STOPMTL.ca: Preliminary Report | 2023

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STOPMTL.ca: Preliminary Report, 2023

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Summary

The *stopmtl.ca* project uses a participatory mapping methodology to allow individuals to self-report their police stop experiences in the city of Montreal, Canada.

Between July 14th 2021 and December 21st 2021, a total of 714 police stop experiences were contributed to the stopmtl.ca website. Of these contributions, approximately 28% (N = 197) were removed due to a programming error that led to the duplication of cases. Of the remaining contributions (N = 517), 21% were suspected fake data and 7% were excluded due to missing data. A total of 369 contributed police stop experiences were retained (71%). A descriptive analysis of the data suggests that most police stop experiences were reported by men (74%), individuals who identified as being White (55%), hetereosexual (70%) and being aged between 19 and 24 years (27%). A Black racioethnic identity was the second most frequent racioethnic identity (17%). In terms of spatial distribution, stop experiences were reported as occurring most frequently in the Côte-des-Neiges (13%) and Ville-Marie (12%) boroughs of Montreal. Nearly half of all reported stops were reported as having occurred in 2021 (49%), and most frequently in the summer months (May-August) (65%), peaking in July (33%). The most frequent activity individuals reported doing during their stop was being in a vehicle (42%), followed by walking (23%). Respondents could identify multiple reasons for which they believed they were stopped. The perceived reason for the stop most frequently identified was what the person was doing (39%), followed by their appearance (30%). Roughly equal proportions of police stops were seen as justified (41%) and as not justified (43%). There are several similarities between the characteristics of self-reported police stop experiences contributed to *stopmtl.ca* and police-recorded stops in the city of Montreal, Canada. Namely, there appears to be a comparable spatial distribution of police stops in both data sets, as well as some indication of a comparable social distribution (e.g., gender, age and racioethnic identities of those stopped). However, the self-reported police stop data is limited in several important ways. Namely, for self-reported police stops with available data on whether the respondent received a sanction following their stop (i.e., fine, arrest or charge) (N = 129), 42% were said to have led to a sanction. This limits the capacity to draw strong comparisons between self-reported data and police-recorded data (which excludes all stops leading to a sanction). Though criteria were applied to exclude suspected fake data, it is not possible to establish the veracity of self-reported stops. Nevertheless, these preliminary descriptive results provide a snapshot of who self-reported their stops and of the types of stops that led to self-reports. Furthermore, the data provide insight into citizens' perceptions of their police stop experiences. Future directions for research, including planned validation analyses and a second wave of data collection are discussed.

Background

The social and spatial distribution of police stop experiences can impact the neighbourhood socio-cultural environment, and individuals' health and quality of life.

A police stop is defined as an intervention by a police officer that leads to the identification of an individual or the obtaining of their information, without the incident leading to a sanction (fine, charge or arrest). Police stops are generally not an efficient or effective means of reducing crime or disorder (Bowling & Phillips, 2007; Fagan, Geller, Davies, & West, 2010). Some evidence suggests that a spatial concentration of police presence and activity in a neighbourhood can signal that police are addressing safety issues, providing a sense of reassurance (Montréal sans profilage, 2008). However, other studies suggest that a strong police presence has no measurable impact on perceived safety or may even worsen perceived safety (Scheider, *et al.*, 2003; Ratcliffe, Groff, Sorg, & Haberman, 2015). Most importantly, experiencing interactions with police that are deemed unfair or discriminatory can contribute to feelings of exclusion, stress and depressive symptoms (Bradford, 2014; Earnshaw, *et al.*, 2016; Geller, Fagan, Tyler, & Link, 2014), particularly for young men living in urban areas (Geller, *et al.*, 2014). A concentration of disproportionate or discriminatory police stop activity can also impact the broader community and have important social consequences by undermining police legitimacy and diminishing the social good of policing (Fagan, *et al.*, 2010).

The social and psychosocial impact of a strong police presence, and of police stops in particular, on neighbourhoods and communities is not easily addressed because of significant data quality issues. Police-recorded data on police stops is, to date, the only available quantitative data on the incidence, spatial and social distribution of police stops in Montreal, Canada. This type of data are limited in part by a lack of systematic recording. For instance, police have previously reported that police-recorded data represent only 10-20% of all police stops (Charest, 2010). An independent observation suggested that, in the UK, approximately 30% of stops were recorded by police (Bowling & Phillips, 2007). Moreover, police-recorded data provide limited information on the individuals who are stopped (e.g., racial or ethnic group is based on officer perceptions). This data is also notoriously difficult to access (Wortley & Owusu-Bempah, 2011), due in part to the sensitive nature of official police records. Lastly, when data are available, the spatial resolution (territorial neighbourhoods) is not precise enough to measure individuals' exposures and impacts on well-being and public health (Chaix, Merlo, Evans, Leal, & Havard, 2009).

The current project uses participatory mapping, a form of citizen science, to encourage public collaboration in the generation of data on police stop experiences in Montreal, Canada. Though this methodology has yet to be used to measure police stop experiences, similar methodologies have been used to measure deaths at the hands of the police in the U.S. (mappingpoliceviolence.org), anti-muslim hate incidents reported across Canada (nccm.ca/map) and sexual violence and harassment worldwide (ihollaback.org). In academic settings, participatory mapping has been used to measure and map cyclist safety (e.g., accidents, thefts) (bikemaps.org). More broadly, citizen science approaches are used in a number of disciplines including astronomy, ecology, meteorology, and medicine (Roche, *et al.*, 2020)

Objectives

A key objective of the *stopmtl.ca* project is to produce a dataset of police stop experiences from citizens' perspectives. A secondary objective is to assess whether a Volunteered Geographic Information System (VGIS) can produce valid data on the social and spatial distribution of police stop experiences. The validity of this type of data can be established using recognized criteria (e.g., the correspondence between data obtained using VGIS with data from other sources).

This preliminary report provides a portrait of the collected data. A subsequent report will present results on the validity of the data. In the long term, the aim is to use this data to identify areas for intervention and to contribute to the development of inclusive and efficient urban social policies. All of the data presented in this report are publicly accessible on stopmtl.ca.

Methodology

The project uses a Volunteered Geographic Information System (VGIS) to allow members of the public to map their police stop experiences in the city of Montreal, Quebec, Canada. The VGIS methodology refers to the access to, contribution to, and sharing of geographic information obtained through voluntary contributions using the internet (Hung, Kalantari & Rajabifard, 2016). This methodology uses a crowdsourcing or citizen science approach to generate a "process of consensus production whereby many people will provide and augment information about the same thing which will become more and more accurate thanks to a convergence of information" (Capineri, 2016, p.7).

