# *A Walk in the Park [Ex]*

## Exploring Environmental Justice Through Resident Interactions with Greenspace in Park-Extension

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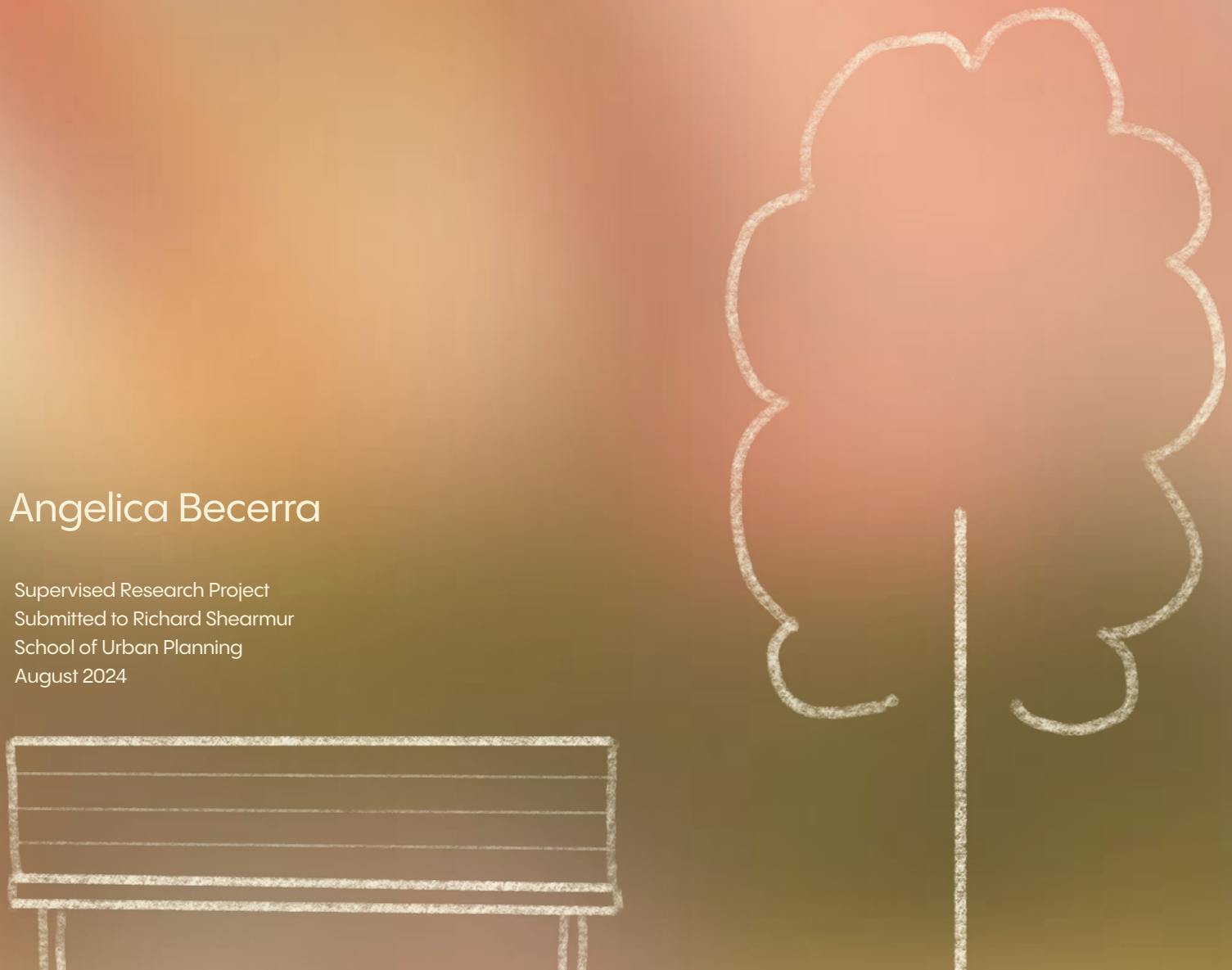

# *Résumé*

La nature urbaine a de nombreux bienfaits, offrant notamment une meilleure qualité de vie, et atténuant la pollution et les îlots de chaleur, en plus de séquestrer le CO2. Pourtant, l'accès aux espaces verts dans les villes est souvent réparti inégalement, alors que les communautés marginalisées vivent souvent dans des zones où la végétation est moins abondante et où les niveaux de pollution sont plus élevés. De plus, ces populations sont souvent exclues des processus décisionnels liés à la planification des espaces verts. Ceci soulève des questions quant à l'équité et à la justice environnementale. Bien que la littérature démontre la présence d'injustice environnementale dans les quartiers vulnérables et à faible revenu de Montréal, peu de recherches ont exploré la façon dont les résidents de ces zones utilisent et perçoivent les espaces verts. Cette étude se concentre donc sur Parc-Extension, un quartier défavorisé sur le plan socio-économique et diversifié sur le plan ethnique, qui dispose de peu d'espaces verts et qui est très vulnérable aux îlots de chaleur. Cette recherche vise à répondre aux objectifs suivants: comprendre les conditions actuelles des espaces verts dans Parc-Extension, explorer la façon dont ils sont utilisés et appréciés par les résidents, et identifier les possibilités d'amélioration en fonction des besoins de la communauté. Grâce à des observations dans 12 parcs et à des entretiens avec 8 résidents, l'étude révèle que si les espaces verts favorisent la cohésion sociale, la sécurité et le bien-être, ils sont confrontés à des défis tels que la surpopulation, une canopée insuffisante, un manque d'entretien et des problèmes de propreté. Il existe également un décalage entre les principaux utilisateurs de ces espaces (principalement des personnes de couleur et issues de communautés marginalisées) et les perspectives partagées par des résidents blancs et aisés souvent plus impliqués dans les discussions environnementales dans Parc-Extension. Cette étude suggère que pour résoudre ces problèmes, l'arrondissement de Villeray-Saint-Michel-Parc-Extension devrait mettre en œuvre des processus décisionnels participatifs qui intègrent les voix des communautés marginalisées, en plus d'investir dans les parcs existants tout en atténuant l'embourgeoisement et le déplacement des communautés vulnérables.

# *Abstract*

Urban nature provides various benefits, including enhanced quality of life, pollution mitigation, CO2 sequestration, and alleviation of the urban heat island (UHI) effect. Yet, access to urban green space (UGS) is often unevenly distributed, with marginalized communities frequently living in areas with less vegetation and higher levels of pollution. Such populations are often excluded from participatory decision-making processes related to UGS planning. These issues raise questions regarding environmental equity and justice. Despite literature demonstrating the presence of environmental injustice in Montreal's low-income and minority neighbourhoods, limited research has explored how residents in these areas use and perceive greenspace. This study focuses on Park-Extension (Park-Ex), a socio-economically disadvantaged and ethnically diverse neighbourhood with limited greenspace and high vulnerability to the UHI effect. This research addresses the following objectives: understand the current conditions of greenspace in Park-Ex, explore how it is used and valued by residents, and identify opportunities for improvement based on community needs. By conducting observational studies in 12 parks and interviews with 8 residents, the study finds that while UGS fosters social cohesion, safety, and well-being, it faces challenges such as overcrowding, inadequate tree cover, poor maintenance, and lack of cleanliness. There is also a disconnect between the primary users of UGS (mostly people of colour and immigrant communities) and the perspectives of affluent, White residents involved in local environmental discourse. This study suggests that to address these issues, the borough of Villeray-Saint-Michel-Park-Extension should implement participatory decision-making processes that incorporate the voices of marginalized communities and invest in existing parks while mitigating ecological gentrification and displacement.

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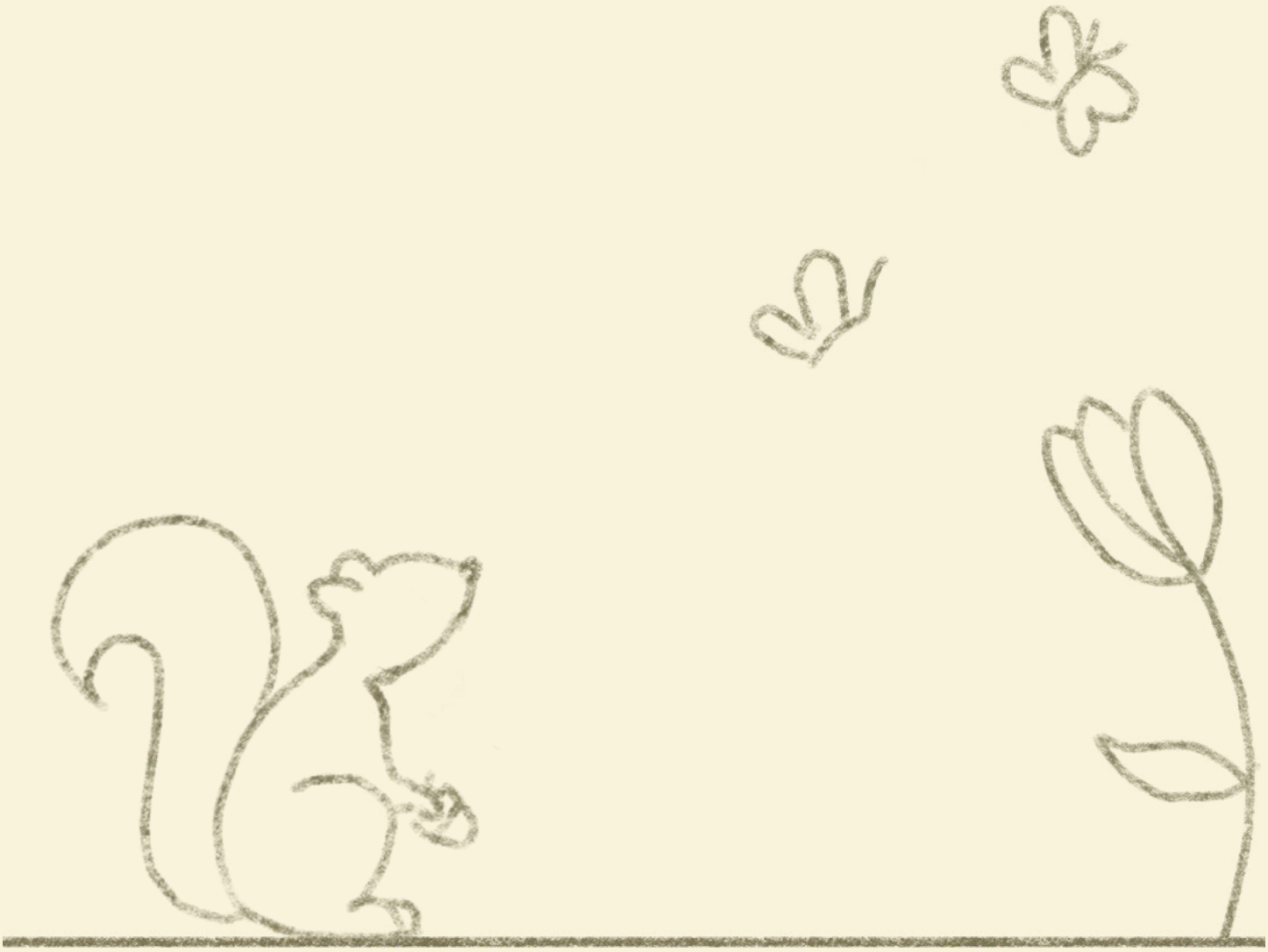

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# *Introduction*

Urban nature provides numerous benefits to residents. Various studies have documented the advantages of urban vegetation on quality of life, pollution mitigation, CO2 sequestration and alleviation of the urban heat island (UHI) effect (Akbari, 2002; Jansson et al., 2007; Nowak et al., 2006; Oke et al. 1989). The literature has also revealed that vegetation is often unevenly distributed, as low-income and minority populations tend to live in more polluted neighbourhoods with less access to greenspace and trees (Bullard, 1993; Cutter, 1995; Grove et al., 2006; Mennis, 2006). Urban governance can be equally as uneven, with marginalized populations being excluded from participatory decision-making processes (Nesbitt et al., 2018). These studies have raised questions about environmental equity and justice, which relate to the belief that for all of society, ecological benefits and costs should be equally distributed (Downey, 1998, Heynen, 2006; Landry and Chakraborty, 2009; Pedlowski et al. 2002; Tooke et al, 2010, Cable & Cable, 1995). Although studies have shown that environmental injustice prevails in neighbourhoods with low-income people and visible minorities in Montreal (Pham et al, 2012; Thomson & Caquard, 2011), little research has been conducted to understand how Montreal residents in these neighbourhoods use greenspace and how they perceive it.

Considering how access to greenspace differs across socio-demographic groups is crucial in supporting greenspace use and expanding collective health benefits across all populations (El-Murr et al., 2023), as it can shed light on potential disparities experienced by marginalized communities regarding use, amenities, and the overall quality of greenspace. Additionally, examining the personal accounts of citizens gives voice to communities, unveiling their specific needs and aspirations depending on their unique social, economic, and environmental compositions. Hence, acquiring this qualitative data is pivotal, as it may disclose information that is more difficult to uncover through quantitative research. While quantitative spatial analysis is important in demonstrating how accessible and available greenspace is in a neighbourhood, qualitative analysis can highlight who uses greenspace and how it is used.

This project thus focuses on the neighbourhood of Park-Extension (Park-Ex), its greenspace and how it is used, and the experiences of its residents. In Montreal, Park-Ex is among the poorest and most ethnically diverse neighbourhoods with the least access to greenspace and a high vulnerability to UHI effect (Patsias, 2020). The goal of this project is threefold: to understand the conditions and importance of greenspace in Park-Ex, to explore how greenspace is used and valued by residents, and to identify opportunities to improve these spaces according to the community's needs.

# Project Description

In addition to the physical attributes of greenspace, this study investigates how people use these spaces and the experiences of residents related to them. Recognizing that not all users interact with and perceive greenspace in the same way is important to understand the benefits — or lack thereof — for different populations (Lee et al., 2015; Zhou & Rana, 2011). The characteristics of users, their lived experience, and their interactions with greenspace must therefore be documented to plan effectively and appropriately for the community's unique needs.

Against this backdrop, the following research question is posed: ***How can greenspace in Park-Extension better reflect the needs of all residents?***

To help answer this overarching question, the following sub-questions are posed:

**(1) How do people use greenspace in Park-Ex?**
**(2) What are the current conditions of greenspace in Park-Ex?**
**(3) What amenities, vegetation, and characteristics do residents find most useful in greenspace?**
**(4) In what ways do residents envision the enhancement of greenspace in their neighbourhood?**
**(5) How can environmental justice be increased in Park-Ex?**

The report is organized into four sections. The first section consists of a literature review regarding greenspace in urban space including its definitions, benefits to residents, threats and challenges, environmental injustice and equity issues, and perceptions of greenspace. This literature overview provides a foundation for exploring the nuanced relationship between communities and their greenspace, and how such relationships exist in the neighbourhood of Park-Ex.

The second section of the report provides an overview of the neighbourhood of Park-Ex, presenting a brief historical review and its current social composition, built environment, and green elements. In the third section, I summarize my findings from observational studies conducted in twelve different parks in the neighbourhood. Based on the previous literature review, I utilize principles and definitions discovered in the literature to identify the types of users, types of activities, and possible differences between anticipated and actual use that could be influenced by the park's location, time and day of observation, design, accessibility, and other factors.

