhood	Other	Activities	Edible	Plants
Lakeview	2.57	1.86	0.86	1.14
Meadowvale	0.75	0.50	0.25	1.50
Mineola	0.14	0.29	0.36	0.21
Rathwood	0.88	0.88	1.24	1.29

Aside from all the conflicts that have been analyzed throughout this study with regards to the presence of trees on resident's properties, it is also interesting to find that many residents are willing to find solutions to existing conflicts in order to be able to keep the trees on their property.

One resident in Lakeview states that "the neighbor had a large umm, tree in the back that was giving off a lot of shade. Now the garage that's there now is where the vegetable garden was. But, you know it seemed to be not such a big deal, we just moved the things that needed sun to the other side." This demonstrates that interviewees do have conflicts with edible gardens and the shade created by trees. However, this is usually not a significant problem and residents are usually willing to find a solution allowing plants to co-exist with trees on their property.

Another interview conducted in Lakeview demonstrates the same desire to keep trees on their property. This female resident states that "...you have to be sensible about where the tree grows. Trees suck the moisture out of the soil, and - so that it is a considera - that's a little conflict but you just water." When the interviewee was asked whether they would ever remove a tree in order to be able to continue gardening the interviewee responded, "Oh no, no." This displays the willingness of residents to find a solution to the conflict that shade created by trees present on their property and that they prioritize the trees on their property over gardening and other plants.

It is shown through various analyses of the transcriptions that the biocentrism of residents do influence their desire for the presence of trees on their property. A lot of residents keep the trees on their property because of all the benefits that it has to offer such as shade and privacy. An interviewee in Lakeview states that, "Yeah. I mean like, mmm I like the trees so I'm not going to, you know chop it all the way back or anything like that. It helps to keep the house cool. I don't use air conditioning." Another resident from Mineola also states that, "I think I'm okay with the trees... there's not a lot of light that gets in there and there's enough privacy so we just thought it wasn't really necessary. So, really I wouldn't remove any trees...". One resident in Rathwood expressed, "I love the trees more than anyt-. Take my flowers away but don't take the trees."

Conclusion

Throughout the conduction of this study it has been observed that there are many factors that influence the types and amount of conflicts that trees present on the property of residents. It has been demonstrated that the age of a neighborhood greatly affects the types of conflicts that trees present in the neighborhood because of the maturity and level of maintenance that the trees require. It is also important to note that the level of income and average age of residents in a neighborhood also greatly influences the amount of conflicts present on their properties caused by trees. Usually individuals with a lower income are not capable of affording to properly maintain growing trees on their property and those of older age find it more difficult to carry out yard work duties. However, regardless of the conflicts that trees present to residents, a large majority of the interviewees that took part in this study expressed that they prioritize trees over edible gardens and other plants on their yard because of the benefits that trees provide such as shade, privacy, and esthetics. As this study progresses I believe that it is important to conduct

the same analysis for the other three categories of main focus in this project such as government involvement, edible gardens, and activities strictly regarding trees on the property. It is essential to understand the effects and relationship between trees and the urban environment holistically and may provide a better understanding of the choices and major influences of having trees on resident properties.

Appendix

Master node list used as a guideline for the transcription and coding of the audio files.

Topic/keywords	Node	Child Node	Notes for Interpretation
By-laws	Policy	by-law	
City tree	Policy	city tree	
Mississauga/ municipal/city/government, any activity related to trees	Policy	activity	
Mississauga/ municipal/city/government, any policy, program related to trees	Policy	policy	
Sources of information/ expertise	Policy	Info	
Other discussion about Mississauga/ municipal/city/government	Policy	Other	
Fruit and vegetable growing	Edible	Growing	
Stopping Fruit and vegetable growing	Edible	Stop	Stopping edible gardening
Urban agriculture, more broadly or other	Edible	Urban Agriculture	
Conflict: trees, fruit, vegetables	Conflict	Trees and Edible	Including replacement of edible garden with tree
Conflict: trees and other plants	Conflict	Trees and Plants	Trees, grass, any plant that is not edible
Conflict: trees and activities	Conflict	Trees and Activities	Any activity, required tree care (i.e. Need to water causes conflict in household)
Conflict: trees and other	Conflict	Trees and Other	Including neighbors, etc.; safety
Tree: Native, Exotic, Non-native, Local	Tree	Native	Include all discussions of native/exotic/non-native trees
Tree: Species selection	Tree	Species	Any discussion around selection motivation
Tree: Planting	Tree	Planting	Past or future/ potentially tree planting
Tree: Removal	Tree	Removal	Actual or future/potential tree removal
Tree: water, mulching, pruning, etc.	Tree	Care	Any activity or discussion related to caring for trees
Trees: uses/benefits	Tree	Use	Any use/benefit discussed: pretty, privacy, shade, etc.
Location: where in yard	Location	Front Yard	Tag (starting point) but don't transcribe discussions around location of trees or edible gardens
Location: where in yard	Location	Back Yard	