The mapping function of *stopmtl.ca* allows individuals to place a pin on a map of the city which automatically records the geographic coordinates of the police stop experience (i.e., latitude and longitude), and also allows for grouping police stop experiences by census tract and borough. A survey function of the website allows individuals to provide information about themselves (e.g., gender, age, racioethnic identity) and about the stop (e.g., year, month). The survey also allows individuals to report their perceptions of the police stop, including the perceived reason(s) for their stop and whether they believe the stop was justified.

To contribute a police stop experience, individuals had to tick a box indicating that they were over the age of 15 years and agreed to the "Privacy policy and protection of anonymity" terms and conditions. The project received ethics approval from the Institut National de la Recherche Scientifique and McGill University. The total project cost was just over $16,000 CAD, not including researcher and volunteer labor (see l'Appendix I).

Privacy policy and protection of anonymity

To protect individuals' privacy and anonymity, five strategies aiming to reduce the personal, temporal and spatial specificity of contributed police stop experiences were put into place. First, no personally identifying information is collected (first name or last name) and contributors can choose to omit information about themselves or the stop. Second, only a partial date is collected (year and month), and publicly accessible data is updated periodically in order to prevent identifying a specific date for a contributed police stop. Only the research team has access to the exact geographic coordinates of police stops. Publicly available information includes a "heatmap function" indicating where there is a concentration of police stop experiences in the city, and a counter indicating the number of police stop experiences per borough. These approaches prevent identifying specific individuals or stops. Lastly, all data collected from users accessing the website are secured on INRS servers and are only accessible to the research team.

Data collection

Targeted population

The population of interest for the purpose of the project are all individuals above the age of 15 years who have experienced a police stop in the city of Montreal, Québec. There are no exclusion criteria for individuals who wish to contribute a police stop experience. Individuals can contribute police stops that occurred as early as the year 2000.

Mobilization strategy

The website was launched on July 14th 2021. A total of 4 mobilization strategies (community engagement, media presence, street mobilization, web mobilization) were used to encourage individuals to visit the website and contribute their police-stop experiences. Throughout all community, media, street and web mobilization activities particular efforts were made to target geographic and racioethnic communities that are most affected by police stops according to a report released by the SPVM in 2019. Namely, there are specific boroughs of the city with higher levels of police stops (e.g., Côte-des-Neiges) and police report disproportionately stopping young men, particularly those identified as being Black and Arab, and Indigenous women in particular. A team of volunteers were involved in identifying community organizations, individuals and post-secondary institutions that are involved with these key communities (i.e., young adults, racialized groups including the Black community, citizens living in boroughs with high levels of police stops or of discriminatory police stop practices).

Community engagement activities

In the weeks before the website launch, we presented the project to over 30 stakeholders, and asked them to share the website link throughout their networks once it was launched. Community stakeholders were largely supportive of the project. Some community stakeholders were less supportive of the project in part because the methodology (i.e., VGIS) might represent a barrier to obtaining data from certain populations (e.g., Indigenous populations living in Montreal). Some stakeholders officially endorsed the project, and were included as "Supporters" on the website and in press-releases. We prepared and sent communication materials to stakeholders (in English and French).

Media presence

The mobilization strategy involved having an active media presence during the website launch. Press releases were prepared in English and French, and these were distributed directly to media outlets by the media relations team at INRS. On the day of the launch, July 14th 2021, the project was featured in all mainstream print news outlets in the city of Montreal (Le Journal de Montréal, The Montreal Gazette, Le Devoir, Métro). For instance, it appeared on the front page of the Montreal Gazette under the header "Website lets citizens log police stops". The research team took part in 3 radio interviews and 4 televised interviews. The website launch was also covered by national and international news outlets. For instance, an article about the project appeared in the National Post which is distributed Canada-wide and available online.

Street mobilization

A street postering campaign was carried out over a two-week period, beginning the day of the launch. A total of 1,000 posters were put up throughout the city. Posters were placed on public signposts and on authorized walls (e.g., construction sites, boarded up windows, public posting spaces) in 8 key boroughs: Notre-Dame-de-Grace, Montréal-Nord, Ville-Marie, Plateau Mont-Royal, Rosemont, Villeray, le Village, le Sud-Ouest. The posters were prepared by a marketing company based in Montréal, Québec, and featured three different individuals that represented different sociodemographic profiles (see Figure 2). The posters were captioned in either English with the following "Stopped by police? Put it on the map!" or in French with the following "Interpellé par un policier? Mets-le sur la carte!" (or the feminized version "Interpellée par un policier? Mets-le sur la carte!"). The posters included the website address, a QR code leading to the website and logos of the affiliated universities and key community supporters.

Web mobilization

Social network accounts were created for the project on three social network platforms: Twitter (@stopmtl.ca), Instagram (@stopmtl.ca) and Facebook (facebook.com/stopmtl.ca). The day of the launch and following the launch, a series of posts were released across all platforms announcing the launch and inviting individuals to contribute their police stop experiences. The social network accounts were successful in generating followers, liking and sharing of posts, and in stimulating discussions. Citizens took pictures of the posters and shared them on social networks. News outlets also shared articles about the project on their social networks, and these posts generated public discussions about police stops and about the project.