For a more robust understanding of residents' experiences using greenspace in Park-Ex, how they benefit from such infrastructure and how they envision improvements, I conducted eight semi-structured interviews with Park-Ex residents. The interviews followed a general interview guide consisting of four sections, focusing on personal background and connection to Park-Ex, personal relationships to greenspace, experiences using greenspace in Park-Ex, and thoughts on challenges and opportunities regarding these spaces in the neighbourhood, as well as on environmental equity issues. The findings from the residents' interviews are all highlighted in section three with the observational studies. Lastly, section four provides a final discussion, urban planning and design recommendations regarding the future of greenspace in Park-Ex, and suggestions for future research.

# *Section 1: Literature Review*

# 1.1 Defining Urban Greenspace

Urban greenspace (UGS) has various definitions and synonyms which sometimes appear contradictory. Greenspace can be public or private, green or grey, artificial or natural, large or small. While at times greenspace can be very "green" and "natural" with much vegetation, it can also be highly designed and incorporate elements such as concrete, creating a much more "unnatural" atmosphere. Within the literature, it has been defined as "[comprising] of all-natural, semi-natural and artificial networks of multifunctional ecological systems within, around and between urban areas, at all spatial scales" (Tzoulas et al., 2007, p. 169). Other scholars defined it as an "open space situated within city limits with a good vegetation cover planted deliberately or inherited from pre-urbanization vegetation and left by design or by default" (Jim & Chen, 2006, p. 338). Additionally, studies have referred to UGS as public parks, sports fields, informal greenspace by roads or sidewalks, public or private gardens, patches of natural vegetation, and even individual trees on the street (Davies et al., 2008). Two prevalent but opposing interpretations are "greenspace as nature" and "greenspace as urban vegetated space" (Taylor & Hochuli, 2017). While the former refers to greenspace as wild, untouched, and "natural", the latter merges with urbanity by suggesting a natural landscape that is part of the urban, designed for and managed by humans. Regardless of what UGS specifically refers to, urban residents rely on these spaces in conducting their everyday lives, whether for leisure, physical activity, socialization, or mental well-being.

Because of the numerous benefits that UGS provides, and the challenges in maintaining and managing them, UGS availability has also emerged as an important concept within the literature. Studies have consistently demonstrated that the closer residents are to UGS, the more likely they are to use them and reap their benefits (Kabisch et al., 2016). Conversely, individuals are less likely to experience the benefits of UGS if they have less or no access to them. Therefore, the differences in availability and ability to take advantage of these benefits raise issues regarding environmental equity and justice — the belief that for all of society, ecological benefits and costs should be equally distributed (Downey, 1998; Heynen, 2006; Landry & Chakraborty, 2009; Pedlowski et al., 2003; Tooke et al., 2010).

Not all UGS is equal. A UK case study found that the attributes of local greenspace affect the duration, frequency, and nature of visits, as well as the social connections that may develop during those visits (Kabisch et al., 2016). Additionally, Lee and Maheswaran (2011) demonstrate how environmental influences such as a UGS's features, conditions, accessibility and safety affect the use of greenspace. Understanding these differences is crucial in exploring the broader implications of UGS on urban environments and their inhabitants. This brings the discussion to the following section, examining the relationship between greenspace and the city.

# 1.2 Urban Greenspace and the City

UGS in urban environments are fundamentally different than UGS in rural areas. As noted by researchers, one of the notable characteristics that set cities apart from their rural counterparts is the greatly modified climate in which urban areas exist. Factors such as "solar radiation, air temperature, wind speed... relative humidity, cloud cover, and precipitation can vary

significantly due to the built environment and according to a city's topography and local surroundings" (Heidt & Neef, 2008a, p. 84). Urban climates are typically marked by higher temperatures, weaker winds, and solar radiation levels that fluctuate based on the degree of pollution present (Gilbert, 1991). Air pollution in urban areas is high, often 5 to 25 times higher than in nearby rural areas due to emissions from transportation and industry, leading to reduced solar input but increased heat retention (Heidt & Neef, 2008a).

Most cities globally are typically up to 4 degrees Celsius warmer than their rural surroundings demonstrating that cities behave as "heat islands" (Akbari, 2002; Nowak et al., 2006; Oke et al., 1989). UHIs have been more pronounced over the past century and have been defined as "isolated pockets of increased temperature located over cities and urban areas" (Heidt & Neef, 2008a, p. 85). This phenomenon is caused by several factors, including the absorption of heat by building roofs, walls, and pavements. All these materials absorb rather than reflect solar radiation, raising surface temperatures by 10 to 20 degrees above ambient air temperature (Akbari, 2002). Additionally, the high proportion of impervious surfaces that do not allow the passage of water in cities compared to rural regions means that there are fewer trees, plants, and vegetated areas to provide shade and intercept solar radiation, absorb rainfall and flooding, as well as less evapotranspiration from vegetation and unpaved soil to cool the urban environment (Bonan et al., 2002; Heidt & Neef, 2008a). UGS have a cooling effect in urban environments through evapotranspiration, water absorption and retention, and shade.

Because of higher temperatures in cities, extreme heat is a major cause of mortality, surpassing severe weather events like tornadoes, blizzards, or floods. In the summer of 1995, extreme heat killed 700 elderly people in Chicago (Semenza et al., 1996). A study found that in Montreal, there has been an average of 120 annual deaths directly related to heat during heat waves (Jandaghian & Akbari, 2021). In 2018, for example, 66 deaths were directly related to heat in Montreal, working out to 6.4 deaths per day, per million inhabitants according to a report by Montreal's public health authority (MacFarlane, 2019). The report also found that low income and social isolation were key factors in the deaths attributable to that heat wave. Of those who died, two out of three were 65 years old or older, and nearly three in four – 72 percent – had a chronic condition (MacFarlane, 2019). Moreover, a disproportionate number of deaths in 2018 occurred among people suffering from schizophrenia, who made up 25 percent of the total deaths, even though they represent just over 0.6 percent of Montreal's population (MacFarlane, 2019). The unique challenges cities encounter with climate highlight the importance of thoughtfully located, designed, and managed UGS. These spaces are imperative to managing issues relating to heat, pollution, mental health and more. The next section explores the various benefits of urban greenspace and their essential role in urban environments.

## 1.3 Benefits of Urban Greenspace

UGS offer numerous benefits that extend beyond individual users to entire communities. According to Bedimo-Rung et al. (2005), parks provide various facilities and services that fulfill individual, social, economic, and environmental needs. UGS are now recognized as essential in creating sensible and habitable cities. They contribute to recreation and health, support everyday life, conserve biodiversity, enhance cultural identity, provide nature experiences, improve environmental quality, and offer natural

solutions to technical problems in urban areas, such as sewage treatment and flooding regulation (Kabisch et al., 2016).

## 1.3.1 Ecological and Environmental Benefits

Even small greenspace like neighbourhood parks have significant effects on urban climate. UGS improve air quality by absorbing pollutant gases like ozone and binding particulate dust through their leaves. The composition and arrangement of trees and shrubs in the case of small inner-city parks is crucial. For example, a plantation arrangement consisting of tall trees with small shrubs in between trees is more efficient in mitigating pollutants than a forest of the same size consisting of only trees (Heidt & Neef, 2008). Moreover, only a few trees in high-density neighbourhoods can decrease the amount of dust in the air by a significant amount. Street trees create small air circulations that help dilute pollutants, thereby reducing the risk of smog. Small UGS can also help enhance air quality up to 300 meters away from their immediate surroundings (Heidt & Neef, 2008). In addition to filtering air and reducing pollution, UGS provide habitats for various fauna and flora. Biodiversity in urban areas can be higher than in rural surroundings, as cities with sufficient greenspace can provide ecological pockets for many species to thrive, including some endangered species (Heidt & Neef, 2008a; Nowak et al., 2006).

Additionally, with the increasing impacts of global warming and the intensification of the UHI effect, an academic focus has shifted toward the influence of UGS in mitigating heat in cities. It is now well known that UGS play a critical role in reducing UHI, creating cooling effects, and offering thermal comfort for residents. A study found that large parks, over 10 hectares in size, achieve the highest Cooling Effect Index (CEI) and Cooling Effect Distance (CED) measurements, with temperature reductions of 1-2 degrees Celsius extending up to 350 meters away from the park boundary (Aram et al., 2019).

## 1.3.2 Economic Benefits

Greenspace and landscaping have increased property values and financial returns for land developers. Specifically, UGS and landscaping projects have resulted in financial returns ranging from 5 to 15 percent. Studies also indicate that zones with many trees sell for 20 to 30 percent more on average than comparable lots without trees. Mature trees preserved during development also add more value to a lot than landscaping done post-construction. Additionally, 70 to 80 percent of home buyers rated natural open space as the most desired feature in new home developments (McMahon, 1996). Nonetheless, it is important to note that such economic benefits can directly result in the displacement of lower-income individuals – and often people of colour – and exacerbate environmental injustices (see Section 1.5: Environmental Justice and Spatial Exclusion for more details). Using vegetation to reduce the energy costs for cooling buildings is also increasingly recognized as a cost-effective reason for expanding greenspace, vegetation, and street trees in cities (Akbari, 2002).

Outdoor recreation facilities also offer direct and indirect economic benefits to communities. Several studies have found that proximity to state parks, reservoirs, or regional parks positively affects property values. However, parks that fall into disrepair and neglect may diminish these potential positive influences on land use (Bedimo-Rung et al., 2005).

## 1.3.3 Social Benefits

UGS offer numerous social advantages that positively impact human health by providing shade, reducing heat strain and cancer risks, and lowering noise levels. These areas act as local hubs for relaxation and recreation, facilitating contact with nature and the changing seasons. Greenspace introduce "emotional warmth and softness" into urban life, both in their physical composition by contrasting the rigidity of concrete and pavement, but also in bringing individuals and communities together as spaces to gather and share (Heidt & Neef, 2008a). They can also enhance privacy and serve as educational venues, providing opportunities for both structured and informal lifelong learning about natural and ecological processes, especially when it comes to educating children and maintaining participatory engagement and enthusiasm (Wolsink, 2016).

Research on UGS emphasizes how residents' satisfaction, experiences, and perceptions of greenspace quality are vital for sustainable development. The link between urban parks and sustainability becomes clear when nature is considered a provider of essential social services that improve the quality of life (Chiesura, 2004). Referencing existing literature, a research study has summarized the social benefits that UGS offer that demonstrate their importance as a form of social infrastructure, critical in the everyday lives of urban residents (Zhou & Parves Rana, 2012). The following benefits are mentioned in the study:

- **Providing recreational opportunities.** As urbanization and built-up areas expand, so does the need for recreational zones and greenspace. Different types of greenspace offer varied recreational experiences. For example, neighbourhood gardens facilitate daily contact with nature, golf courses provide leisure activities, playgrounds provide children with movement and play, and urban parks offer ideal locations for picnics. Importantly, the naturalness, maintenance, safety, diversity, and amenities of greenspace are key factors in assessing their attractiveness.
- **Rendering aesthetic enjoyments.** Greenspace provide unique aesthetic pleasures through colours, shapes, textures, and sounds that change with the seasons, weather, and time of day. Visual contact with nature offers immense pleasure and gratification, while experiences as subtle as the scent of certain plants, rustling of leaves in the wind, and sighting of a squirrel or butterfly create a sense of tranquillity. Additionally, in less dense areas such as the suburbs, a well-designed green corridor can enrich citizens' lives with an abundance of natural beauty.
- **Enhancing social ties.** UGS foster social interaction and strengthen social cohesion. Older adults with better access to greenspace have more social connections, and frequent use of outdoor greenspace can create a sense of community. These spaces can also serve as places to gather through community events.
- **Providing educational opportunities.** Lastly, UGS also serve as educational resources, acting as secondary classrooms for children and adults alike. Specifically, such areas can aid in stimulating creativity and imaginative play in children.

## 1.3.4 Physical and Psychological Benefits

McCormack et al. (2010) add to the exploration of UGS benefits by highlighting the role of urban

parks in promoting physical activity among diverse subpopulations. Their research emphasizes the connection between park design, accessibility, and amenities with population health, noting the influence of attributes such as size, features, and maintenance on park use. Additionally, a different study has shown a positive correlation between the size of greenspace and the frequency of walking, exercising, and relaxing, as well as how visual elements and noise management are crucial in increasing park satisfaction and usage (Gozalo et al., 2019).

Zhou and Parves Rana (2012) emphasize that greenspace significantly improve physical health by encouraging outdoor activities. They note that proximity to greenspace reduces the likelihood of diseases such as cardiovascular problems, diabetes, and certain cancers. Furthermore, the literature has demonstrated that conveniently located exercise facilities, including parks, are associated with higher levels of vigorous physical activity among both adults and children (Bedimo-Rung et al., 2005).

The accessibility of large, attractive greenspace increases usage, leading to higher physical activity levels. Barriers like major roads, safety risks, or uncared-for areas can deter park usage, while well-maintained facilities attract more visitors. People choose to use these spaces not just for their features but also for the quality and condition of those features. Having access to high-quality greenspace ultimately leads to residents being more likely to reach recommended daily exercise levels compared to those without access (Lee & Maheswaran, 2011).

UGS also offer numerous psychological benefits. They provide an effective escape from the stress of daily life, promoting mental well-being (Zhou & Parves Rana, 2012). Having a view of nature from windows has been linked to various psychological, emotional, and mental health benefits among different groups, including workers, students, hospital patients, inner-city dwellers, and public housing residents. Even the mere existence of parks is valued by people as studies suggest that people place value on the existence of parks even when they do not use them (Bedimo-Rung et al., 2005). Frequent park use is also associated with improved psychological health. For example, older adults who participated in light to moderate aerobic activity in parks reported being in a better mood after their visits (Bedimo-Rung et al., 2005).

It is important to note that several factors influence the use of greenspace, and therefore the benefits they yield. For example, age appears to be an influencing factor as Lee and Maheswaran (2011) found that some studies suggest young adults and older adults are often less frequent users of UGS. Additionally, adolescents experience a decline in physical activity, with a notable drop in participation between ages 15 and 18, especially among teenage girls. Possible reasons include issues of social exclusion, stigma, boredom, fear of crime, racial and ethnic tensions, heavy traffic, and litter. It has also been found that males use parks more frequently than females and are more likely to engage in vigorous physical activities. Women are more likely to walk purposefully rather than for exercise. Ethnic minorities and people with disabilities are less likely to use greenspace, often due to safety concerns. The interaction between socioeconomic status, gender, ethnicity, and disability is complex and affects how individuals benefit from greenspace. For instance, women from lower-income neighbourhoods benefit more from the availability of physical activity resources than those in wealthier neighbourhoods. Moreover, despite the advantages that UGS provide, they face numerous threats that jeopardize their management and functionality.

# 1.4 Threats to Urban Greenspace

Lee et al. (2015) highlight various threats to UGS. These spaces face significant threats due to the limited urban space, the increasing demand for development and housing, and other local government priorities such as transportation. Maintaining green areas incurs costs, and when greenspace are perceived as neglected, they are at higher risk of being developed into something perceived as more useful, rather than refurbished and improved. Additionally, the lack of integration between planning, transport, housing, and health policies often hampers efforts to create environmentally friendly and health-promoting cities (Lee et al., 2015).

Another issue highlighted by Lee et al. (2015) is the restricted access to public greenspace, particularly when urban land is redeveloped for housing and greenspace are provided exclusively for residents. This approach exacerbates inequities in access to greenspace. Furthermore, initiatives to improve greenspace in deprived neighbourhoods can inadvertently drive up property values and displace the residents who were meant to benefit – a phenomenon referred to in the literature as "ecological gentrification" (Dooling, 2009). Understanding how residents use greenspace and involving them in the planning and design process is crucial in fighting against ecological gentrification (Lee et al., 2015).

