

March 2019

# Well-being Assessment: Pavement-to-Plaza Program



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# Well-being Assessment: Pavement-to-Plaza Program

## Executive Summary

Can public space improve well-being? Well-being assessments reveal that the City of Vancouver's Pavement-to-Plaza program is supporting local residents with gains in social interaction, inclusion, place attachment and more.

The Pavement-to-Plaza Well-being Assessment analyzed how three new plazas influence people's perceptions of sociability, safety, trust, inclusion and place attachment. The three plazas—14th-Main Plaza, Bute-Robson Plaza, and Jim Deva Plaza—were measured against three nearby control sites with typical street designs (these were, respectively, the west side of the Main and 10th intersection; the south side of the Bute and Cardero intersection; and the north side of the Bute and Thurlow intersection). In total, 703 people answered a short survey administered by City of Vancouver staff at the six sites.

### Social Interaction

The plazas are performing an important role in supporting social interaction among friends and strangers. When asked their level of agreement with the statement “This is the kind of place I would choose to meet friends,” nearly 90% of participants at the plazas agreed or strongly agreed with the statement, compared with 60% of participants at the control sites. Similar results emerged when participants were asked about their willingness to meet new people. Even in a digital age, high-quality public space matters.

### Community & Inclusion

The plazas serve as welcoming and inclusive spaces. Plaza respondents were 30% more likely to agree that “This place reflects my community.” This supports the conclusion that the plazas have a positive impact on residents' sense of community and belonging. The statement “I feel welcome in this place” received agreement from 93% of participants at the plazas, versus 81% at the control sites. Together these results suggest that welcomeness and inclusion are notable overall strengths of the plaza spaces.

### Sense of Safety

Visitors to the plazas were more likely to experience a sense of safety. Participants at the control sites were more than twice as likely to say they did not feel safe visiting the space alone. This difference was particularly notable among female-identifying participants: survey results showed that 5% of females at the control sites reported feeling unsafe compared to 1.5% of females at the plaza sites. Females were 25% more likely to agree with the statement “This place reflects my community” in plaza locations compared to control sites. Notably, none of the female participants surveyed responded that they felt “unwelcome” in the plaza sites.

### Strong Main Street Response

Of the spaces in this study, the 14th-Main Plaza is located in the neighbourhood with the fewest public spaces. This plaza had the strongest and most positive response to nearly every well-being measure studied. This is promising for Pavement-to-Plaza programs in Vancouver and beyond, indicating their potential to cost-effectively generate enthusiasm, well-being and a sense of community among residents.

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# Introduction

In recent years, cities have sought to improve our collective experience of public spaces by enhancing them. In places like Sugar Beach in Toronto, New York City's Times Square, and Superkillen Park in Copenhagen, this has meant everything from additional seating options and landscaping features (small hills, running water, native plants) to colourful flowers and public art. The City of Vancouver has taken this interest in the public realm a step further. Under the direction of its VIVA Vancouver team, and in partnership with community and business organizations, the City has been exploring ways to transform excess road space into gathering places through its Pavement-to-Plaza program.

The success of such interventions have generally been measured by factors such as access to public space, walking and cycling frequency, and crime statistics. But what impact do these interventions have on the way we feel, how we perceive others, and our connection with place?

Recent insights in social science and environmental psychology suggest that design can alter people's use of space, well-being in the moment and even perception of others. Happy City identified some Vancouver-specific connections between public space design and well-being through the Happy Streets Living Lab, carried out in Vancouver in 2016. The Pavement-to-Plaza Well-being Assessment builds on this work by focusing on how three new plazas developed through the VIVA Vancouver program influence visitors' feelings of sociability, safety, trust, inclusion and place attachment.



Laneway Living Room Pop-up in Gastown, Vancouver, 2017

Three plazas and three control sites were selected as the basis for this evaluation: 14th-Main Plaza, with Main Street and 10th Avenue as the control site; Bute-Robson Plaza, with Bute Street and Cardero Street as the control site; and Jim Deva Plaza, with Thurlow Street and Bute Street as the control site.

Results suggest that transforming roads into plazas is an effective way to support social interaction. The plazas appear to be fulfilling an important role as community “living rooms,” offering comfortable spaces for visitors that boost social trust.

In terms of how the plazas affect place-attachment, the results are mixed. The plazas also appear to have minimal impact on self-reported happiness, suggesting that factors beyond the urban environment are having a greater influence on visitors’ happiness in the moment. There was also variation in the performance of the plazas relative to each other and their control sites, with 14th-Main Plaza performing very well across nearly all criteria measured. These fine-grained results are detailed below.