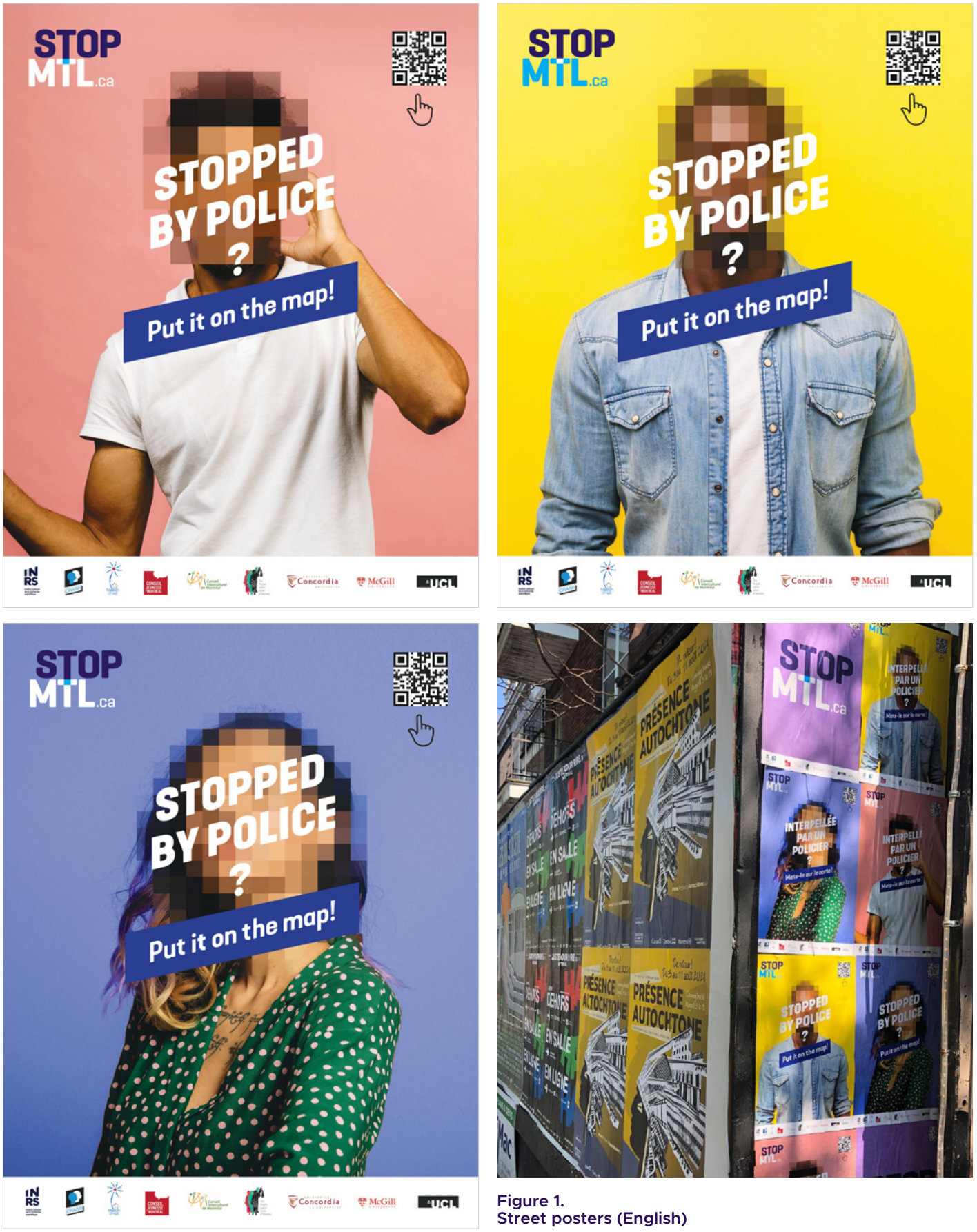

Figure 1.
Street posters (English)

Measures

The survey items aimed to assess information about the stop itself, about the individual who was stopped, and about the individual's perception of the stop. On the landing page of the stopmtl.ca website, visitors were greeted with the following:

> **Have you experienced a police stop?**
>
> Put it on the map, and contribute to the creation of a public map of police stop experiences in Montreal. A police stop experience consists of an intervention by a police officer that gave rise to your identification (or the obtaining of your information) without the incident leading to a sanction (fine, charge, arrest).

This definition of a police stop follows that used in the most recent report on police stop practices released by the Montreal police service (Armony et al., 2019). However, in public discussions there are sometimes distinctions drawn between police stops as defined above, "social interactions" (i.e., when a police officer has any form of conversation with a citizen) and a police road-stop (i.e., requiring a driver to stop their vehicle if they have reasonable grounds to believe that an offence was committed under the Highway Safety Code). The *stopmtl.ca* project therefore only explicitly refers to police stops, and not police social interactions or road-stops.

For all questions related to their police stop experience, respondents could select a "Prefer not to answer" option.

CHARACTERISTICS OF THE STOP
Year of the stop Individuals indicated the year in which the stop occurred.
Month of the stop Individuals indicated the month in which the stop occurred.
Time of day of the stop Individuals indicated whether the stop occurred in the "morning", "afternoon", or in the "evening/night".
Activity during the stop Individuals indicated their activity during the stop by selecting one of the following: ☐ In a vehicle ☐ In public transportation ☐ Walking ☐ Bicycle, skateboard or scooter ☐ Not on the move (in a park or in front of a business or house)"
Sanction Individuals indicated whether a sanction followed the stop by selecting: ☐ Yes (fine, charge or arrest) ☐ No Due to a programming error, sanction data is not available for all contributions (see Results).

CHARACTERISTICS OF THE INDIVIDUAL

Age group

Individuals indicated their age group at the time of the stop:

☐ 15 to 18 years old ☐ 19 to 24 years old ☐ 25 to 29 years old ☐ 30 to 34 years old
☐ 35 to 39 years old ☐ 40 to 44 years old ☐ 45 to 49 years old ☐ 50 years old or more

Gender

Individuals indicated their gender identity. Options were:

☐ Man ☐ Woman ☐ These categories do not define me

Racioethnic group

Individuals indicated their racioethnic identity by selecting all of the groups that applied, including:

- ☐ Black
- ☐ Arab
- ☐ Indigenous
- ☐ South Asian (e.g., Indian, Pakistani)
- ☐ East Asian (e.g., Chinese, Korean, Japanese)
- ☐ Filipino
- ☐ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian)
- ☐ West Asian (e.g., Iranian, Afghan)
- ☐ Latin American
- ☐ White
- ☐ Other

If they selected Other they were asked to enter their own identities.

Sexual orientation

Individuals indicated their sexual orientation at the time of the stop. The options were:

☐ heterosexual ☐ gay ☐ lesbian ☐ bisexual ☐ These categories do not define me

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EXPERIENCE AND PERCEPTION OF THE STOP

Perceived reason of the stop

Individuals selected all of the reasons for which they believed they were stopped:

- ☐ Ongoing police investigation or complaint from the publicc
- ☐ My appearance/who I am
- ☐ Where I was
- ☐ What I was doing
- ☐ Other

Perceived justification of the stop

Individuals indicated their own perceived justification for the stop by selecting:

- ☐ This stop was justified
- ☐ This stop was not justified
- ☐ Don’t know/Uncertain

Results

Data

Between July 14th 2021 and December 21st 2021, a total of 714 contributions were made on the stopmtl.ca website.

Duplicate cases

A programming error led to the duplication of 197 contributions in the dataset. These were excluded from all subsequent analyses. Excluding duplicate cases, a total of 516 unique contributions were made between July 14th 2021 and December 21st 2021 (see figure 1).

Suspected fake data

As part of our data integrity verification process, we investigated and ultimately removed data that we considered to be potentially fake. Data were suspected as fake based on: (1) a single user profile making an unusually large number of contributions, (2) a single contribution with an improbable sociodemographic profile, and (3) a contribution that was part of a series of suspicious contributions.

We considered multiple contributions being made from a single user profile as an indicator of potential fake data. An unusually large number of contributions could occur if multiple individuals made contributions from the same device or location (e.g., halfway house) or if an individual had an unusually higher number of police stop experiences. We calculated the average number of contributions per user profile and identified user profiles that contributed an unusually large number of contributions (i.e., 3 standard deviations above the mean), leading to the identification of 59 cases (11%) that were suspected as being fake due to a single user profile.