The development, management, and maintenance of UGS also remain challenging. This is partially because they are often a low priority at national and local levels, resulting in limited financial budgets for their upkeep. There is also a growing emphasis on high-density, compact urban development, which often conflicts with incorporating greenspace. Moreover, the development of brownfield sites due to disappearing industries and rail transportation in city centers often involves the sacrificing of existing greenspace (Kabisch et al., 2016).

Even when UGS are tended to, there may be some complications. Aronson et al. (2017) explain how common management practices of UGS, such as pruning trees and shrubs, applying pesticides and herbicides, and introducing non-native species, can pose threats to urban biodiversity. UGS are governed by multiple stakeholders and balancing human perceptions, needs, and uses with ecological requirements for preserving and enhancing biodiversity is often challenging for those governing such spaces. To improve the conservation, design, and management of UGS, collaboration among scientists, resource managers, planners, and residents is essential.

Moreover, the way in which UGS are classified by planning officials and the ways they are used in public statistics hinder the encouragement of a diverse, interconnected green infrastructure system in cities. For example, a Polish study found that the classification of UGS focuses on formal greenspace managed by public authorities, overlooking other types of greenspace used by inhabitants for recreation and other ecosystem services (Feltynowski et al., 2018). Consequently, these spaces are not formally recognized by local authorities and are not included in the dominant classification for public statistics (Feltynowski et al., 2018). This is an interesting point to note because areas that lack formal green infrastructure often benefit from informal greenspace – such as private yards or alleyways. It is in understanding these overlooked dynamics at play that authorities can better plan for communities based on their lived experiences and needs.

# 1.5 Environmental Justice and Spatial Exclusion

## 1.5.1 Environmental Justice

As mentioned previously, uses of urban parks vary among diverse populations, with socio-demographic factors such as class, age, gender, race, and ethnicity playing important roles. Scholars have argued that parks are not ideologically neutral spaces; rather, they are shaped by ecological, social, political and economic factors that influence how people perceive and use them (Byrne & Wolch, 2009). In addition to socio-demographic factors, historical perspectives are important to consider as they highlight how local ecosystems, parks, and gardens can narrate complex socio-ecological histories and evolve with shifting neighbourhood demographics (Quastel, 2009). Hence, perceiving urban greenspace as sites of societal complexity rooted in unique histories encourages a deeper understanding of the benefits, barriers, and opportunities they provide residents and why.

Originating in the 1980s, the concept of environmental justice initially documented how ethnic minority communities disproportionately faced exposure to environmental hazards such as power plants and landfills. More recently, the focus has shifted to examining how environmental amenities, particularly UGS and parks, are spatially distributed across different incomes and ethnic groups (Rigolon, 2016). According to Rigolon (2016), environmental justice now encompasses both decision-making processes and their spatial outcomes, "aiming for equitable distributions of environmental threats and resources as a result of fair decision-making processes to locate threats and resources" (p. 161). Environmental justice involves disclosing the unequal consequences of environmental issues and policies to residents (Patsias, 2021). However, as Patsias (2021) explains, defining environmental justice is not easy because both environment and justice vary greatly in meaning. For instance, the environment includes not only nature, UGS, and natural resources, but also public transport and even animals. Further, Patsias (2021) breaks down the concept of justice into three components:

1. **Distributive justice** deals with the unequal distribution of wealth and resources.
2. **Procedural justice** highlights how legal or institutional system designs and procedures can create inequalities in treatment and participation due to unevenly distributed resources and skills.
3. **Recognition** emphasizes that all collective identities deserve the same respect, shedding light on how justice systems are embedded within frameworks of power and values.

Research indicates that despite some lower-income communities of colour being situated near UGS, significant disparities in park access and quality persist. Lower-income communities of colour frequently experience inferior park services compared to more affluent and predominantly White neighbourhoods (Rigolon, 2016). Rigolon (2016) explores the geographic inequalities affecting these vulnerable groups by examining the proximity, acreage, and quality of parks. Proximity refers to acceptable distances between a residence and an urban park, acreage refers to the area of park space per resident, and quality refers to the condition, maintenance and safety of the park. Consistent with Rigolon's (2016) findings, other scholars have observed that high socioeconomic neighbourhoods often have shade from trees, water features such as creeks, and pleasant walking paths

that encourage wealthier residents to connect with nature (Zhou & Parves Rana, 2012). Other researchers noted that inner-city and poor populations are less likely to participate in outdoor recreational activities. For instance, teenagers in disadvantaged groups often lack access to safe parks, making them less likely to engage in physical activities compared to their peers in higher-income areas (Lee & Maheswaran, 2011).

Although UGS in poor and racialized neighbourhoods are often in need of improvements, efforts to enhance their environmental quality can result in displacement. In 2009, Sarah Dooling introduced the term "ecological gentrification" to describe how environmental improvement projects displaced unhoused people from UGS they were living in. Now this term encompasses a broader phenomenon where economic disinvestment and environmental degradation devalue certain areas, which are later revitalized through reinvestment, and ecological remediation. These improvements, however, increase property values and displace existing residents, a pattern also referred to as green, climate, or environmental gentrification (Rice et al., 2020). Environmental enhancement often leads to the displacement of lower-income, predominantly non-White residents, who are replaced by higher-income, predominantly White individuals. These impacts are part of a broader pattern of environmental racism and climate injustice faced by low-income, racialized, and migrant communities. Historically, these communities have had the least access to green amenities while being disproportionately exposed to pollution, toxic waste, and climate hazards, with limited resources for adaptation (Rice et al., 2020; Rigolon, 2016).

Marginalized communities are less likely to benefit from long-overdue environmental remediation and urgent climate adaptation projects. This outcome is not coincidental but rather the expected result of systemic patterns of disinvestment and discriminatory policies that have shaped cities along racial and class lines (Pulido, 1996). Addressing and preventing ecological gentrification should not fall solely on affected communities. Governments must implement policies and programs that acknowledge historical injustices, tackle ongoing environmental inequities, and ensure that future ecological initiatives are grounded in social equity. Wolch et al. (2014) emphasize the need for "just green enough" strategies to enhance the quality of life for current residents without triggering green gentrification. The authors use the example of Greenpoint, Brooklyn, where working-class residents and new arrivals collaborated to advocate for environmental cleanup efforts that maintained industrial uses and preserved blue-collar jobs. Implementing "just green enough" strategies requires planners and local stakeholders to design greenspace that reflect community needs and desires rather than adhering to standard urban design or ecological restoration models. Additionally, such policies should be accompanied by policies to prevent gentrification such as rent control, forms of decommodified housing, and implementing community gardens as a means to access food affordably.

## 1.5.2 Spatial Exclusion

The literature on environmental injustice has highlighted the spatial and social exclusion that marginalized communities face when it comes to UGS and environmental improvements. Kazmierczak and James (2007) argue that UGS in socially excluded areas can increase community inclusion and cohesion in four ways. First and foremost, they are free and publicly accessible to all. Second, they provide spaces for human interaction. Third, they relieve stress and restore mental fatigue. Lastly, they provide residents with opportunities for voluntary work, whether that be

volunteering at a community garden, hosting events, or participating in activism (Kazmierczak and James, 2007).

However, it is also important to ask questions about whether or not certain groups are explicitly or implicitly welcome in UGS. A US study identified four different factors influencing an individual's choice to visit a UGS: (1) ***Personal/internal constraints*** such as fear of crime, disability, motivation, interest, and depression; (2) ***Social constraints*** such as lack of companions and family responsibilities; (3) ***Structural constraints*** such as time, money, and poor transportation; and (4) ***Institutional constraints*** such as user fees and park programming (Byrne, 2012). Additionally, marginality theory introduces the notion that people of colour face socio-economic barriers, impacting their access to and use of parks. For instance, low-income people may be transit-dependent, limiting their access to parks near public transit routes or within walking distance of their homes. Higher minority and low-income populations may also be relegated to neighbourhoods with lower access to greenspace (Bullard, 1993; Byrne & Wolch, 2009).

A study found that Latino focus group participants in Los Angeles experienced many ethno-racial and nativist obstacles when trying to access and use UGS and parks (Byrne, 2012). Participants expressed feelings of being "out of place", "unwelcome", or excluded from these spaces. Some exclusionary factors included the predominantly White visitors of the parks investigated, the ethno-racial demographics of neighbourhoods near those parks, the absence of signage in Spanish, and explicit discriminatory experiences (Byrne, 2012). The literature collectively highlights the need for holistic and inclusive approaches to park planning, considering physical attributes and socio-demographic factors to create spaces that contribute to the well-being of diverse urban communities. Qualitative inquiry can assist in ensuring park planning meets the unique needs of local communities (McCormack et al., 2010). As this study examines the condition, use, and perceptions of Park-Ex residents, this literature provides a foundation for exploring the nuanced relationship between communities and their greenspace.

## 1.6 Human Perceptions of Urban Greenspace

Understanding how people perceive urban nature is important. Helen Hoyle (2020) differentiates between "objective nature," which includes physical features such as plants, animals, lakes, rivers, and landscape features, and "subjective nature," which is how these elements are perceived and experienced by people. Objective urban nature, or urban green infrastructure (UGI), is characterized by definable vegetation type, biodiversity, structure, density, and aesthetics. To effectively plan, design, manage, and fund UGI, planners must understand the subjective experiences of potential users from various socio-cultural and geographical backgrounds. This is especially true when planning within a diverse and equitable framework. Different socio-cultural influences can lead to varied reactions and perceptions among individuals experiencing the same natural setting. Researchers have long recognized that while perceptions may be fleeting and changeable, the deeply held values informing these perceptions are more stable (Figure 1).

This area of research is relatively underdeveloped, as scholars point out a significant information gap regarding the perceptions and values of cultural ecosystem services (CES) associated with UGS (Rall et al., 2017). This lack of data hampers the ability to make well-informed recommendations for the planning and management of UGS. For instance, Rall et al. (2017)

find in their study on perceptions of greenspace in Berlin, that perceptions of overcrowding, neglect, and fear highlight the need for better maintenance and management. Additionally, Otto et al. (2024) emphasize that physical availability and accessibility of greenspace do not always align with perceived and realized accessibility. Factors such as structural or personal limitations, high user pressure, insecurity, or experiences of discrimination can obstruct the use and enjoyment of greenspace and their benefits (Otto et al., 2024). Accessibility has a psychological aspect, influenced by unwritten social norms and feelings of being unwelcome or unsafe (Andersson et al., 2019).

Culture is a constant filter influencing how individuals interpret different environments and situations. Specific needs, knowledge, practices, identities, beliefs, worldviews, literature, and art all impact the planning, design, and management of UGS, and the benefits desired, realized, and recognized (Andersson et al., 2019). Age, gender, ethnicity, and other cultural and socioeconomic circumstances further accentuate these differences. Even without explicit restrictions, disparities in knowledge, education, available information, and individual circumstances can privilege certain voices and interests over others. To enhance equal opportunities to realize UGS benefits, it is essential to understand the plurality of values, different needs, and abilities among current and future beneficiaries.

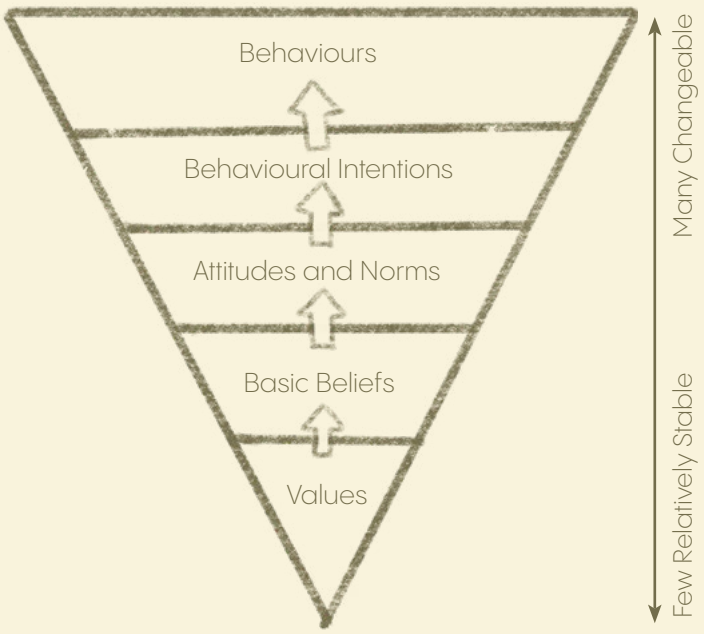


**Figure 1: The cognitive hierarchy (Hoyle, 2020).**

From an urban planning and policy perspective, understanding residents' preferences is crucial for sustainably managing greenspace's capacity to support ecosystem service benefits (Otto et al., 2024). Hoyle further emphasizes that the variety of experiences and responses to natural spaces necessitates "a careful balancing of general and particular relationships in UGS provision and management" (2020, p. 31). She argues that future research should focus on the unique perceptions and preferences of socio-cultural groups in different geographical areas. This study adds to the need for research addressed by Hoyle and other scholars by exploring the UGS in the socio-culturally diverse neighbourhood of Park-Ex in Montreal, through observations of parks and interviews exploring the perceptions of residents concerning such spaces.

# *Section 2: Park-Extension Overview*

# 2.1 A Brief History of Park-Extension

Park-Extension (Park-Ex) is a 1.6 km$^2$ neighbourhood centrally located on the Island of Montreal (Figure 2). It is part of the western-most region of the Villeray–Saint-Michel–Park-Extension borough and is bordered to the west by the Town of Mount Royal (TMR), to the south by Outremont, to the south-east by Rosemont-La-Petite-Patrie, and the north by Ahuntsic-Cartierville. Historically, the neighbourhood has welcomed immigrants and many newcomers have settled in this former inner-city suburb making it one of the most multi-ethnic areas on the Island of Montreal and Canada. According to the 2021 Canadian Census, 77% of the neighbourhood's population is made up of immigrants and 68% of households are reported to be part of a visible minority (Statistics Canada, 2021; Table 1). The first wave of immigration that Park-Ex experienced occurred between 1880 and 1930 when Europeans from Germany, Poland, Hungary and Italy moved into the area. At this time, Park-Ex was a relatively new neighbourhood housing primarily Canadian Pacific Rail workers (Germain & Rose, 2000). After the Civil War in Greece, Park-Ex experienced a second wave of immigration comprised of a Greek population. To this day, Greek restaurants, religious institutions, and service businesses in the neighbourhood have led to the distinction of Park-Ex as Montreal's Greektown (Germain & Rose, 2000).