Jim Deva Plaza, 2018



Bute-Robson Plaza, 2018



14th-Main Plaza, 2018, Photo: Alison Boulier



Jim Deva Plaza, 2018, Photo: Alison Boulier

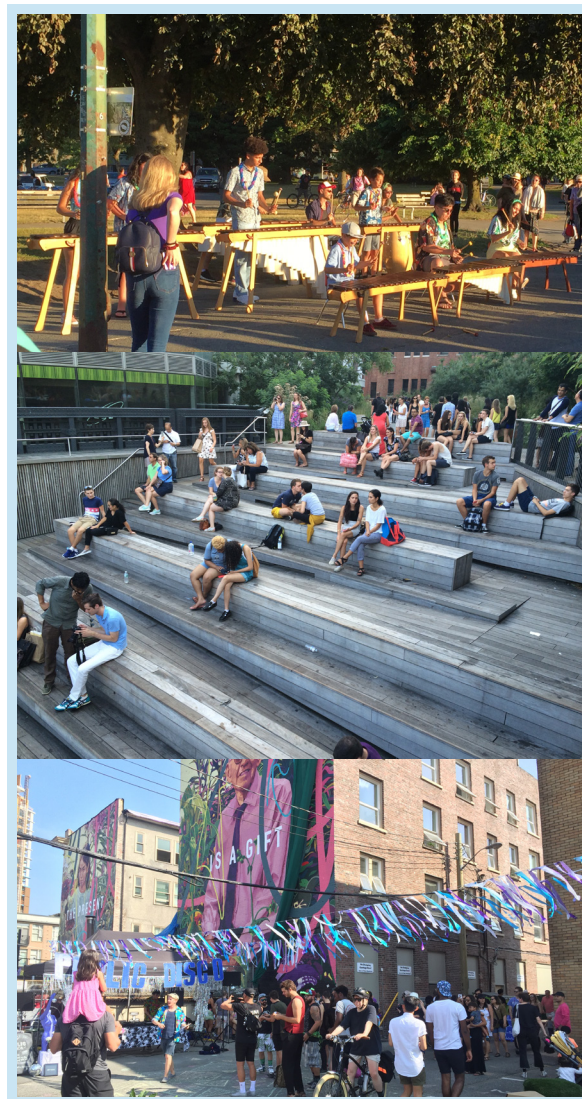
## What We Talk About When We Talk About Well-being

Well-being is typically viewed as a subjective measure for the condition of an individual or group. Used to broadly describe states of health and happiness, it can include formal and informal social, economic, psychological or medical measures. People who report feeling happy usually score well on these quantitative measures of well-being.<sup>1</sup> They tend to be healthier and have stronger and more supportive social bonds. Studies have shown that people who report high levels of happiness work well with others, are better able to respond to challenging times, and are more resilient to change.<sup>2</sup>

### Sociability

Beyond core needs, such as food and shelter, social connection is the most powerful indicator of human well-being. People with strong, positive relationships are happier, healthier and more productive. They tend to live longer and sleep better than people who are socially isolated.<sup>3</sup> However, the former US Surgeon General, Dr. Vivek H. Murthy, has stated that Americans are in the midst of a “loneliness epidemic.”<sup>4</sup> Advocates have warned of such a situation in Canada as well.<sup>5</sup> It is reflected locally in the Vancouver Foundation’s 2013 and 2017 Connect & Engage reports, where one in five Metro Vancouver residents reported being lonely and where more than one in three young, elderly or vulnerable Vancouverites reported being alone more often than they would like.<sup>6</sup>

High-quality public space can help address this. Superficial, trust-building encounters in public can raise people’s spirits as much as time with close friends.<sup>7</sup> These empathic encounters with strangers—a friendly conversation with someone walking their dog, a joke shared on the bus—are able to alter perceptions of strangers and improve people’s well-being.<sup>8</sup>



Kitsilano Beach, 2018; Highline, NYC, 2016; Muralfest, Mount Pleasant, 2018

<sup>1</sup>John F. Helliwell and Robert D. Putnam, *The Social Context of Well-Being*, (Philosophical Transactions: Biological Sciences, 2004).

<sup>2</sup>Michele M. Tugade and Barbara L. Fredrickson, *Resilient Individuals Use Positive Emotions to Bounce Back From Negative Emotional Experience*, (Journal of Personality and Social Psychology, 2004).

<sup>3</sup>Julianne Holt-Lunstad, Timothy B. Smith, Mark Baker, Tyler Harris and David Stephenson, *Loneliness and Social Isolation as Risk Factors for Mortality*:

<sup>4</sup>A Meta-Analytic Review, (Perspectives on Psychological Science, 2015).

<sup>5</sup>Shainna Ali, *What You Need to Know About the Loneliness Epidemic*, (Psychology Today, 2018).

<sup>6</sup>Victoria Carmichael, *Opinion: An ‘epidemic of loneliness’ threatens Canadians’ health*, (Montreal Gazette, May 16, 2018).

<sup>7</sup>Vancouver Foundation, *Connect & Engage 2017*, (Vancouver Foundation, 2017).

<sup>8</sup>Gillian M. Sandstrom and Elizabeth Dunn, *Social Interactions and Well-Being: The Surprising Power of Weak Ties*, (Personality and Social Psychology Bulletin, 2014).