A contribution was deemed as presenting an improbable sociodemographic profile if it included more than 3 racioethnic identities. For example, one contribution reported the following racioethnic identities: Arab, Black, Latin American, Native American, and South Asian. Based on these sociodemographic improbabilities, a total of 14 cases were excluded (3%).

In analyzing the data, certain series of consecutive contributions stood out from the overall data set. For example, a series of 10 consecutive contributions were made on a single day in July 2021, all for the same sparsely populated, affluent and peripheral borough of Senneville and represented stops made between July 2008 to September 2016. Of these stops, 7 out of 10 were for Gay, Bisexual or Lesbian sexual identities. In comparison to the overall dataset, this consecutive series represents an improbable series. Later, over two days in August 2021, a series of 7 consecutive contributions were made for the same borough of Senneville and were all reported for stops made in August 2021. In this series, 3 out of 7 were for Gay or Bisexual individuals with varying racioethnic identities, and all reported their stop as “justified”. There are no known social, cultural or spatial factors (e.g., gay nightclub, LGBTQ+ resource center) that would lead to an expected high concentration of police stops of individuals with a marginalized sexual orientation in Senneville. There was also evidence suggesting these contributions were made from a single user profile. A contribution was therefore deemed as being part of a

series of suspicious contributions if it was immediately preceded or followed by one or more contributions with improbable sociodemographic profiles (namely marginalized or vulnerable communities), or part of a consecutive series in the same precise geographic area but with various sociodemographic profiles. Based on such series of suspicious contributions a total of 36 cases were excluded (7%).

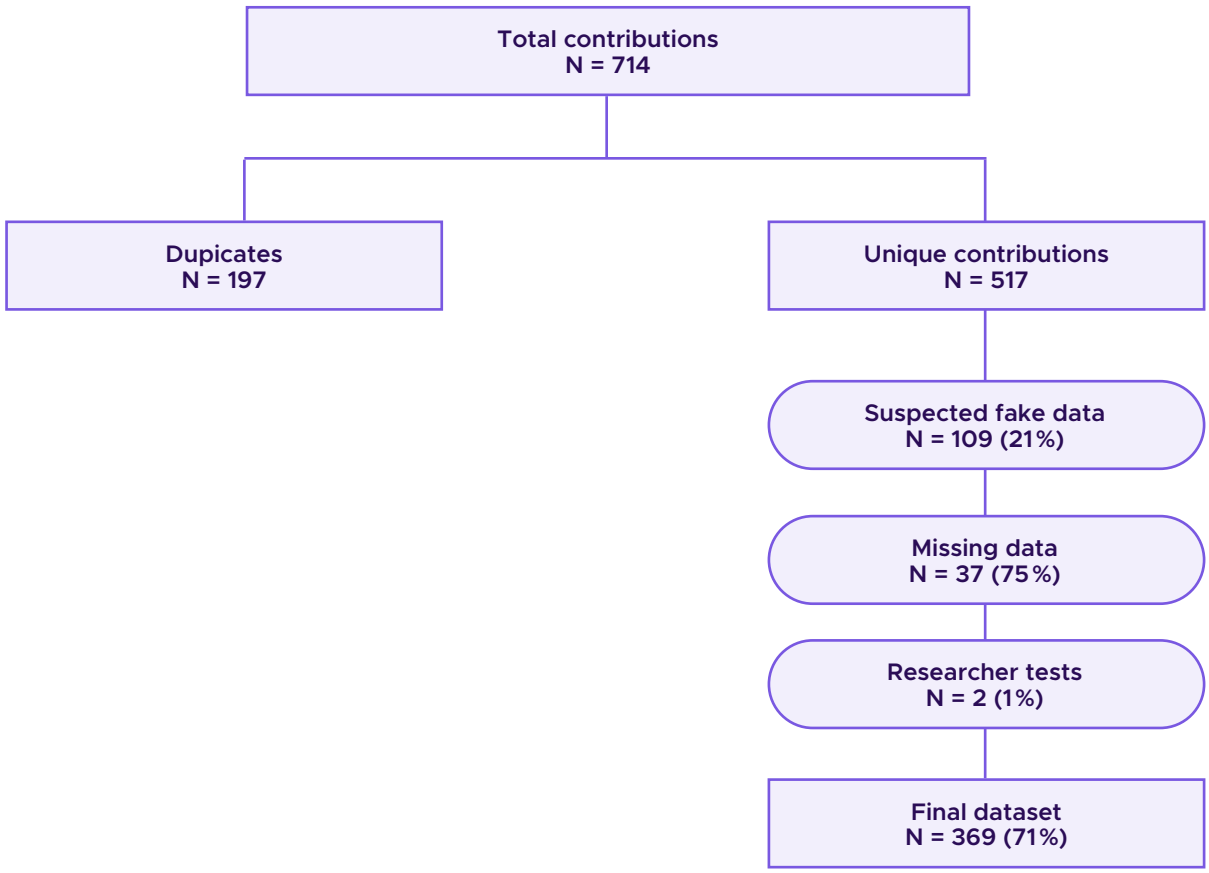
Missing data

If a contribution was missing most measures or missing all or most sociodemographic information (e.g., gender, age, racioethnic groups, sexual orientation), these cases were deemed as missing too much data to be included in the analyses. A total of 37 cases were excluded (7%).

Final dataset

The original dataset included 714 contributions of police stops. Of these, 28% were duplicates and were excluded. Of the remaining 516 contributions, 21% were suspected fake data and 7% were treated as missing data. Therefore, a total of 71% of contributions were retained for subsequent analyses (N = 369).

Figure 1. Total contributions and final dataset



Preliminary results

Spatial distribution

Borough

There are a total of 32 boroughs in the greater Montreal area (see Figure 2). The boroughs where most stops were reported were: Côte-des-Neiges-Notre-Dame-De-Grâce (13%), Ville-Marie (12%), the Sud-Ouest (8%), Le Plateau Mont-Royal (8%), Montréal-Nord (7%), Villeray-Saint-Michel-Parc-Extension (7%) and Rosemont-La-Petite-Patrie (5%). Together, stops reported in these 7 boroughs represent 60% of all reported stops. Stops were reported in 25 other boroughs, with each representing 1-4% of the total stops, for a total of 40%. Borough data is missing for N = 33 police stop experiences that were reported as occurring outside of the city of Montreal.

While there is no comparable data available by borough for SPVM recorded police stops, the total number of stops recorded by police station (N = 33) between 2014-2017 is available. These data were used to calculate the percentage of stops conducted within police station boundaries (see Figure 3 and Table 2). Comparing our borough-level data in terms of rough correspondences to police station data, we can see that the areas with the most stops are comparable. For instance, the two boroughs with the most stops are the same in *Prefer not to answer/NA* data and police-recorded data: downtown (Ville-Marie/Centre-Ville) (*stopmtl.ca:* 12%, SPVM: 31%) and Côte-des-Neiges-Notre-Dame-de-Grâce (*stopmtl.ca:* 13%, SPVM: 8%). The other boroughs with the most stops in *stopmtl.ca* data are comparable to the police stations with the most stops in police-recorded data: Plateau Mont-Royal, Montréal-Nord, Sud-Ouest.