In the 1970s, a large portion of the Greek immigrants moved to more affluent neighbourhoods due to social mobility and job market integrations. This shift allowed for a large influx of newcomers, particularly from South Asia. Over the past thirty years, Park-Ex has welcomed immigrants from countries such as India, Pakistan, Bangladesh, and Sri Lanka who have established businesses, places of worship, and a strong internal community (Germain & Rose, 2000). Additionally, Montreal residents seeking affordable

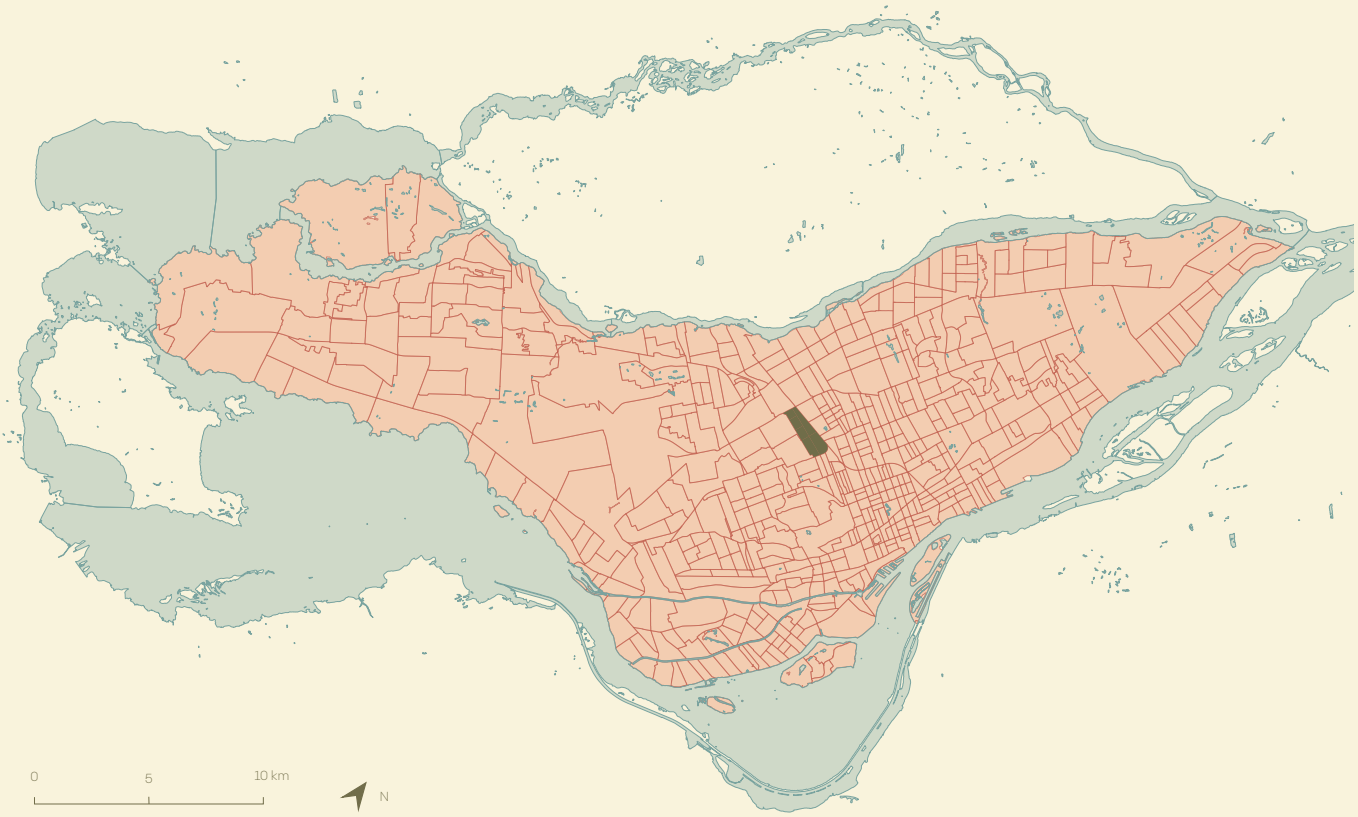


**Figure 2: Map of Park-Extension on the Island of Montreal.**

| | Median Household Income | Visible Minorities | Average Age | Trees per Person | UGS Area per Person | Tree Canopy Area per Person |
|---|---|---|---|---|---|---|
| Park Ex | $ 49,000 | 73% | 38 | 0.102 | 3.0 $m^2$ | 8.4 $m^2$ |
| | Median Household Income | Visible Minorities | Average Age | Trees per Person | UGS Area per Person | Tree Canopy Area per Person |
| Mtl | $ 76,000 | 38% | 40 | 0.199 | 39 $m^2$ | 72 $m^2$ |

**Table 1: Median household income, visible minorities, average age, trees, tree canopy area, and greensapce area per person in Park-Extension vs. Montreal.**

housing have moved to this area. Park-Ex is one of Canada's poorest neighbourhoods, with 70% of its population of roughly 33,000 living in rental housing (Nichols et al., 2019). Of these renters, nearly 30% spent over a third of their income on rent each month in 2020 (Statistics Canada, 2021). Moreover, while the median total income of households in Montreal in 2020 was $76,000, the median total income of households in Park-Ex was approximately $49,000 (Statistics Canada, 2021). Recently, after a long period of neglect and degradation during the late 20th century, public stakeholders and developers have started to reinvest in the neighbourhood, putting pressure on long-standing residents (Jolivet et al., 2023).

Additionally, Park-Ex is one of the densest neighbourhoods in all of Montreal, with a population density of nearly 19,000 per square kilometre, compared to the average of 9,000 per square kilometre in the city (Statistics Canada, 2021). Studies have found that high population and dwelling density often lead to decreases in greenspace and tree cover (Lin et al., 2015). Additionally, dense communities like Park-Ex are often "more dependent on public green space for tree cover and the ecosystem services provided by them, as most green cover in these areas is in parkland" (Lin et al., 2015, p. 956). Due to this, it is important that Park-Ex offers enough high-quality greenspace for its residents who cannot rely on access to private trees and yards. The following section highlights the UGS available in the neighbourhood.

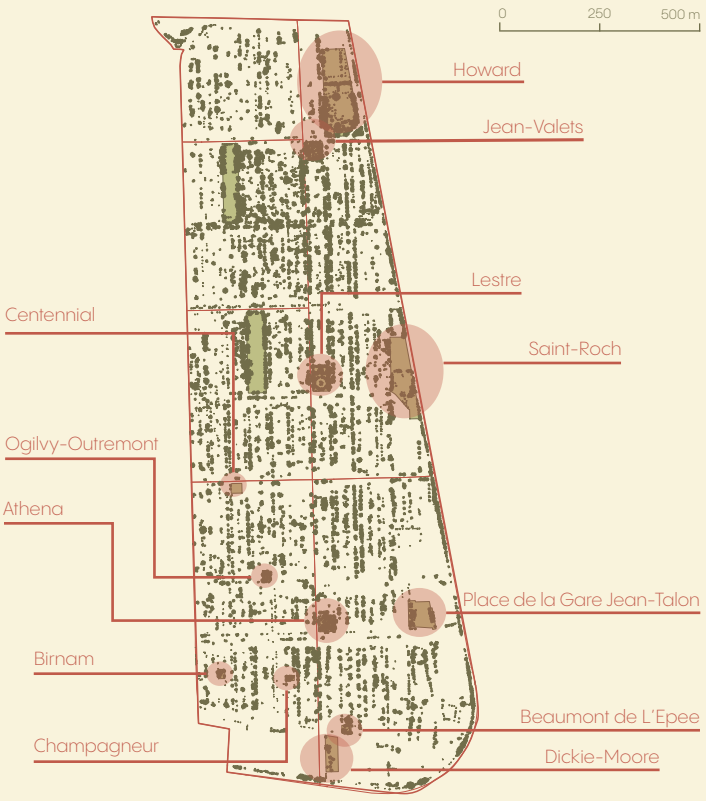


**Figure 3: Map of Park-Extension and parks.**

# 2.2 Urban Greenspace and Parks

Without including school yards, Park-Extension has 12 parks. Most of these parks contain playgrounds, with many restricting their use to children under five. The majority of the parks have water fountains, and two have public toilets. All parks contain some urban furniture, whether benches and/or picnic tables (Table 2). Recently, Park-Ex greenspace have experienced renovations and redevelopment. Howard Park, an older park located to the northeast of the neighbourhood, has been upgraded featuring new play equipment and structures (Figure 4). Additionally, new parks have been constructed in the neighbourhood such as Dickie-Moore Park – one of the latest parks commissioned by the City of Montreal.

Importantly, Park-Extension is bounded by nearby greenspace such as Jarry Park, a large urban park located past the eastern boundary of Park-Extension (Figure 5). To the west is TMR, a wealthy suburban town with an abundance of green space and a large tree canopy. Similarly, to the south is Outremont, an affluent inner-city neighbourhood with a high amount of greenspace. The difference in tree canopy between the three neighbourhoods is striking as seen in Figure 6. Although these neighbouring areas contain green infrastructure, they are not the most accessible to Park-Ex residents, since TMR is fenced off and Outremont is bounded by the railway and the MIL campus. Moreover, residents have expressed feelings of exclusion in these neighbourhoods, such as feeling out of place (Schinazi, 2001). High-quality greenspace must be accessible to residents of Park-Ex, within Park-Ex if environmental justice is to be increased. As Montreal works toward this goal it is important to recognize the injustices that may unfold, such as gentrification and displacement.

| *Park Name* | *Size* | *Amenities* |
|---|---|---|
| Place de la Gare Jean-Talon | 6750 $m^2$ | Picnic tables, benches, flower beds, trash cans. |
| Athena Park | 2500 $m^2$ | Picnic tables, benches, trash/recycling cans, BIXI. |
| Ogilvy-Outremont Park | 750 $m^2$ | Picnic tables, sculpture, flower beds, trash cans |
| Beaumont de L;Epee Park | 810 $m^2$ | Playground, picnic table, benches, trash cans. |
| Dickie-Moore Park | 4025 $m^2$ | Playground, picnic tables, benches, trash cans |
| Champagneur Park | 375 $m^2$ | Playground, water fountain, benches, trash can. |
| Birnam Park | 600 $m^2$ | Water fountain, splash pad, benches, playground. |
| Centennial Park | 1050 $m^2$ | Play area, benches, picnic tables, croque-livres. |
| Lestre Park | 3750 $m^2$ | Benches, trash cans, water fountain, playground. |
| Saint-Roch Park | 6000 $m^2$ | Playgrounds, tables, cricket batting, splash pad. |
| Howard Park | 14400 $m^2$ | Splash pad, playgrounds, benches, trash cans. |
| Jean-Valets Park | 3300 $m^2$ | Picnic tables, benches, trash cans, water fountain. |

**Table 2: Park-Extension parks studied and characteristics.**

Figure 4: New Howard Park playground.


Figure 5: Jarry Park located to the east of Park-Ex.

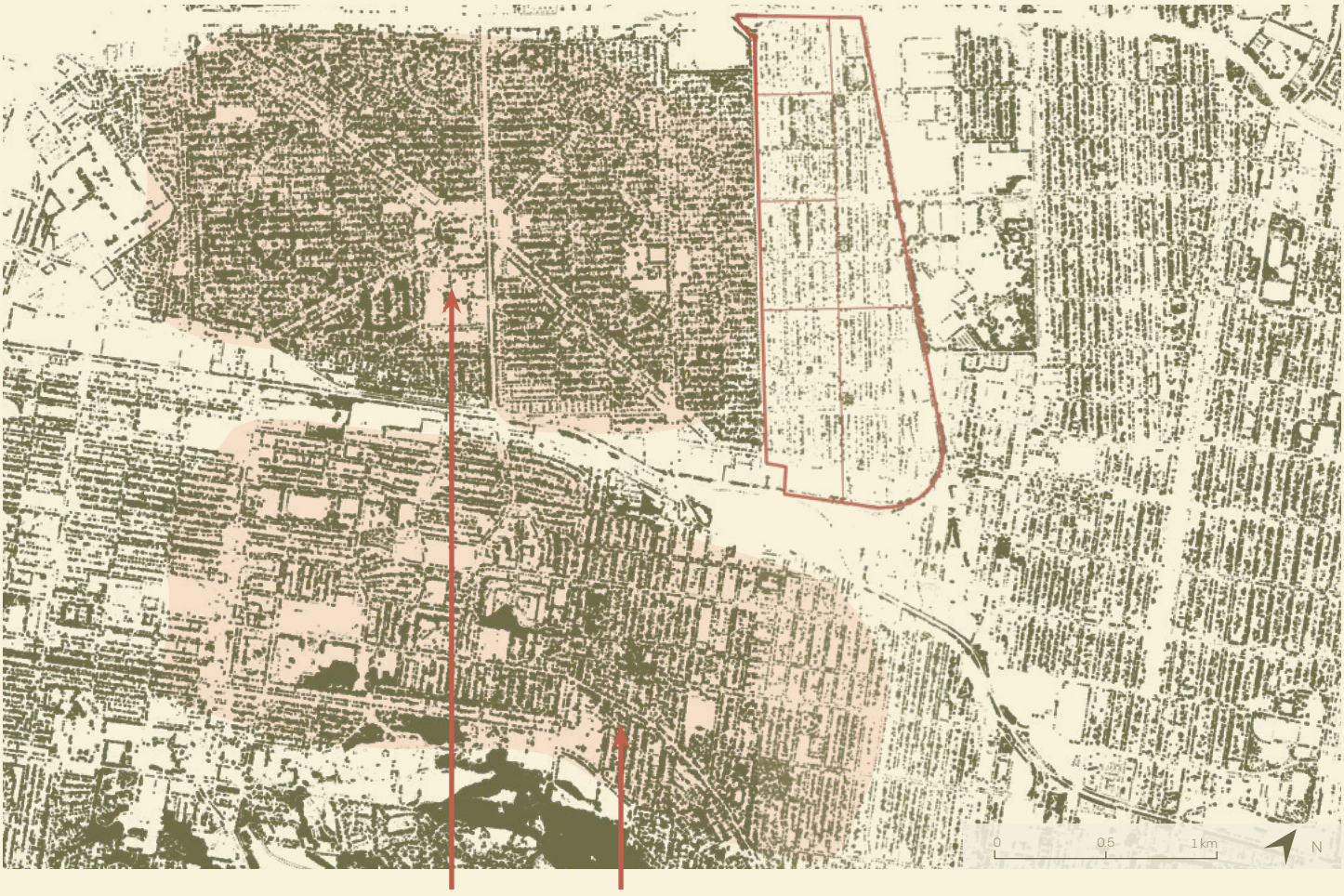


Figure 6: Tree canopy in Park-Ex, TMR, and Outremont.

# 2.3 Environmental Injustice and Ecological Gentrification

The opening on the MIL campus has concerned Park-Ex residents as the area has witnessed a significant amount of development and investment. The MIL project, led by the City of Montreal in partnership with the Université de Montreal (UdeM), focuses on redeveloping a brownfield site in Outremont, one of Montreal's wealthiest boroughs. With the construction of 1,300 new condominium units and greenspace around the campus, the project has started transforming the adjacent immigrant neighbourhood of Park-Ex into a desirable area (Jolivet et al., 2023). This transformation is attracting new, predominantly White residents, particularly students and creative workers employed by nearby artificial intelligence companies (Jolivet et al., 2023). The MIL project represents a significant redevelopment strategy for Montreal, promoting sustainable urbanism and the knowledge economy. However, it is also seen as accelerating gentrification in Park-Ex, through up-zoning and enhancements in centrality and infrastructure, which increase the rent gap. Beyond the economic aspects of gentrification, there are concerns about the symbolic and social changes brought about by this development (Jolivet et al., 2023).

Park Extension's largely renter-based population faces a heightened risk of experiencing the impacts of gentrification compared to nearby boroughs like TMR and Outremont, where the majority of housing consists of owner-occupied residences (Nichols et al., 2019). Moreover, given that 72% of Park-Extension residents have children, involuntary displacement could have extensive repercussions, increasing stress levels within family units and disrupting social networks in the community (Nichols et al., 2019). Although gentrification in Park-Ex began before the opening of the MIL campus, it remained an intermittent trend for over a decade.

The neighbourhood of Park-Ex also struggles with environmental issues, such as a sparse tree canopy and a limited amount of greenspace per person, which intensify the adverse effects of urban development and diminish residents' quality of life (Table 1). These issues being experienced by residents of Park-Ex call for an evaluation of environmental injustice and ecological gentrification mitigation strategies, as they may be crucial in protecting local tenants and supporting both communal and subjective well-being.