Figure 2. Map of boroughs in the city of Montreal

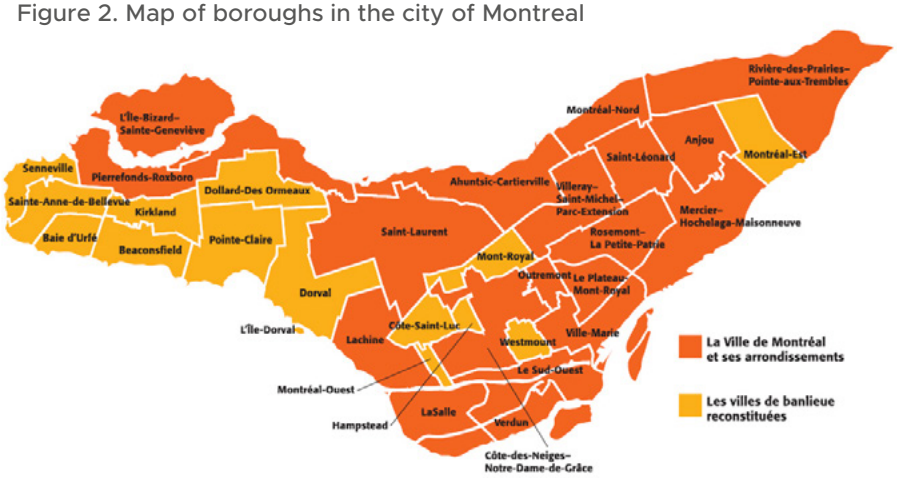


Figure 3. Map of police station boundaries in the city of Montreal

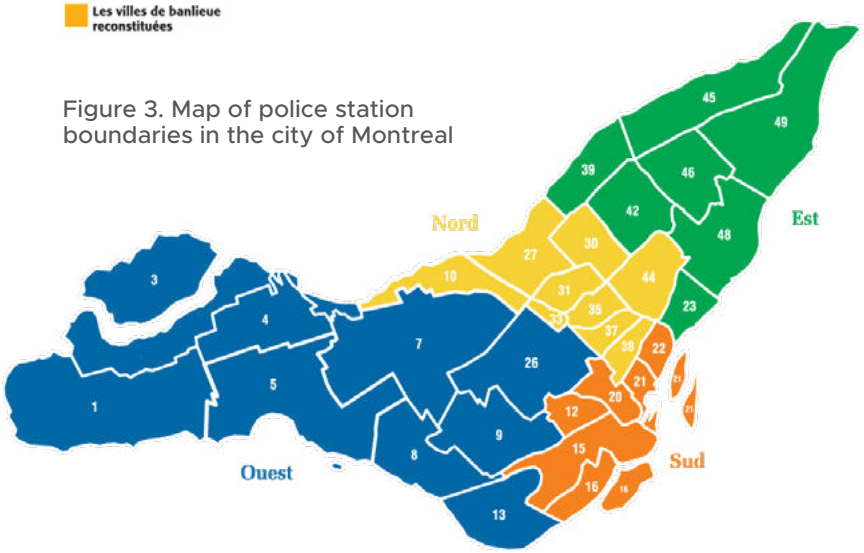


Table 1. Contributions by borough (N = 336)

	STOPMTL.ca	
Boroughs	**N**	**%**
Ahuntsic-Cartierville	12	4
Anjou	1	1
Baie-d'Urfé	3	1
Beaconsfield	3	1
Côte-des-Neiges–Notre-Dame-de-Grâce	42	13
Côte-Saint-Luc	5	1
Dorval	3	1
Dollard-des-Ormeaux	2	1
Hampstead	2	1
Lachine	6	2
LaSalle	12	4
Kirkland	4	1
L'Île-Dorval	1	1
L'Île-Bizard-Sainte-Genevieve	1	1
Plateau–Mont-Royal	26	8
Sud-Ouest	26	8
Mercier–Hochelaga-Maisonneuve	11	3
Montréal-Nord	23	7
Mont-Royal	4	1
Outremont	8	2
Pierrefonds–Roxboro	6	2
Pointe-Claire	7	2
Rivière-des-Prairies–Pointe-aux-Trembles	7	2
Rosemont–La Petite-Patrie	18	5
Sainte-Anne-de-Bellevue	4	1
Saint-Léonard	2	1
Saint-Laurent	12	4
Senneville	9	3
Verdun	9	3
Ville-Marie	39	12
Villeray–Saint-Michel–Parc-Extension	22	7
Westmount	6	2

Table 2. Police stops by police station (2014-2017)

Police station number	Police station name	%
1	Baie-d'Urfé, Beaconsfield, Kirkland, Sainte-Anne-de-Bellevue, Senneville	0.24
3	L'Île-Bizard, Pierrefonds, Sainte-Geneviève, Roxboro	0.98
4	Dollard-des-Ormeaux	0.56
5	Dorval, L'Île-Dorval, Pointe-Claire	1.06
7	Saint-Laurent	3.53
8	Lachine, Saint-Pierre	0.97
9	Côte Saint-Luc, Hampstead, Montréal-Ouest	0.59
10	Bordeaux-Cartierville	1.29
11	Notre-Dame-de-Grâce	4.37
12	Ville-Marie Ouest, Wesmount	1.62
13	LaSalle	2.09
15	Saint-Paul, Petite Bourgogne, Pointe-Saint-Charles, Saint-Henri, Ville-Émard	3.28
16	Île-des-Soeurs, Verdun	0.91
20	Centre-Ville (Ville-Marie Ouest), Parc Mont-Royal	12.29
21	Centre-Ville (Ville-Marie Est), Île-Notre-Dame, Île-Saint-Hélène, Vieux-Montréal	18.38
22	Centre Sud	2.05
23	Hochelaga-Maisonneuve	2.83
26	Côte-des-Neiges, Mont-Royal, Outremont	4.02
27	Ahunstic	3.01
30	Saint-Michel	2.48
31	Villeray	1.58
33	Parc-Extension	1.19
35	Petite-Italie, Petite-Patrie, Outremont	1.89
38	Plateau Mont-Royal	7.35
39	Montréal-Nord	4.43
42	Saint-Léonard	3.77
44	Rosemont. Petite-Patrie	2.09
45	Rivière-des-Prairies	1.55
46	Anjou	0.93
48	Arrondissement de Mercier–Hochelaga-Maisonneuve	2.17
49	Montréal-Est, Pointe-aux-Trembles	1.47
50	Métro de Montréal	4.89
55	Aéroport International Pierre-Elliott-Trudeau	0.10

Note. Data was obtained from Table 8.2 in the Armony report. Total number of stops by police station were divided by the total number of stops recorded as occurring between 2014-2017 (N = 119,439)

Sociodemographic distribution

Age

Stops were reported as occurring most frequently among those aged 19-24 years (27%), followed by those aged 30-34 years (16%) and 25-29 years (15%).