# *Section 3: Observational Park Studies and Interviews*

# 3.1 Evaluating Parks

To better understand residents' perceptions of greenspace in Park-Ex, a series of observational studies were conducted in twelve parks in the neighbourhood (Figure 7). Park Jarry was purposely omitted from this study as it is outside the boundaries of Park-Ex, and this study concerns itself with drawing attention to other smaller and perhaps less used and maintained spaces in the area. The parks included in this study are neighbourhood parks, meaning they are intended for the local population. These studies were aimed at understanding how residents use greenspace and whether they appear to be serving local needs (targeting sub-questions 1 and 2: ***How do people use greenspace in Park-Ex? What are the current conditions of greenspace in Park-Ex?***).

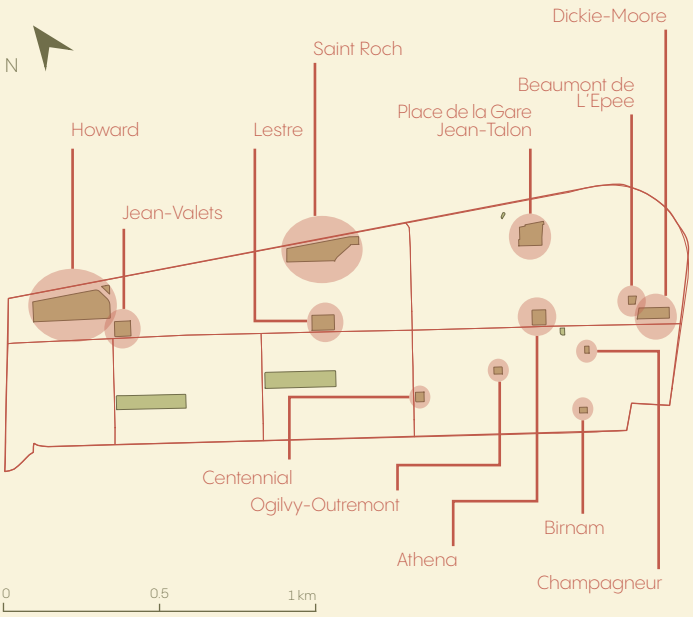


**Figure 7: Map of observed parks.**

As noted by the literature, the determinants of the use of public greenspace are not one-dimensional. Important factors include the availability of UGS, the accessibility (both measured and experienced), the quality and characteristics, perceptions of environmental hygiene, security and safety, as well as social factors such as feeling a sense of community when visiting certain areas (Lee et al., 2015). By taking the time to sit, observe, and occasionally interact with residents, I understood these factors and familiarized myself with neighbourhood dynamics before analyzing resident interviews (see Section 3.4). Additionally, as noted by Otto et al. (2024), information can be lost in qualitative studies when using solely verbal data collection methods. The park observations hence serve as an additional layer to data collection.

Additionally, interviews were conducted with residents of Park-Ex to understand better what residents think about greenspace available and what they envision as potential improvements (targeting the main research question and sub-questions 3 and 4: ***What amenities, vegetation, and characteristics do residents find most useful in greenspace? In what ways do residents envision the enhancement of greenspace in their neighbourhood?***).

# 3.2 Methods

## 3.2.1 Observational Studies

Observational studies were conducted to "study the interactions between life and space" (Gehl & Svarre, 2013). The qualitative methodology for documenting the observations and use of parks and greenspace is inspired by factors highlighted by Lee et al. (2015) – *accessibility, amenities, quality and maintenance, and cleanliness*. I also noted three more factors: *types of users, types of activities, and animals and nature.* The first consisted of documenting the age, gender, and ethnicity of users, and the second consisted of categorizing types of activities undertaken by the UGS users. The third was considered to compare

the level of "naturalness" and environmental benefits between parks. The approach for this study was not to document specific details but to find overarching patterns and themes as they relate to the UGS use, the physical state of these areas, and potential challenges and opportunities. As such, these observations were very much informed by the neighbourhood's history, socio-economics, and politics.

The methodology for the observational studies was also inspired by the System for Observing Physical Activity and Recreation in Communities (SOPARC) tool, originally developed to gather observational data on physical activity and the surrounding setting in which it takes place (McKenzie et al., 2006). By momentarily scanning a park area from left to right and/or noting a single observation, the SOPARC tool is used to gather systematic observational data to assess park contexts and has been used in various studies (Evenson et al., 2016). The tool was used leniently to provide contextual information on the setting of urban parks and the park user characteristics for this study, as I recorded amenities of parks, types of activities (extending beyond physical activity), and user age, gender, and ethnicity.

Each site visit consisted of 30 minutes of observations, on three days (a Tuesday, Wednesday, and Sunday) totalling about 6 hours. Conducting observations during different times of the day on different days ensures a more comprehensive understanding of park usage. Over 350 people were considered in noting the types of users and types of activities. Specific details for each observation session were recorded, including date, time, weather conditions, and number of park users. The collected data was analyzed to identify patterns and themes in park usage, maintenance and user interactions with the space. Comparisons were made between different parks to understand the influence of amenities, maintenance, and demographic factors on user experience and are highlighted in Section 4.1: Key Takeaways. Lastly, the limitations to this study are noted in Section 4.2.4.

## 3.2.1 Resident Interviews

The interview sample was gathered through responses to a Facebook post advertising the study meaning the selection process was biased, as it catered to English-speakers who use Facebook. The interviews conducted were semi-structured, following four main themes: *Background Information* to understand how long participants have been living in the area, *Relationship to UGS* to get a sense of how people interact with outdoor spaces, *Perceptions of Park-Ex UGS* to investigate what residents think about the greenspace available to them, and *Potential Improvements* to explore what changes participants would like to see. The interviews were followed up with a brief demographics survey, which all participants completed. In total, 7 interviews were conducted with residents of Park-Ex, and 1 with a previous resident who is still involved in the community and owns property in the neighbourhood. The interviews were then coded concerning the research questions and findings were organized under four themes in Section 3.4: *Broad Understanding of UGS; Positive Perceptions; Negative Perceptions; and Future Aspirations.*

Respondents were ultimately representative of a small portion of the population in Park-Ex. All respondents were medium to high-income individuals, and all were White. This segment of the population was observed infrequently in the observational studies conducted, with people of colour being the predominant users of UGS in the neighbourhood. For this reason, the major findings are drawn from the observational studies, and the interviews are taken as a counterpoint to keep the unrepresentative sample in mind.

# 3.3 Findings: Observational Studies

## 3.3.1 Place de la Gare Jean-Talon

**Date and Time of Observation:** Tuesday, June 11, 3:00 pm – 3:30 pm
**Weather Conditions:** Overcast, 21°C
**Number of Park Users:** ~95

*Amenities:*
Place de la Gare Jean-Talon is a large plaza outside the Parc metro station. By the plaza is also a Maxi, a relatively affordable grocery store. The plaza includes large walkways, a field of grass in the middle, numerous flower beds, picnic tables, benches, and some trees.

*Quality and Maintenance:*
The quality and maintenance of the space were acceptable but not exceptional. There was generally no littering, but the grass was not upkept. Nonetheless, the garden beds were well-maintained, and the plaza was advertised as an "oasis for pollinators" (Figure 8).

*Types of Users:*


**Figure 9: Top view of Place de la Gare Jean-Talon.**

Almost all users were adults. Children were only observed walking past the area with their parents. Those who used the space were mostly men and people of colour.

*Types of Activities:*
Types of activities were mostly passive. Most users were socializing, gathering in small groups talking and some eating. Most people were temporary users,




**Figure 8: Photos taken during observations at Place de la Gare Jean-Talon.**

using the plaza as a way to cut through to the metro station, or walking by it to go to the Maxi grocery store.

*Animals and Natural Elements:*
The natural elements in the plaza include some trees to the west and south, garden beds with wildflowers, and a small field of grass in the middle (Figure 9). Animals observed in the space were predominantly pigeons and residents were observed with bags of breadcrumbs to feed them.

*Final Thoughts:*
Overall, Place de la Gare Jean-Talon seems to cater to the local population and offer opportunities for socialization. The space is very well-used as many people would walk by it to get from point A to point B, and others would walk around bumping into people they know and sitting down on a bench for a chat. Users were also witnessed to be sitting alone on picnic tables, and one person would quickly turn into four or five. Although not the most naturally appealing park, it appears to be an important area for the community. There is a sense of social cohesion that is felt and experienced when one enters the space.

## 3.3.2 Athena Park

**Date and Time of Observation:** Tuesday, June 11, 3:30 pm – 4:00 pm
**Weather Conditions:** Overcast, 21°C
**Number of Park Users:** 38

*Amenities:*
The park's amenities include two picnic tables, approximately 20 benches, multiple garbage and recycling bins, a bus stop, a BIXI station, bike racks on the periphery, and several lamp posts.


**Figure 10: Top view of Athena Park.**

*Quality and Maintenance:*
Despite the presence of numerous trash bins, a significant amount of trash was observed on the grass. The grass appeared minimally maintained but was not in poor condition. The benches showed no signs of maintenance and were very dirty.

*Types of Users:*
The user demographic included both men and women, though men were predominant with only about three women observed. The park was used by individuals of various ethnic backgrounds, including South Asian, Black, and White people. Compared to Place de la Gare Jean-Talon, Athena Park seemed to be frequented by a more diverse group of people.

*Types of Activities:*
Users were primarily engaged in passive activities such as sitting on benches, eating, and people-watching. Notable interactions were observed, including



**Figure 11: Photos taken during observations at Athena Park.**

someone sleeping on a bench, friendly greetings among users, and occasional aggressive interactions. For example, one individual was seen talking to himself before yelling at another person (seemingly a stranger) sitting on a bench parallel to him. Additionally, many people used the park as a shortcut, especially school children accompanied by their guardians moving between adjacent streets.

*Animals and Natural Elements:*
The park included large trees that provided ample shade, patches of grass, and wildlife such as squirrels and pigeons. These animals were frequently seen on the benches and picnic tables.

*Final Thoughts:*
The general atmosphere of Athena Park was welcoming and comfortable. Despite being one of the few women in the park, I did not feel observed or out of place. The tranquillity of the park, enhanced by its natural elements, contrasted sharply with the noise from the nearby busy Jean-Talon Street. Overall, the observations highlighted the park's diverse user base, its purpose for providing a place for social interaction and passive activity, and a peaceful and welcoming atmosphere amidst a busy urban area. The main issues observed included a lack of maintenance and urban noise surrounding the area.

## 3.3.3 Ogilvy-Outremont Park

**Date and Time of Observation:** Tuesday, June 11, 4:05 pm – 4:35 pm
**Weather Conditions:** Overcast, 21°C
**Number of Park Users:** 3

*Amenities:*
The park includes ten benches, two picnic tables, and a decorative sculpture in the middle adorned with pink roses. Despite the amenities available, the park was not frequented by many users during the observation period.

*Quality and Maintenance:*
The park has a significant amount of trash, especially cigarette butts. There was one trash bin in the park, but no cigarette disposal options, highlighting a potential lack of adequate waste management facilities.

*Types of Users:*
The park's users were predominately men of colour, mostly older. The park's few users might be explained

due to its smaller size and the unpleasant humming from a vent located on the site. Additionally, the park is not situated on a busy street like Athena Park and Place de la Gare Jean-Talon, potentially affecting its usage.

*Types of Activities:*
Users were engaged in passive activities. One individual sat down and started drinking a soft drink, another man sat and watched his surroundings, and a third man rested on one of the benches, massaging his leg before leaving.

*Animals and Natural Elements:*
The park has big trees but no noticeable presence of animals like pigeons or squirrels, possibly due to the low usage of the space and lack of food sources. However, small birds could be heard and seen in the surrounding bushes, creating a pleasant natural ambiance when their chirping overpowered the vent's sound.

*Final Thoughts:*
Overall, the observations at Ogilvy-Outremont Park highlighted the park's underutilization despite appealing natural elements and amenities. The maintenance issues regarding sufficient waste management and the vent noise could explain the park's limited attraction and use.


**Figure 12: Top view of Ogilvy-Outremont Park.**



**Figure 13: Photos taken during observations at Ogilvy-Outremont Park.**

## 3.3.4 Beaumont de L'Epee Park

**Date and Time of Observation:** Tuesday, June 11, 4:40 pm – 5:10 pm
**Weather Conditions:** Overcast, 21°C
**Number of Park Users:** 11

*Amenities:*
The park amenities consist of three children's play structures including slides and swings. The playground flooring is sand, adding another element for children to play with. Additionally, two trash cans are located on-site, as well as about seven benches and a picnic table.

*Quality and Maintenance:*
The park was notably clean and well-maintained. The benches, which were the same as those in other parks, were significantly cleaner and better maintained. The overall cleanliness of the park contributed to a pleasant environment for its users.

*Types of Users:*
The park was predominantly used by White families, with fewer people of colour compared to other parks. During the observation, only one person of colour visited the area with her child. The children were mostly between the ages of 2 and 5 and were all accompanied by their parents. Most adults present were men, with 4 being male and 2 being female. The parents all appeared to know each other, engaging in casual conversations.

*Types of Activities:*
The primary activities in the park involved children playing, particularly with the playground equipment and sand. Based on the children's interaction with the space, there appeared to be a high level of engagement with the play amenities provided. Parents were sitting on the benches surrounding the park, and the picnic table was used for sitting and as a place to rest bikes.

*Animals and Natural Elements:*
There was a noticeable absence of animals in the park, other than some birds chirping from the surrounding trees. Additionally, dogs were not allowed in this park and a sign for a $300 fee was posted outside the park (see Figure 14). The higher level of cleanliness and maintenance in this park might explain the lack of animals such as squirrels and pigeons.

*Final Thoughts:*
The park has a very prescribed atmosphere, catering




**Figure 14: Photos taken during observations at Beaumont de L'Epee Park.**

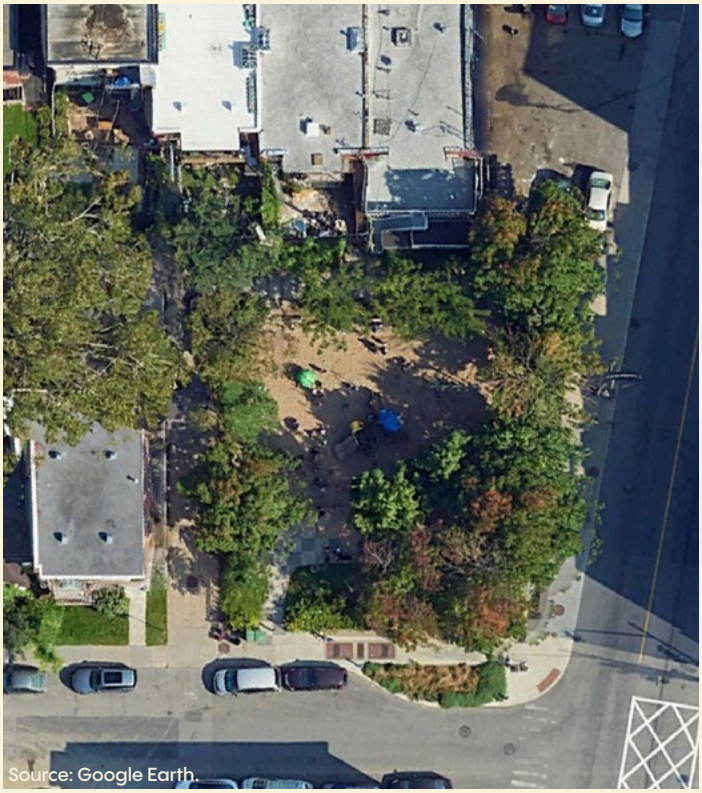


**Figure 15: Top view of Beaumont de L'Epee Park.**

to families in the area. Despite the park's relatively small size, it accommodated many people comfortably, indicating a high level of use among residents with young children. It seemed unlikely that individuals without children would find this space appealing for leisure or social activities. The park's design and use were centred around providing a safe and engaging environment for children and their caregivers. Lastly, there was a relative lack of ethnic diversity among the population observed, with fewer families of colour visiting the park.

Additionally, it should be noted that Beaumont de L'Epee Park is located on Beaumont Avenue, which features new housing developments and upscale businesses. As mentioned in Section 2.3., this area has seen a lot of investment through the arrival of new residents and businesses in conjunction with the MIL campus.

## 3.3.5 Dickie-Moore Park

**Date and Time of Observation:** Tuesday, June 11 5:10 pm – 5:40 pm
**Weather Conditions:** Overcast, 21°C
**Number of Park Users:** 22

*Amenities:*
Dickie-Moore Park features a range of amenities, including a water feature, ample seating, picnic tables, a playground, and a field. These amenities catered to both active play and passive activities, making the park versatile for various types of users.

*Quality and Maintenance:*
The park was exceptionally well-maintained, clean,

**Figure 16: Photos taken during observations at Dickie-Moore Park.**


**Figure 17: Top view of Dickie-Moore Park.**

and appeared new. The plants, though wild in appearance, were well cared for, and mulch was added to various areas with bushes and other vegetation. The asphalt was light-coloured and clean, adding to the park's clean and fresh look. Additionally, the grass was well-kept and cut, suggesting that it is regularly maintained.

*Types of Users:*
The park was mostly frequented by young families with children. There was a diverse mix of ethnicities, including people of colour and White people, contrasting against the observations made in Beaumont de L'Epee Park just across the street from Dickie-Moore Park.

*Types of Activities:*
The park was lively with children playing, typically around the ages of 3 to 6. Common activities included drawing with chalk on the ground, throwing stones into the water, climbing on big rocks, and stacking small rocks. Some children took off their shoes to wade in the little pond. Children predominantly used the south side of the park, where the playground was located. The field in the middle of the park was actively used to play ball sports among families. In addition, younger adults in their late 20s and early 30s were observed engaging in passive activities, such as eating at picnic tables under pergolas or chatting on benches. Moreover, a few people were observed using the park to pass through, although this was less common.

*Animals and Natural Elements:*
The park featured a pond and a water feature, along with two big trees, although most were young and provided little canopy. There was significant interaction with the little pond, indicating it is an attractive and useful feature for the park's users.

*Final Thoughts:*
The atmosphere of Dickie-Moore Park was very family-friendly. The park also attracted adults without children who enjoyed the amenities and peaceful environment. This balance created a welcoming space for a wide range of users, potentially fostering a sense of community. Lastly, Dickie-Moore is one of the newest parks in the neighbourhood and like Beaumont de L'Epee, it is located on Beaumont Avenue. It is likely not a coincidence that the quality and upkeep of these parks are in an area of the neighbourhood that has experienced high amounts of investment.

## 3.3.6 Champagneur Park

**Date and Time of Observation:** Wednesday, June 12, 3:30 pm – 4:00 pm
**Weather Conditions:** Overcast, 19°C
**Number of Park Users:** 6

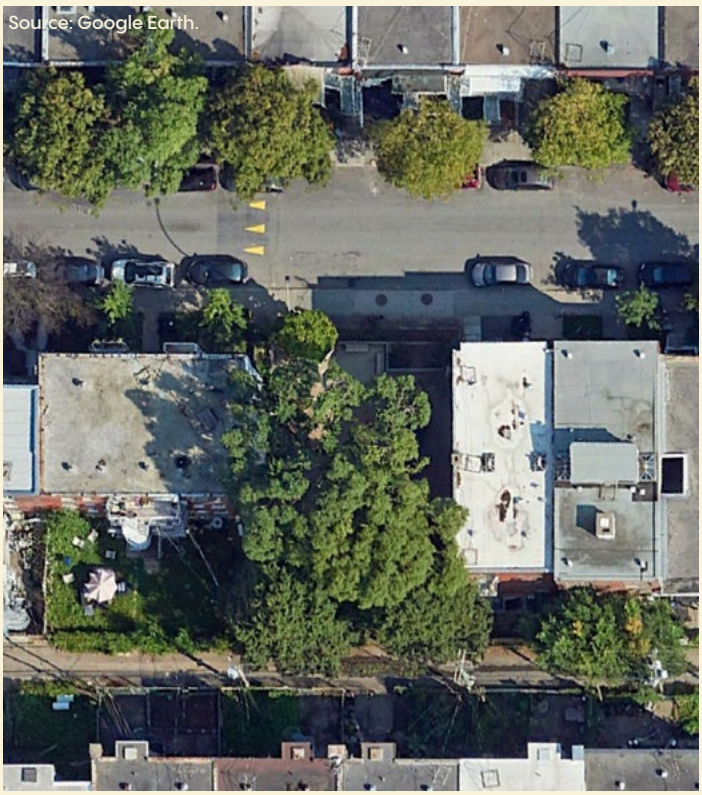


**Figure 18: Top view of Champagneur Park.**

*Amenities:*
The amenities provided in Champagneur Park include children's play structures, a water fountain and four benches. The design and placement of the amenities suggest that the space is catered towards children with parent supervision, as benches face the playground. Additionally, like Beaumont de L'Epee Park, the playground flooring is made up of sand, adding another play element for children to interact with.

*Quality and Maintenance:*
The maintenance of the park was noted to be mediocre. There were some food wrappers on the ground and fallen branches in the sand, a striking difference from the upkeep witnessed in Beaumont de L'Epee Park. Moreover, graffiti was present on the pavement, suggesting lower levels of maintenance.

*Types of Users:*
During the observation period, 4 boys around 10 years old were using the playground swings. These users were people of colour, older than those seen at Beaumont de L'Epee and were not accompanied by adults. The boys yelled back at a child from a nearby building, suggesting they might live in the surrounding buildings. A fifth boy, around the same age, joined the boys, sitting on a bench by the swings to chat. An elderly woman also briefly visited the park to throw garbage in the trash can.

*Types of Activities:*
The main activity observed was children playing with the swings, therefore the space was primarily used for its prescribed purpose. The playground equipment appears to be a central feature of the park, well-used by local children. Nonetheless, the park includes play structures that are quite small and intended to be used by children between the ages of 3 and 5.

*Animals and Natural Elements:*
The park's natural elements included large trees providing shade to most of the area. Birds could be heard from surrounding bushes and squirrels were witnessed climbing up trees. Like Beaumont de L'Epee, no dogs are allowed inside the park.

*Final Thoughts:*
Champagneur Park appears to be a useful UGS for the local population, particularly those living in the surrounding buildings. The proximity to residences allows parents to let their children play in the park while


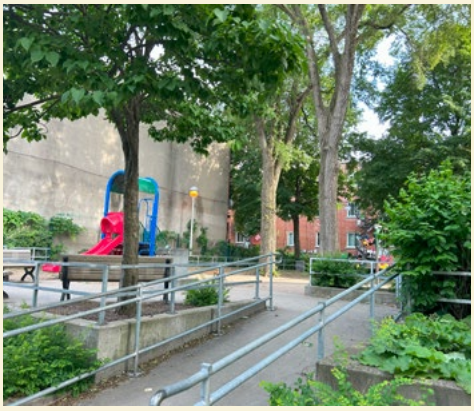


**Figure 19: Photos taken during observations at Champagneur Park.**

keeping an eye on them from their homes. Nestled between residential buildings, the park felt somewhat private, like an extension of an individual's backyard. It is worth noting that the play equipment in the park was not appropriate for the age and size of the boys playing. It is possible that the boys were only using the two swings at the back of the park because the play structures were too small, suggesting a lack of adequate amenities for older children.

## 3.3.7 Birnam Park

**Date and Time of Observation:** Wednesday, June 12, 4:05 pm – 4:35 pm
**Weather Conditions:** Overcast, 19 °C
**Number of Park Users:** 11

*Amenities:*
Birnam Park includes a water fountain, a splash pad, six benches, two small play structures, and one swing set. The amenities cater to both active play and passive relaxation. The ground material is a mix of concrete and poured-in-place rubber. Overall, the amenities of the playground appear to be new.

*Quality and Maintenance:*
The park was well-maintained with little to no trash. There was some graffiti on the play structure, but it was not significant enough to detract from the overall cleanliness and upkeep of the park. The fact that the park was recently renovated in June 2020, may explain the level of upkeep in comparison to other areas (Portail Constructo, 2019).

*Types of Users:*
The primary users of the park were children around the ages of six and eight, and their parents. One elderly resident was observed using the space. All users were people of colour, specifically of Hispanic and South Asian descent.

*Types of Activities:*
The children engaged in various activities, including playing soccer, using the swing sets, and playing in the splash pad. Children also played in nearby vegetation, as two little girls were observed looking for bugs in the bushes. Parents were either sitting on benches or the rubber flooring under the play structures, watching their children play. The elderly woman sat on a bench watching the children and eating fruit.

*Animals and Natural Elements:*
Other than the bushes that separated the back of the park from the alley behind it, there were three large

Figure 20: Photos taken during observations at Birnam Park.

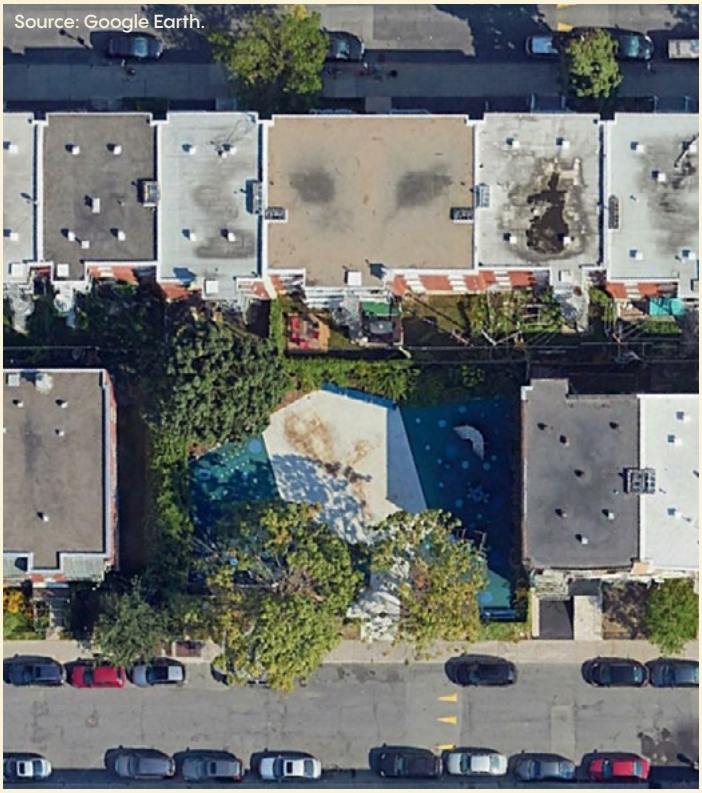


Figure 21: Top view of Birnam Park.

trees, providing shade, although not enough to cover the entire park. Except for birds in the surrounding bushes, no animals were observed in Birnam Park.

*Final Thoughts:*
Birnam Park had a pleasant and well-maintained atmosphere. The park was quiet and featured new amenities. Like Champagneur Park, it is nestled between residential buildings, however, there is no direct access from the alley like Champagneur Park. The splash pad added a useful element to the space since Park-Ex suffers from high surface temperatures. Amenities like splash pads provide residents with opportunities to cool off especially if they lack access to air conditioning.

## 3.3.8 Centennial Park

**Date and Time of Observation:** Wednesday, June 12, 4:40 pm – 5:10 pm
**Weather Conditions:** Overcast, 19 °C
**Number of Park Users:** 10

*Amenities:*
Amenities provided in Centennial Park include a small play structure, a small field, four picnic tables, three lounge chairs, two benches, two *croque-livres* (take-a-book, leave-a-book public library), multiple bike racks, and three trash cans.

*Quality and Maintenance:*
As one of Park-Ex's newest parks, Centennial Park was observed to be very well-maintained (Brunet-Kirk, 2021). The grass appeared freshly mowed and the park was in excellent condition. Littering was also not a significant problem, although a small amount of



**Figure 22: Photos taken during observations at Centennial Park.**

trash was seen on the ground.

*Types of Users:*
The users at the park were very diverse. An elderly man rested on one of the lounge chairs next to me as I made observations. A younger man was eating lunch on one of the picnic tables and then joined by his partner. Two older men were smoking and playing chess at a different picnic table. A mother, grandmother and child briefly stopped by the play sculpture as they cut through the park on their way home. A man and child also stopped by the play structure for about 20 minutes. Most users were people of colour, either South Asian or Black. The only White users were the two older men playing chess.

*Types of Activities:*
The space was used for its prescribed purposes, as many users interacted with the picnic tables and lounge chairs provided. Additionally, the two children engaged with the play structure and appeared to enjoy doing so. When one of the boys was told it was time to go home, he started crying, indicating he was enjoying his time in the park and wanted to stay longer. The two amenities not being used were the *croque-livres* and the bike racks.

*Animals and Natural Elements:*
There were birds in the bushes, and some were eating what appeared to be small amounts of food on the ground. Despite patches of grass and other vegetation, there is no shade in the area as the trees have been recently planted and are still very small.

*Final Thoughts:*
Centennial Park, like Dickie-Moore, had a very welcoming atmosphere, with new amenities suitable for all ages. The lounge chairs were very comfortable and allowed for a useful resting spot for the elderly man observed using them. Although surrounded by a fence, the park has multiple entrances on each side, ensuring easy access for visitors. Nonetheless, it should be noted that there is little shade in this park which may pose barriers to the public on warmer days.

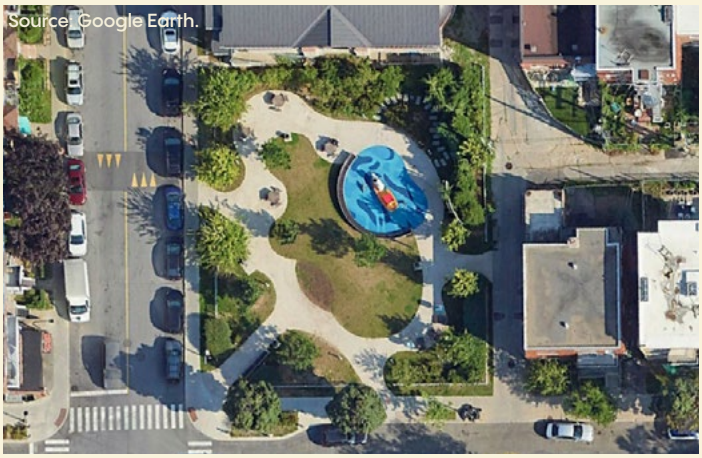


**Figure 23: Top view of Centennial Park.**

## 3.3.9 Lestre Park

**Date and Time of Observation:** Wednesday, June 12, 5:15 pm – 5:45 pm
**Weather Conditions:** Overcast, 19 °C
**Number of Park Users:** 16

*Amenities:*
The amenities in Lestre Park include an area with multiple benches, multiple trash bins, and a drinking water fountain. A play area with a splash pad, slides, and a climbing structure is separated by a fence.

*Quality and Maintenance:*
The park was less maintained and closer to the maintenance level observed in Ogilvy-Outremont Park. There were many cigarette butts and food wrappers found on the grass and the vegetation was not well-kept. The park has a nice design and layout, with the plaza separate from the playground area (Figure 24). This layout and separation allow multiple users to enjoy and benefit from its amenities.

*Types of Users:*
The types of users in Lestre Park varied depending on the zone. In the plaza, adults were primarily observed using the space except for one child. In the playground area, children dominated the area accompanied by their guardians. Most users were people of colour excluding one child and her father who were White.