With regards to age groups, there was a comparable distribution in self-reported stops and police-recorded stops. Namely, in both datasets roughly one third of the sample are aged 15-24 (police-recorded: 32% vs. *stopmtl.ca:* 35%), aged 25-34 (police-recorded: 34% vs. *stopmtl.ca:* 32%), and aged over 35 (police-recorded: 33% vs. *stopmtl.ca:* 32%)..

Table 3. Contributions by age group

		STOPMTL.ca		SPVM (2014-2017)
Age		**Frequency**	**%**	**%**
15-24	15-18	31	35	32
	19-24	101		
25-34	25-29	55	31	34
	30-34	59		
35-44	35-39	25	14	18
	40-44	27		
45 or more	45-49	20	18	15
	50 or more	42		
Prefer not to answer/NA		9	2	
Total		**369**		

Note. The SPVM tabulated stops including those aged 0 to 14 years (1.6%), however *stopmtl.ca* did not collect data for those under the age of 15.

Gender

In terms of gender identity, police stops were reported as being more frequent among men (74%) than among women (17%). This observed trend is similar to that observed in SPVM data (men: 86.1%, women: 13%), although the *stopmtl.ca* data suggests a greater representation of non-binary individuals (5%) than the SPVM data (0.4%).

Table 4. Contributions by gender

	STOPMTL.ca		SPVM (2014-2017)
Gender	**Frequency**	**%**	**%**
Man	274	74	86.1
Woman	61	17	13.4
These categories does not define me	19	5	0.4
NA	10	4	
Total	**354**		

Racioethnic group

Approximately 55% of those who reported stops identified as being White, while 17% identified as being Black, 4% as being Arab, 4% as being Latino, 4% as being

South Asian, 2% as East Asian, 1% as being Indigenous, 1% as being Filipino, 7% as being Mixed, and a total of 3% as being Other or preferring not to answer.

Table 5. Contributions by racioethnic group

	STOPMTL.ca		SPVM (2014-2017)	Population (2016)
Racioethnic group	**Frequency**	**%**	**%**	**%**
White	204	55	44.8	67.1
Black	64	17	27	9.5
Arab	16	4	9.3	6.9
South Asian	16	4	5	8
Latin American	14	4	3.7	3.8
East Asian	8	2	1.7	3.8
Indigenous	3	1	2.1	0.7
West Asian	2	1		
Southeast Asian	1	1		
Filipino	2	1		
Prefer not to answer	4	1		
Mixed	27	7		
Autre	8	2	6.4	1
Total	**369**			

Note. SPVM percentages are based on graphic 1.13 in the Armony report, which represents proportions in relation to the total number of stops (vs. total individuals stopped). Total number of stops are most closely aligned to the *stopmtl.ca* data which allows individuals to contribute multiple stops.

The racioethnic composition of the *stopmtl.ca* sample shows some similarities to the racioethnic composition of those stopped according to police-recorded data. First, the racioethnic group most likely to report being stopped were those identifying as being White (*stopmtl.ca:* 55%). Similarly, those who were identified as White by a police officer are also the most stopped group according to police-recorded data (SPVM: 44.8%). The second racioethnic group most likely to report being stopped were Black individuals (*stopmtl.ca:* 17%), who were also the second largest socioethnic group represented in the police-recorded stop data (SPVM: 27%).

Reported police stop experiences on *stopmtl.ca* suggest that there is an underrepresentation of White individuals and an overrepresentation of Black individuals among those reporting stops in the city of Montreal. In 2016, a total of 67.1% of individuals living in Montreal identified as White. In comparison, only 55% of those who reported police stops identified as being White. Similarly, according to police-recorded data, only 44.8% of those stopped by police were identified as White. In 2016, a total of 9.5% of individuals living in Montreal identified as Black. In comparison, 17% of those who reported police stops identified as being Black. Similarly, according to police-recorded data, 27% of those stopped by police were identified as Black.

Despite these similarities in terms of the underrepresentation of White individuals and overrepresentation of Black individuals in *stopmtl.ca* data and police-recorded data, *stopmtl.ca* may have been less successful in reaching the Indigenous and Arab populations which also tend to be disproportionately stopped according to police-recorded data. These groups were not overrepresented in the *stopmtl.ca* data.

Sexual orientation

A total of 70% of individuals identified as heterosexual, 7% as gay, 5% as bisexual, 0,8% as lesbian, 5% stated that these categories did not define them and 8% preferred not to answer. There is no police-recorded data on the sexual orientation of those who are stopped.

Table 6. Contributions by sexual orientation

	STOPMTL.ca	
Sexual orientation	Frequency	%
Heterosexual	259	70
Gay	27	7
These categories do not define me	19	5
Bisexual	18	5
Lesbian	3	1
Prefer not to answer	28	8
Total	**354**	

Stop characteristics

Year and month

Most stops were reported for 2021 (49.2%), the year the project was launched, followed by stops that occurred in the last two years (2019-2020) (25.7%). Though some early police stops were reported, over 89% of reports were for stops that occurred within the 5 years prior to the project launch year. Police stops were reported as occurring most frequently in the summer months (May-August) (64.8%), with a peak in July (32.8%).

Table 7. Contributions by year

	STOPMTL.ca	
Year	**Frequency**	**%**
2000	2	0.5
2001	1	0.3
2004	1	0.3
2005	1	0.3
2006	2	0.5
2007	4	1.1
2008	4	1.1
2009	2	0.5
2010	2	0.5
2011	5	1.4
2012	4	1.1
2013	4	1.1
2014	2	0.5
2015	4	1.1
2016	16	4.3
2017	10	2.7
2018	31	8.4
2019	47	12.7
2020	48	13
2021	178	48.2
NA	1	0.3
Total	**368**	

Table 8. Contributions by month

	STOPMTL.ca	
Month	**Frequency**	**%**
Janvier	10	3
Février	13	3
Mars	17	5
Avril	35	10
Mai	39	11
Juin	56	15
Juillet	121	33
Août	23	6
Septembre	19	5
Octobre	19	5
Novembre	6	2
Décembre	6	2
Total	**364**	

Moment of the day

Most commonly, stops were reported as occurring during the evening or night (39%). Smaller proportions were reported as occurring in the afternoon (33%) or in the morning (26%).