*Types of Activities:*
In the plaza, adults were observed using the benches to converse with one another. One child was observed playing in this space by riding her bike on the plaza's pathways as her dad spoke with a friend on one of the benches. The splash pad was not functioning at the time of observation, but the playground was actively used by children between the ages of 2 and 9 as their parents stood and watched from the playground's periphery. Additionally, a child around the age of 3 attempted to use the water fountain which was unfortunately too high for him.


**Figure 24: Top view of Lestre Park.**

*Animals and Natural Elements:*
The park featured nice landscaping with a circular arrangement of trees in the plaza. The trees were mature and abundant, adding significant shade in all areas of the park. No animals were observed in the space, except for small birds in the bushes and smaller trees.

*Final Thoughts:*
Lestre Park has a shady and relaxing atmosphere, making it a pleasant spot for socializing and leisure. The park's layout, with a plaza area for adults and a playground for children, caters to different age groups and activities. Nonetheless, the park suffers from a lack of attention and maintenance especially in comparison to other parks such as Dickie-Moore and Beaumont de L'Epee.



**Figure 25: Photos taken during observations at Lestre Park.**

## 3.3.10 Saint-Roch Park

**Date and Time of Observation:** Wednesday, June 12, 5:50 pm – 6:20 pm
**Weather Conditions:** Overcast, 19 °C
**Number of Park Users:** ~80

*Amenities:*
The amenities in Saint-Roch Park include two children's playgrounds, one for children between 5 and 12, and another for children between 18 months and 5 years old. Additionally, there is a field and surrounding pathway (Figure 27). There are 5 picnic tables, about 13 benches, and multiple trash cans. The park also connects to the Babylone Community Garden, offering spaces to garden for residents at a small fee (Ville de Montreal, 2023).

*Quality and Maintenance:*
The park's maintenance was acceptable overall, especially considering the large number of users. There was more trash on the grass than other playgrounds observed, which again might be attributed to the higher number of visitors the park attracts. Moreover, the park is connected to a community centre, basketball courts, and a pathway leading to Jarry Park. Therefore, the trash may not be coming from the park users exclusively, but from those using the other spaces or just passing by.

*Types of Users:*
The users of the park were primarily families with young children, mostly people of colour, including South Asian, Hispanic, and Black families. Additionally, there were young adult males in the field area, and elderly residents on the picnic tables. Using the pathway connecting the park to Jarry Park, were many cyclists.

*Types of Activities:*
Activities mostly involved children playing on the playground structures and riding bikes. Parents sat on benches, play structures, and picnic tables, supervising their children. Younger men played soccer in the field and others in the basketball court across the pathway leading to Jarry Park. Overall, the park was predominantly used for its prescribed purposes. However, an isolated incident involved an older man, potentially unhoused, urinating in the bushes, highlighting a need for a public restroom. Moreover, the pathway leading to Jarry Park, although not explicitly a bike lane, was mainly used by cyclists, posing dangers for children using the playground. During the observation period, a child was riding his

**Figure 26: Photos taken during observations at Saint-Roch Park.**


**Figure 27: Top view of Saint-Roch Park.**

bike on this pathway and stopped suddenly, causing a cyclist going fast behind him to break quickly and fall off his bike.

*Animals and Natural Elements:*

The park has little wildlife presence, with only a few birds observed. While some areas provided shade – such as a grassy area under large trees by the pathway leading to Jarry Park from which I recorded my observations – the playgrounds were mostly exposed to the sun. This could pose a problem on warmer days especially since the playground materials mostly consist of metal, which retains a lot of heat.

*Final Thoughts:*

Saint-Roch Park had a lively atmosphere, characterized by its larger size and high usage. Many children and parents appeared to know each other, forming different groups for socializing. The park's liveliness suggests that it is an important gathering space for residents. Nevertheless, the park lacks amenities like public restrooms and cycling infrastructure to avoid collisions. There may also be a need for more trash cans outside the park to avoid littering. On a final note, although the popularity of the park suggests a level of user satisfaction and appreciation, the large number of people in the space points to potential overcrowding.

# 3.3.11 Howard Park

**Date and Time of Observation:** Sunday, July 28, 3:30 pm – 4:00 pm
**Weather Conditions:** Sunny, 30 °C
**Number of Park Users:** ~40

*Amenities:*
Howard Park offers a variety of amenities, such as a large splash pad, a shady and fenced playground for toddlers, a park for older children, a large field, pathways, plenty of seating, a drinking water fountain, trashcans, as well as a BIXI station. Batting cages for cricket are also available in the park, catering to the local South Asian population (Haber, 2016). Additionally, the park included plenty of picnic tables and two "rain gardens" to mitigate flooding in the area (Figure 29).

*Quality and Maintenance:*
The quality and maintenance of Howard Park are high. The children's play areas have been renovated recently, and the pathways look new and clean. Even the lighting is noticeably new, as the lamp posts look recently added and well-maintained.

*Types of Users:*
The types of users observed on this sunny and warm Sunday afternoon were families, children, and adults without children. Additionally, all users engaged with the space were people of colour, most being South Asian, as well as quite a few Black individuals. Some White residents were observed; however, all were using the park to get from one point to another and did not actively engage in any activities.

*Types of Activities:*
The main activity involved children playing with the water features. Furthermore, children mostly played in the toddler playground. This is most likely due to the area being highly shaded, while the playground intended for older children was in direct sunlight with no tree cover. Moreover, adults were using the lounge chairs to relax and scroll through their phones, sitting on a bench and chatting, eating food on the picnic tables with friends, or lying on the grass on towels. This was the first park where sunbathing and lounging on grass was observed. This may be due to the higher quality


**Figure 28: Top view of Howard Park.**


**Figure 29: Photos taken during observations at Howard Park.**

of the grass in the area and the amount of shade.

*Animals and Natural Elements:*
Some squirrels were observed in Howard Park, but overall, the park lacked wildlife. This may be because construction has recently ended in this park, and urban wildlife may have moved to other areas in the neighbourhood where food was more readily available. Regarding vegetation, the park has plenty of mature trees and more have been added recently. The grass is well-maintained and there is very little littering.

*Final Thoughts:*
Overall, Howard Park is an excellent park, seemingly catering to the local community very well. Residents seemed to appreciate the space and lingered for longer periods in comparison to other parks. The amenities allow any user to find something to do and benefit from. The fact that it is well-maintained may also suggest that residents care for the space. The amount of shade also makes the park a great place to visit, especially in the summer months. Even as I made observations, I was very comfortable sitting in the park due to the shade provided. The children's play areas are well-received and appreciated. The success of the investment directed towards Howard Park may serve as an example for the improvement of other parks in the area.

## 3.3.12 Jean-Valets Park

**Date and Time of Observation:** Sunday, July 28, 4:05 pm – 4:35 pm
**Weather Conditions:** Sunny, 30 °C
**Number of Park Users:** 22

*Amenities:*
The amenities in Jean-Valets Park include four picnic tables and six benches. Four trash cans are scattered around the park and a drinking water fountain is available.

*Quality and Maintenance:*
The quality and maintenance of this park was certainly the lowest in the neighbourhood. Littering was a prominent issue, with many food wrappers and cigarette butts found on the ground. Garbage was most noticeable around benches, suggesting people litter when sitting on them. The trash cans in the area are located on the periphery of the parks. Placing trash cans closer to seating areas may be beneficial in alleviating littering issues.

*Types of Users:*
The types of users in Jean-Valets were all men, older and White, and younger and South Asian. All used the

space in groups of at least three, playing checkers on picnic tables, sitting on the grass and smoking, or drinking with friends. Despite the lower level of maintenance in the park, it was very well used.

*Types of Activities:*
The types of activities all involved socializing. It appears residents use this park mostly for that purpose. All users were hanging out with friends and stayed for a long time. Some level of passing through was observed, but most people walked on the sidewalks instead of cutting through the park.

*Animals and Natural Elements:*
No squirrels or birds were observed in this space despite the amount of trash. In terms of natural elements, the park benefits from significant shade from mature trees. Of all the parks observed, Jean-Valets provides the most shade in the neighbourhood.

*Final Thoughts:*
Jean-Valets is a great park for lingering due to the shade provided to mitigate against heat. The amount of seating, especially in such a small park, is generous and useful for those looking for a place outside to sit and relax. Nonetheless, the amount of trash in the park is striking even compared to other parks that also experience littering issues. The park certainly has the potential to be transformed into a cleaner and more environmentally friendly area, by adding signage advising against littering and adding trashcans near benches and picnic tables. However, cleanliness did not appear to be a significant issue for those using the space.


**Figure 30: Top view of Jean-Valets Park.**

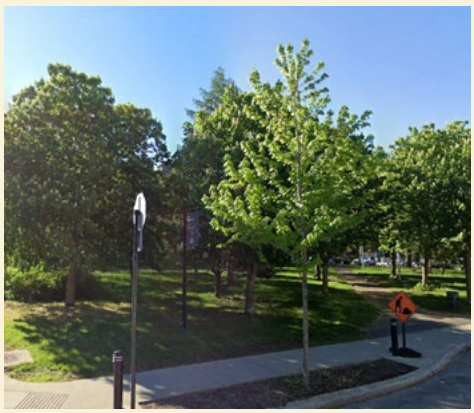

**Figure 31: Photos taken during observations at Jean-Valets Park.**

## 3.3.13 Summary: Observational Studies

The UGS in Park-Ex are crucial for fostering social cohesion, promoting leisure and enjoyment, and supporting physical and mental health among residents. Place de la Gare Jean-Talon, Athena Park, and Saint-Roch Park are particularly well-used, serving as essential hubs for social interaction and community engagement. These parks provide residents with opportunities for both solitary and group activities.

Despite the benefits provided, many parks in the neighbourhood face significant challenges. A notable issue is the lack of trees and larger greenspace, essential in combating UHI effect and pollution. Additionally, maintenance problems, insufficient garbage collection, and inadequate amenities detract from the usability and appeal of these parks. For instance, Ogilvy-Outremont Park and Lestre Park suffer from underutilization and neglect, highlighting the need for better maintenance and infrastructure improvements.

Importantly, the quality of the parks often correlates with newer developments and areas experiencing gentrification. Beaumont de L'Epee Park and Dickie-Moore Park, both located in recently developed areas on Beaumont Avenue, benefit from higher levels of investment and maintenance. This trend highlights disparities within the neighbourhood, where parks in gentrified zones are more appealing, while those in less affluent areas struggle with basic upkeep.

Overall, the observations indicate that while Park-Ex's UGS are vital for community well-being, there is a pressing need for improved maintenance, more trees and larger green areas, and better amenities to enhance their functionality and appeal. Addressing these issues is essential for ensuring that all residents can equally benefit from these crucial communal spaces, and increase environmental equity in the neighbourhood.

# 3.4 Findings: Resident Interviews

## 3.4.1 Sample Overview

| *Participant* | *Ethnicity* | *Gender* | *Age Group* | *Time in Park-Ex* |
|---|---|---|---|---|
| **1** | Caucasian | Female | 55-59 | 10 |
| **2** | Caucasian | Female | 35-39 | 6 |
| **3** | Caucasian | Male | 20-24 | 2 |
| **4** | Caucasian | Male | 75+ | 30+ |
| **5** | Caucasian | Female | 60-64 | 20 |
| **6** | Caucasian | Female | 45-49 | 7 |
| **7** | Caucasian | Male | 30-34 | 25 |
| **8** | Caucasian | Female | 20-24 | 4 |

**Table 3: Characteristics of interview participants.**

As noted previously, the interview sample was not representative of the Park-Ex population. In total, 8 interviews were conducted, 7 with current Park-Ex residents, and 1 with a previous resident who owns property in the neighbourhood and is still involved in community politics. Table 3 demonstrates a good range of gender identity, age, and length of time living in Park-Ex among participants. However, all identify

as White highlighting the need for further research to document the experiences of other ethnic groups in the area.

## 3.4.2 Findings: Resident Interviews

### *1. Broad Definitions and Understanding of UGS*

UGS was not defined or explained to the interviewees during the interview process. Instead, participants were left to understand the term in ways that would best apply to their daily lives and experiences. This decision led to a finding that aligns with previous studies – different residents, in different circumstances, view UGS in unique ways. For example, while homeowners frequently resorted to speaking about their backyards when asked where they spend time outside, renters spoke of the closest public park. Additionally, a student living near the MIL campus interpreted UGS to refer to public streets and sidewalks.

In addition to varying perceptions of UGS, residents also expressed uncertainty when it came to speaking about UGS. For example, there was hesitation when participants spoke about UGS. They would note "*I don't know if this counts as a park or a public space*" or "*Well, this space isn't really 'green'*". These responses also align with findings from previous research that UGS is fluid and complex. The variability also indicates that documenting individual perspectives is important in understanding residents' needs.

### *2. Positive Perceptions: Social Cohesion, High Usage, and Safety*

Among the positive perceptions noted in the interviews, participants universally experienced social cohesion. Although participants varied in age, gender, family composition, and occupation, all mentioned that they enjoyed the amount of social interaction experienced in UGS when asked what they appreciated the most about these spaces. One resident mentioned:

> *"You know, the thing I enjoy is that I always meet the same people when I go to parks [...] It's easy to make links with other people in such a neighbourhood."*

She later adds that parks are also a place for intercultural social exchange and shares a specific moment with a South Asian lady as she prepared her daughter to leave a local park:

> *"I don't interact that much with the people from [South Asia] [...] because I don't speak the language but sometimes when you have kids, I think they have this impulse to help you. When I went to the water games, I had some trouble dressing up my daughter and a South Asian lady helped me put on her shoes."*

It is clear from the interviews that the parks studied are used. Beyond formal park space, many participants stated that Park-Ex residents are always outside, using outdoor spaces in one way or another. One interviewee said there is always "*life*" in UGS in the neighbourhood. Another participant stated that because of the lack of space in a neighbourhood as dense as Park-Ex, the majority of children are seen in parks and alleys because most families do not live in homes with backyards.

The high usage may also relate to UGS having the amenities and characteristics individuals need depending on their situation and preferences. For example, while one resident stated that what she enjoyed most about the UGS in Park-Ex was the

number of games for children, another mentioned that she enjoyed the number of spaces without children's playgrounds. Moreover, one participant noted that she appreciated the abundance of benches because when visiting parks with her elderly parents, they can sit down and rest whenever they need to.

Lastly, common among female participants was a positive perception of safety. All expressed feeling secure in the neighbourhood and comfortable in UGS. One participant stated:

*"In poor neighbourhoods, sometimes you have some [negative] feelings of safety, but this is not the case in Park-Extension."*

Furthermore, one participant mentioned how safety has been significantly improved in the neighbourhood regarding traffic and play spaces for children. Growing up in Park-Ex in the 1980s, she explained how most kids would resort to playing on the streets due a lack of infrastructure, and accidents were common. Now with many children's parks in the area, vehicle speed regulations, and gates around parks, she believes children have safer places to play. In addition to positive perceptions, residents shared their thoughts on what they view as negative aspects of UGS in Park-Ex, summarized in the following section.