Table 9. Contributions by moment of the day

	STOPMTL.ca	
Moment of the day	**Frequency**	**%**
Morning	95	26
Afternoon	121	33
Evening night	145	39
Prefer not to answer/NA	8	2
Total	**364**	

Activity during stop

The most frequent activity reported during the stop was being in a vehicle (42%), followed by walking (23%), being in a park or in front of a house or business (14%), using an active form of transportation (i.e., bicycle, skateboard, scooter) (12%) and using public transportation (2%). A total of 7% preferred not to answer or omitted an answer.

Table 10. Contributions by activity during the stop

	STOPMTL.ca	
Activity during the stop	**Frequency**	**%**
In a vehicle	157	42
Walking	84	23
Not on the move (in a park, in front of a business or house)	51	14
On a bicycle, scooter or skateboard	43	12
In public transportation	8	2
Prefer not to answer/NA	7	7
Total	**350**	

Perceived reason of the stop

Respondents could identify more than one reason for which they believed they were stopped. Indeed, on average respondents identified 1.22 reasons. The most frequent perceived reason for a police stop was what the person was doing (39%), followed by their appearance or who they are (30%), there being an active police investigation (22%) and lastly where they were (16%). The catchall reason “Other” was identified in 12% of stops, and 3% of stops included “Prefer not to answer”.

Table 11. Contributions by perceived reason for the stop

	STOPMTL.ca	
Reason	**Frequency**	**%**
What I was doing	145	39
My appearance	112	30
Active police investigation	80	22
Where I was	58	16
Other	43	12
Prefer not to answer	11	3
Total	**449**	

Note. Percentages are calculated in relation to the total number of stops (N = 369) and should be interpreted as the proportion of stops that identified each reason.

Perceived justification

Approximately 41% reported that they perceived their stop as being justified, with an almost identical proportion reporting that they perceived their stop as being not justified (43%). A total of 14% were uncertain, and 2% preferred not to answer or omitted an answer.

Table 12. Contributions by perceived justification of the stop

	STOPMTL.ca	
Justification	**Frequency**	**%**
This stop was not justified	159	43
This stop was justified	153	41
Don’t know/uncertain	50	14
Prefer not to answer/NA	3	2
Total	**365**	

Sanction

Due to a programming error that led to not recording responses for the sanction measure, sanction data is only available for 35% of the sample. Of the 129 reports for which we have data, 55% (N = 72) reported not receiving a sanction, and 42% (N = 54) reported receiving a sanction (e.g., fine, charge, arrest). A total of 3% preferred not to answer or did not provide a response.

Table 13. Contributions by sanction (N = 129)

	STOPMTL.ca	
Sanction	**Nb**	**%**
Did not receive a sanction	72	55
Received a sanction (e.g., fine, charge, arrest)	54	42
Prefer not to answer	3	3

Discussion of results

The *stopmtl.ca* project was launched in July 2021 to allow citizens in Montreal, Canada, to self-report their police stop experiences using a public participatory mapping methodology. The launch was accompanied by a multipronged mobilization strategy aiming to reach citizens who have experienced police stops as early as the year 2000, and focusing in particular on geographic and racioethnic communities that were known to be disproportionately affected by police stops. Following data integrity verifications, the final dataset includes 369 self-reported police stop experiences.

A descriptive analysis of the data suggests that most police stop experiences were reported by men (74%), individuals who identified as being White (55%), hetereosexual (70%) and being aged 19-24 years (27%). A Black racioethnic identity was the second most frequent racioethnic identity of those who reported being stopped (17%). The sociodemographic composition of the *stopmtl.ca* sample shows some commonalities with police-recorded data. Both sources of data suggest men are stopped disproportionately. While the 2016 Canadian Census suggests that men represented 49% of the population in Montreal, they represent 74.2% of those self-reporting being stopped and 86.1% of those police recorded as being stopped in between 2014-2017 (Armony et al., 2019). Moreover, both sources of data suggest certain racioethnic groups are stopped disproportionately. Those identifying as Black represented 9.5% of the population according to the 2016 Canadian Census, but represented 24.9% of those police recorded as being stopped and 17% of those who self-reported being stopped. In contrast, according to the 2016 Canadian Census, those identifying as White represented 67.1% of the population in Montreal but only 41.4% of those recorded as being stopped by police between 2014-2017, and 55% of those who self-reported being stopped. There are also parallels with police-recorded data in terms of age groups, with roughly one third of those stopped being aged 15-24 and one third being aged 25-34 in both *stopmtl.ca* and police-recorded data. Lastly, with regards to sexuality, the *stopmtl.ca* data suggests that nearly 1 in 5 reports involved an individual with a non-heterosexual identity: 18% reported being gay, lesbian, bisexual or not defined by these categories. These results are in line with other studies suggesting sexual minorities tend to be disproportionately affected by police stop practices (Mallory, 2015). Police frequently target LGBTQ+ persons for certain crimes, especially vice crimes (e.g., prostitution, lewd conduct, indecent exposure), and most especially transgender women who are frequently perceived to be sex workers by police (Braunstein, 2017).

In terms of the spatial distribution, the boroughs with most police stop experiences were Côte-des-Neiges (13%) and Ville-Marie (12%). Côte-des-Neiges is a borough that has been identified in police-recorded data as experiencing a large proportion of police stops in the city of Montreal. The borough mayor and city council members for Côte-des-Neiges officially supported the *stopmtl.ca* project and promoted the project in their respective social networks. These combined factors may have led to the successful mobilization of those who experienced police stops in the borough. Still, there were some discrepancies in terms of the proportions of stops by locality in both sources of data. Namely, while the SPVM reports nearly 31% of police stops occurring in the downtown area, the *stopmtl.ca* data suggests roughly 12% of police stop

experiences were reported in the same downtown area. The downtown area is a commercial and touristic hub with many visitors traveling in and out of the area. It is possible that police conduct and record more stops occurring in the downtown area (e.g., as a preventative strategy to address local issues such as shoplifting, robbery, drug trafficking, sex trafficking). Perhaps individuals with these types of police stop experiences are less inclined to report their stops. Alternatively, this may be a more difficult to reach population in terms of soliciting self-reports of police stop experiences (e.g., tourists who left the city and were not reached by mobilization efforts).

In terms of the temporal distribution of reported police stops, nearly half of all stops were reported as having occurred in 2021 (49.2%), and most frequently in the summer months (May-August) (64.8%) peaking in July (32.8%). This trend may reflect the launch of the website in August 2021, potentially appealing most to those who were stopped very recently in July 2021. It is also possible that there are more individuals in public spaces in the summer months, therefore contributing to more police stops. There is no comparable available data in terms of monthly trends for police-recorded data.