### *3. Negative Perceptions: Cleanliness, UHI Effects, and Lack of Space*

The most common negative perception expressed by the participants of this study was the lack of cleanliness and the amount of trash not only in UGS but in the neighbourhood in general. These factors appeared to affect how residents viewed the quality of UGS. Three residents expressed that the quality of the parks in the neighbourhood is sometimes not worth the trip, even if a park is very close to home. Conversely, travelling farther by walking or public transportation is seen as worthwhile when going to Jarry Park specifically, as it is a large park with many different amenities and excellent maintenance. When referring to parks within walking distance of her home, a resident expressed the reasons why she would not visit often:

*"Do you really [travel] especially to go to this kind of park? The answer is no. [...] You go to Jarry Park because it's a beautiful park. But really, if you want to stay in the neighbourhood very close, you are not going to visit Athena Park."*

Moreover, a previous resident mentioned how maintenance does not appear to be a priority for the borough compared to her current place of residence in Ville Saint-Laurent:

*"There was the bulldozer planting flowers and, you know, taking care. I've never seen that in Park-Extension. I've never seen anyone. Any crew, uh, coming on, then taking care of anything like it's rare. So why? Why in this neighbourhood and not in that one?"*

On top of issues with cleanliness, residents all mentioned the second thing they view as a negative factor regarding UGS in Park-Ex is the heat that the neighbourhood experiences in the summer. Residents believe that more vegetation should be incorporated not just within these spaces but leading to them. The effects of UHI are significant, with all participants experiencing issues regarding heat frequently in the summer months. For example, while speaking about his walk on the sidewalk to a public park, a participant stated the following:

*"[The sidewalk is] like four and a half I think maybe sometimes five meters wide, but it's all concrete and really no greenspace [...] [Tree] canopy is like*

*really low and in the summer [...] it's way more hot than other places."*

As mentioned in the observational studies, tree canopy varies between parks and the participants communicated that this was an important factor in determining which parks to visit. One resident mentioned that she prefers to go to Howard Park instead of Centennial Park despite the latter being closer to her home because of the limited tree canopy and lack of shade.

Lastly, the lack of space in existing UGS was also expressed as a negative perception among residents. One participant stated that they believed the only real option for outdoor recreation regarding UGS he has is Jarry Park:

*"Jarry is really big and it's nice [to do sports and go on runs] but we don't really have any better choice near."*

Another resident echoed similar sentiments when asked which UGS she likes to visit the most:

*"I would usually go to Jarry Park. Actually, I don't know if that's technically Park-Ex, but it's the only real large park."*

The following section describes the aspirations that residents voiced when talking about the changes they would like to see in the UGS available to them.

### *4. Future Aspirations: Waste Management and Maintenance, and More Greenery*

The most prominent aspiration stated by the residents concerned the governing and management of waste in the neighbourhood. All residents stated that trash is a significant issue in most UGS, and one resident mentioned that it was a priority to address this issue as sometimes her children would play with trash in playgrounds.

Some residents suggested that more strict rules and laws were employed by the borough to penalize those littering in the neighbourhood. They also expressed that they believed it was a cultural problem, a habit or tolerance to garbage on the street by the South Asian community which may suggest a level of racist stereotyping among participants. One resident mentioned that oftentimes, she would witness this specific segment of the population throwing trash onto the street from their windows. The comments seemed to contain a certain level of blaming the South Asian community, in particular. Yet, at the same time, residents were weary of their comments stating that they did not feel they could make recommendations regarding the cleanliness issue. Again, the lack of participants from other ethnic groups is a significant limitation to this study, therefore the following findings are limited to the demographic that was interviewed. The following quote was mentioned by a resident after she suggested fining those who leave trash in UGS:

*"I do not want to advise people because I know that it's difficult to go to govern in Park-Extension and also because in comparison with the other people in the neighbourhood, I have a lot of privileges and I know that if I was in the situation of these people, I'm not really going to be concerned about underlying environmental issues."*

The second most common future aspiration expressed by participants was the desire for more trees and vegetation in the neighbourhood. The following quotes are examples of this envisioned improvement:

*"I would say like the tree canopy, not enough trees. The fact that there's not as much of them as you*

*would expect for the density of population."*

*"If I look at it from my point of view, I would say reduce the [amount of concrete] and plant, like public trees because I know that most of the trees right now in Park-Ex are private trees like on a private lot."*

Although increased vegetation is a significant aspiration, almost all participants who suggested this improvement followed up with expressing how this is probably a difficult thing to accomplish. One participant mentioned that she understands adding greenery to be expensive and to yield very little profit, while another participant commented that there is also very limited space to do so in such a crowded and dense neighbourhood. Responding to these potential obstacles, a participant mentioned that it would be useful to improve access to surrounding neighbourhoods, such as TMR:

*"Maybe it's a bit controversial to say this, but better access to the surrounding neighbourhoods, you know, like there's TMR and it's really green but it's hard to get there."*

Better access to surrounding neighbourhoods is not a new aspiration. A resident mentioned that growing up in Park-Ex 40 years ago, there was no formal access to Jarry Park for pedestrians. Today there is a crossing path in Saint-Roch Park leading directly to Jarry. Such changes can be implemented in other areas like TMR and Outremont.

## 3.4.3 Summary: Resident Interviews

The interviews confirmed the findings brought by the observations that UGS play a vital role in promoting social, mental, and physical well-being for residents. Participants highlighted social interaction, high levels of safety, and accommodating a high density of use as positive factors provided by UGS in Park-Ex. Some participants even noted improvements in the neighbourhood, particularly around traffic safety and children's play areas.

Despite these benefits, residents also identified several critical issues. The high density of use may also lead to overcrowding. Additionally, participants mentioned a notable lack of greenspace to support the community adequately. Many parks suffer from insufficient tree cover, exacerbating the UHI effect and making summers particularly uncomfortable. The need for increased vegetation and improved maintenance is a common concern, with participants frequently highlighting the poor state of cleanliness and lack of upkeep in local parks.

It is worth noting that some residents expressed judgements that equated the condition of the parks with the behaviours of people using them, revealing underlying racial stereotyping. For instance, some participants blamed the South Asian community for littering and the condition of parks. This bias highlights the need for a more inclusive and understanding approach to address the challenges faced by UGS in Park-Ex.

Overall, while UGS in Park-Ex are essential for community cohesion and well-being, addressing overcrowding, increasing greenspace, improving maintenance, and confronting potential exclusionary and discriminatory attitudes are crucial for ensuring these spaces serve all residents equitably. The following sections highlight the key takeaways of this study and recommendations for improving UGS for all residents in Park-Ex.

# *Section 4: Discussion*

# 4.1 Key Takeaways

## 4.1.1 Neglect and Overcrowding

As highlighted in the observational park studies, the level of neglect and upkeep vary significantly. Nonetheless, parks are generally not in great condition, with significant cleanliness issues. As the most pressing issue brought up by the residents interviewed, there is concern for the maintenance of parks and residents' desires for aesthetic appeal and environmental wellness in UGS. The variance between parks also followed a particular pattern, with the best-maintained parks in the south of the neighbourhood, near the MIL campus, new housing developments, and businesses that do not cater to longstanding residents. Conversely, the most neglected parks are located near Jean-Talon Street and the north of the neighbourhood.

Despite the ranges in maintenance and amenities, all the parks are relatively well-used. No park was empty and few amenities were disregarded or not interacted with. Although high usage is usually positive, in the case of Park-Ex, there were some issues seen with overcrowding. In Saint-Roch Park, the number of children in a playground of that size revealed some potential hazards. Kids were seen bumping into each other, and as cyclists rode by, children would often be in the way. Additionally, more than one resident interviewed expressed that there is not enough greenspace for the amount of people in the neighbourhood.

## 4.1.2 Environmental Justice for Whom?

Although the prominent group of users found during the observational studies were immigrants and people of colour, all interview participants were White and most Quebecois. Perhaps the most important finding in this study is the fact that there is a disconnect between those involved in the discourse surrounding UGS and environmental issues in Park-Ex and the everyday users of parks in the neighbourhood. When talking about new tenants moving into the neighbourhood due to the introduction of the MIL campus, a participant mentioned that this group of individuals was "*more concerned and wants to be implicated with greenspace*," in comparison to immigrant populations. Moreover, a participant involved in the citizen's committee spoke about events that took place to promote greenspace in Park-Ex. When I asked her who was involved in these events she mentioned:

> *"Perhaps my answer is too blunt, but it was the problem of White people in the neighbourhood."*

The answer as to why immigrants and people of colour are not involved in discussions on UGS is outside of the scope of this study, however, it is still an important theme to highlight. Many participants shared that they believe it is a priority issue. Three participants expressed that they believed immigrant populations and lower-income residents are preoccupied with other issues in their daily lives, whereas those with more financial security and time have the capacity to participate in environmental topics. Other possible explanations may relate to barriers of power, such as people lacking empowerment to participate in asking the city for improvements through barriers such as language. It may also have to do with the type of outreach of those conducting the discourse to

marginalized populations. The limited involvement of certain populations in issues of UGS raises questions of environmental justice – *environmental justice for whom?* As noted by a participant, there is a balance that must exist between environmental and social justice, and understanding when one may outweigh another when it comes to serving the needs of the local community:

*"It's a difficult political question. The contradiction between environmental and social justice, and how to mitigate both and deal with them together."*

The observational studies revealed how well-used, loved, and important UGS are to the immigrant community of Park-Ex, hence this group of people should be involved in the discussion and community organizations should target this population. Additionally, the difficulty in finding a diverse sample of participants for this study points towards the need to target these individuals and document their experiences. Understanding the perceptions of underrepresented populations is crucial in striving toward more equitable greenspace for all. The following section discusses recommendations for improving UGS in Park-Ex and suggestions for future research.

# 4.2 Recommendations

## 4.2.1 Investing in Existing Parks

According to the findings from the observational studies and interviews, better management of vegetation, maintenance of amenities such as pathways and urban furniture, and improved garbage collection by the borough are critical. Moreover, upgrading older parks such as Lestre Park, Jean-Valets and Champagneur should be prioritized. The residents interviewed frequently used the word "potential" when speaking about UGS. Investing in existing parks is crucial to fulfill the potential of these spaces perceived by residents. This is especially relevant to Park-Ex because of the lack of developable land, making it nearly impossible to add new parks. Moreover, due to the low tree canopy and high retention of heat in the neighbourhood, it is crucial to provide residents with high-quality spaces that they can use to cool down and relax in the summer.

Investments do not need to be drastic. Small changes can come a long way. For example, the observations revealed cigarette disposal as a significant issue in UGS. Incorporating cigarette disposal bins and accessible signage in the languages spoken in the community can be instrumental in alleviating this issue. Additionally, improving the conditions of grass in existing parks with shade, such as Athena Park, would encourage individuals to use the space for picnicking – an activity described by the participants of this study to be possible only in Jarry Park. However, as noted in the previous paragraph, complete upgrades of all outdated parks would be most beneficial. The improvements the neighbourhood has experienced, particularly regarding Howard Park, are promising. Newer parks like Dickie-Moore Park can serve as precedents and examples for improving other local parks. However, reflecting on the fact that this better-quality park is in an area of the neighbourhood considered gentrified by community members, it is important to couple environmental improvements with mitigation strategies to prevent displacing lower-income households.

Lastly, participatory efforts should be incorporated by the borough to ensure that the needs of the residents are being met and all residents have equitable access to high-quality greenspace. In particular, the borough should target immigrant communities and people of colour to lead the reimagining of different parks and

bring forth recommendations, as the primary users of such spaces. The borough should then dedicate funds to prioritize these recommendations.

## 4.2.2 UGS Audits and Community Outreach

Another couple of recommendations involve reoccurring audits organized by the borough to evaluate the condition and maintenance of parks regularly. Such strategies can draw awareness of environmental well-being and improvement and promote opportunities for educating residents. Demonstrating that ecological improvement is a central concern in the neighbourhood and communicating with the local community in languages accessible to them is important. There is an opportunity to empower residents to participate in positive environmental change. For instance, holding workshops and providing equipment for homeowners and landlords to improve their properties, yards, and alleys can increase the amount of vegetation in the area as well as foster a sense of care for the natural landscape. Additionally, encouraging landlords to allow tenants to make such improvements is important as most of the population in Park-Ex are renters. Such actions could respond to concerns residents voiced, such as this one:

*"I'm not sure how much residents are aware of how they could also plant and make their properties more green. I mean there's a level of communication and education. There are many different languages. It's very hard to educate the local residents about what's going on in their area."*

## 4.2.3 Mitigating Gentrification

UGS and housing are mutually inclusive concepts. They affect one another in numerous ways. In Park-Ex, residents expressed how the need for housing has affected the amount of greenspace in the neighbourhood:

*"So as I'm talking to you, I'm realizing maybe that's why it seems less green because it has evolved with the fact that [..] there's more need for apartments."*

Another resident added:

*"But we have to also talk about housing because for me there is a debate between greenspace and housing. We have to sync both things together. It's very important. So for example, in Park-Extension, we can transform some buildings into cooperative or affordable housing, but [we should not add] new buildings in Park-Extension."*

Additionally, with the addition of the MIL campus, new businesses, housing developments and greenspace it is important to ask whether the borough and the city are equipped to mitigate potential issues of gentrification if parks and greenspace are improved. Although outside of the scope of this study, the borough and the city of Montreal need to employ policies like allowing lease transfers, banning evictions, rent control, and decommodification of housing on a larger scale.

# 4.3 Concluding Remarks

## 4.3.1 Limitations and Future Research

There are several limitations to this study, some of which have been mentioned in previous sections. First, the study relied on observational data, which allowed for detailed documentation of how residents use and interact with UGS but did not capture the subjective experiences of all user groups. Input from those using the space – often racialized or non-English speaking – was not achieved in this study. Second, the selection process for interview participants is another limitation to this study, as it catered toward English-speaking residents who use Facebook. Moreover, the study focused on areas within the boundaries of Park-Ex, with no focus on resources available nearby or elsewhere in the city. While this focus is justified by the study's aim to understand local UGS in Park-Ex specifically, it limits findings by not considering the broader urban context or the potential benefits residents might derive from accessing nearby amenities and greenspace outside the neighbourhood. Additionally, the study's emphasis on environmental justice was primarily measured by greenspace per person and quality of greenspace, rather than incorporating a broader range of justice metrics. Finally, despite the residents expressing concern for ecological gentrification in the neighbourhood, such dynamics were not in the scope of this study. Existing sources point towards this issue, warranting further study to understand its local impact and develop strategies to mitigate negative effects (Jolivet et al., 2023; Nichols et al., 2019).

Overall, while this study provides important insights into the use and perception of UGS in Park-Ex, its reliance on observations, narrow geographic focus, and limited engagement with diverse resident voices highlight the need for further research to address these gaps and build a more comprehensive understanding of environmental justice and community dynamics in the neighbourhood.

Regarding future research, this study revealed that it was particularly difficult to engage with certain segments of the population, including lower-income individuals of colour and immigrants. Future research should target this group of people to better understand perceptions of greenspace in Park-Ex. Additionally, this study relied on observational study findings documented on only a few days of the week, in different months. Extending such a study to be more comparative by going to the same parks and recording observations at different times and on all days of the week would allow for a more comprehensive understanding of how the space is being used and how use may vary.

## 4.3.2 Conclusion

This study highlights the role of UGS in Park-Ex and seeks to provide insight into how greenspace in Park-Ex can better reflect the needs of all residents. Urban nature provides numerous benefits, including improved quality of life, pollution mitigation, and alleviating heat. However, the literature has revealed that these benefits are often unevenly distributed, with low-income and marginalized populations having less access to high-quality greenspace and trees. Through observational studies and resident interviews, this study found that UGS in Park-Ex excels in fostering social cohesion, safety, and well-being among residents. Nonetheless, UGS face challenges such as overcrowding, insufficient tree cover, poor maintenance, and cleanliness issues.

The disparity in UGS quality between newer, gentrified areas and the rest of the neighbourhood reveals issues of environmental justice and highlights the exclusion of marginalized populations. Considering that the main user group of UGS in the neighbourhood consists of immigrant communities and people of colour, the borough must employ participatory decision-making processes to voice the needs of these individuals and ensure equitable access to high-quality greenspace. Finally, the borough must invest in existing parks and simultaneously introduce efforts to mitigate gentrification and displacement.

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