The most frequent activity individuals reported doing during their stop was being in a vehicle (as a driver or passenger) (42%), followed by walking (23%), not on the move (14%) and using a non-motorized wheeled transport (e.g., bicycle, scooter, skateboard) (12%). It is not possible to compare the most frequent activities during stops recorded by the police because their reports only include where the stop occurred (e.g., on a street) and not whether the person who was stopped was walking or inside a vehicle (Armony, et al., 2019). However, by using a list of keywords developed in partnership with the police, researchers analyzing police-recorded data concluded that police stops involving Indigenous people were less likely to be road stops, while those involving other racialized people (Black, Arab and Latino individuals) were more likely to be subjected to road stops than White individuals (Armony, et al., 2019). It is therefore likely that many police stops occur while individuals are in a vehicle, as suggested by *stopmtl.ca* data.

The *stopmtl.ca* data also provides unique insights into citizens' perceptions of their police stop experiences. Respondents could identify multiple reasons for which they believed they were stopped, the most frequent being what the person was doing (39%) followed by their appearance (30%). The survey did not provide an opportunity to specify which aspect of their appearance was thought to be most important (e.g., racial markers, physical appearance, clothing). Nevertheless, the results suggest that for 1 in 3 police stop experiences, individuals believe their appearance was one of the reasons motivating the police stop. This finding sheds some light onto the issue of perceived discriminatory police stop practices in the city.

However, perhaps most surprisingly, almost equal proportions of individuals believed their stop was justified (41%) and believed their stop was not justified (43%). During the mobilization campaign, it was emphasized that the project sought to measure all police stop experiences and not just negative police stop experiences. It therefore appears that the project was successful in obtaining a variety of police stop experiences in terms of perceived justification. These findings are particularly surprising given that there was widespread discussion and concern about the possibility that the project would shed a particularly negative light on the police service in the city of Montreal. In contrast, it appears as though a significant proportion of individuals who reported a police stop experience believed that their stop was justified. Subsequent analyses of the data will allow for the assessment of factors contributing to perceiving a stop as being justified or unjustified.

Limitations

While data collected by *stopmtl.ca* provide some important insights into citizens' police stop experiences, the study is limited in several important ways. First, the study has a relatively small sample size. The project generated a total of 516 unique police stop experience reports, which pales in comparison to the 45,607 stops recorded by police in Montreal in 2017. Nevertheless, the quality of the data suggests representativeness and a richness that is not available in police-recorded data.

A second equally important limitation is that a significant proportion of individuals reported a police interaction that led to a sanction. A police stop is defined

as an interaction with police that led to an individuals' identification but that did not result in a sanction. It is possible that individuals who received a sanction understood what a sanction meant (i.e., fine, charge or arrest) and what a police stop meant (i.e., a police interaction not leading to a fine, charge or arrest), but that they chose to report their experience anyway. These contributions could therefore account for some discrepancies between *stopmtl.ca* and police-recorded data. Future analyses will allow us to compare the profiles of those who reported being stopped and those who reported being sanctioned.

In meeting with community members, community organizations and in discussions with members of the media, it became clear that there is a strong misconception about what constitutes a "police stop". There is a belief that a "police stop" is when an individual receives a perceived unjustified sanction (e.g., a fine). As 41% reported that they perceived their "police stop" as justified, the concern that the project would strictly appeal to individuals who were upset or dissatisfied with their interaction with a police officer seems unfounded. Moreover, it suggests that individuals with positive and negative evaluations of their encounters with police sought to contribute to a better understanding of the social and spatial distribution of police stops in the city.

An additional limitation is the discrepancy between the timeframe for police-recorded stops (2014-2017) and the period considered for these descriptive analyses (2000-2021). Still, the overwhelming majority of self-reported police stop experiences were reported as occurring between 2014-2021 (91%). Moreover, there is some indication of consistent trends in police-recorded stop practices such as consistency across time in terms of the spatial distribution of police stops (e.g., significantly more police stops are recorded by the South Division and consistently less police stops are recorded by the East and West divisions). Differences in policing strategies may help explain consistent trends in police-stop practices over time. In this respect, the effect of this time discrepancy is likely to be minimal.

Last, but certainly not least, it is impossible to ascertain the validity of self-reported police stop experiences. Despite the application of several criteria aimed at excluding suspected fake data, it is likely that fake data remains. The motivations for contributing fake data may be many. However, the suspected fake Senneville cases in the *stopmtl.ca* data represent a broader phenomenon which was apparent in discussions with the public, and in particular on social networks. The public perception was, in part, that the project aimed to discredit the police, and potentially to interfere with the police's capacity to carry out their work. Public discussions suggested that contributions would come strictly from dissatisfied individuals who wanted to tarnish the image of the police. The series of contributions from Senneville shed some light on this phenomenon: most of these contributions were reported as originating from marginalized or vulnerable groups (e.g., racialized groups, sexual minorities). Yet, these contributions tended to indicate that the police stop was seen as being "justified", perhaps in an attempt to tilt the scales. An alternative, but complementary, interpretation could be that Senneville cases represent the intersectionality of prejudice whereby police stop experiences are imagined as being reserved to those on the margins of society in terms of their racioethnic, gender and sexual identities.

Recommendations and next steps

The *stopmtl.ca* project was successful in generating public discussion about police stop experiences in the city of Montreal, Canada. It was also successful in generating a variety of self-reported police stop experiences.

The public participatory mapping methodology allowed members of the public to share and obtain information on the social and spatial distribution of police stop experiences. These preliminary descriptive results are therefore promising in that they demonstrate public interest in a participatory mapping approach. The results also establish the capacity to generate a variety of contributions related to police stop experiences in a large urban area.

Though the data generated by this public participatory mapping approach has yet to be validated, the data appears to be of good quality, as suggested by indicators of representativeness (i.e., commonalities in terms of the social and spatial distribution of self-reported police stop data and police-recorded police stop data) and the richness of the available data (e.g., perceived reason for the stop, perceived justification, self-identified sexual orientation). Still, these descriptive results suggest that a second wave of data collection is necessary. Future mobilization efforts in Montreal should focus on obtaining measures for the past year in order to avoid redundancy in contributions. However, for future project sites, researchers should consider data collection over a 5 year period preceding the launch of the project. Mobilization might be most effective at the beginning of fall, immediately after peak police stop experiences during the summer months and after summer holidays. Because a substantial proportion of stops were reported as occurring while individuals were in a vehicle, future mobilization efforts should also focus on mobilizing drivers in particular (e.g., radio ads, billboards). Moreover, analyses aiming to validate the data should also include indicators associated with road stops (e.g., traffic volume, road type).

A second report on the validity of the data is planned for 2023.

Appendix I

Budget

Expense	Cost (CAD)
Visual identity/ logo	$4,000
Creation of marketing materials (posters, social network digital images)	$3,100
Street postering campaign	$1,600
Website	$7,600
Total	$16,300