## Safety + Trust

Urban design has been shown to influence visitors' sense of safety in a space and their trust in others.<sup>9</sup> This informs a sense of comfort, which in turn can affect well-being.<sup>10</sup> Safety and trust are also factors that influence our behaviour:<sup>11</sup> people are more likely to linger and socialize in public spaces when they feel comfortable.<sup>12</sup>

## Inclusion

Equity and social inclusion are key components of well-being.<sup>13</sup> Urban planners and designers can use design, management and programming to ensure that a diversity of people can engage with Vancouver's public realm and the city itself. Inclusive environments are places that work for everyone. They enable coexistence within a space and serve as a platform for social connection.<sup>14</sup> People who feel connected to their communities report higher trust in others and higher levels of happiness.

## Place Attachment

Place attachment is the emotional bond between person and place. People are more likely to regularly visit and care for a location to which they feel a strong sense of place attachment.<sup>15</sup> Psychologists have found strong correlations between happiness, social trust and a sense of belonging to a place or community.<sup>16</sup> Strengthening attachment to place can also result in a greater sense of connection to neighbouring businesses, which offers an economic incentive for enhancing urban spaces.



Vancouver Design Week, Robson Square, 2018

<sup>9</sup>Charles Montgomery, *Happy City: Transforming Our Lives Through Urban Design*, (Random House, 2013).

<sup>10</sup>Charles Montgomery, *Happy City: Transforming Our Lives Through Urban Design*, (Random House, 2013).

<sup>11</sup>Jane Jacobs, *The Death and Life of Great American Cities*, (New York: 1961).

<sup>12</sup>Jan Gehl, *Life Between Buildings*, (Copenhagen, 1971).

<sup>13</sup>Global Happiness Council, *Global Happiness Policy Report 2018*, (World Government Summit, 2018).

<sup>14</sup>Richard Sennett, *Building and Dwelling: Ethics for the City*, (London, 2018).

<sup>15</sup>B.P. George and B.P. George, Past Visits and the Intention to Revisit a Destination: Place Attachment as the Mediator and Novelty Seeking as the Moderator, (*Journal of Tourism Studies*, 2014).

<sup>16</sup>David W. McMillan and David M. Chavis, Sense of Community: A Definition and Theory (*Journal of Community Psychology*, 1986).

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# Methodology

To evaluate the success of the Pavement-to-Plaza projects, brief surveys were conducted at each plaza location and at the nearby control sites. Surveys were presented to participants electronically on digital tablets and were administered by City of Vancouver staff.

In order to compensate for the lack of pre-intervention data, a “control” site was selected as a research comparison for each of the plaza locations. Control sites were selected based on similarity to the plazas. Considerations included motor vehicle traffic volume, pedestrian and cyclist traffic, building facades, building height, sidewalks conditions and presence of greenery. Ensuring similar visitor demographics at the plaza and its respective control was vital as well. This was addressed by ensuring proximity to the plaza site, with no control site more than four blocks from its corresponding plaza.

It is important to note that Bute-Robson Plaza and its control site fall within different Business Improvement Area (BIA) jurisdictions. This factor risks diminishing the comparability of the two sites; however, after extensive review of potential control sites using the criteria outlined above, the Bute and Cardero intersection was determined to be the most suitable control site in proximity to the Bute-Robson Plaza.

Recognizing the possible effects of weather and time of day, surveys were conducted three times at each location—one weekday morning, one weekday afternoon, and one weekend day—between August 30th and September 22nd, 2018. The surveys were conducted simultaneously at the respective control and plaza pairings.

Survey administrators were trained in advance and provided with a scripted introduction. Survey questions were reviewed to ensure clarity; difficult

questions that administrators could face during the inquiries were also addressed. To ensure the safety and comfort of administrators, members of the VIVA Vancouver or Happy City teams were present or on call while surveys were being administered in public.

Because the study's participants were engaged randomly in a public setting, the team opted for a brief survey rather than a longer and more rigorous series of questions within a standard academic scale. Recognizing the limited amount of time that people are willing to spend answering questions during an intercept, the survey focused on VIVA Vancouver's key areas of interest: sociability, safety, trust, inclusion and place attachment.

Consisting of 12 substantive questions and five demographic questions, the survey was designed to provide the most useful information that could be obtained during an interaction that lasted three minutes or less. Questions included in the brief survey were rooted in standard instruments that have been used to measure place-based affect, social trust and attraction to public spaces.

In total, 703 anonymous responses were collected. Demographic data gathered includes gender, ethnicity, income, primary mode of transportation and more. Gender was the only demographic lens applied within the scope of this study; however, further demographic analysis could be carried out using data collected for this study. We encourage further analysis.

Site	# of Responses
14th-Main Plaza	124
10th & Main control site	123
Bute-Robson Plaza	76
Cardero & Robson control site	70
Jim Deva Plaza	196
Bute & Thurlow control site	114
<b>Total</b>	<b>703</b>

Gender	# of Responses
Female	316
Male	345
Transgender	4
Preferred not to say	8
“None of the above”	5
Blank	25
<b>Total</b>	<b>703</b>

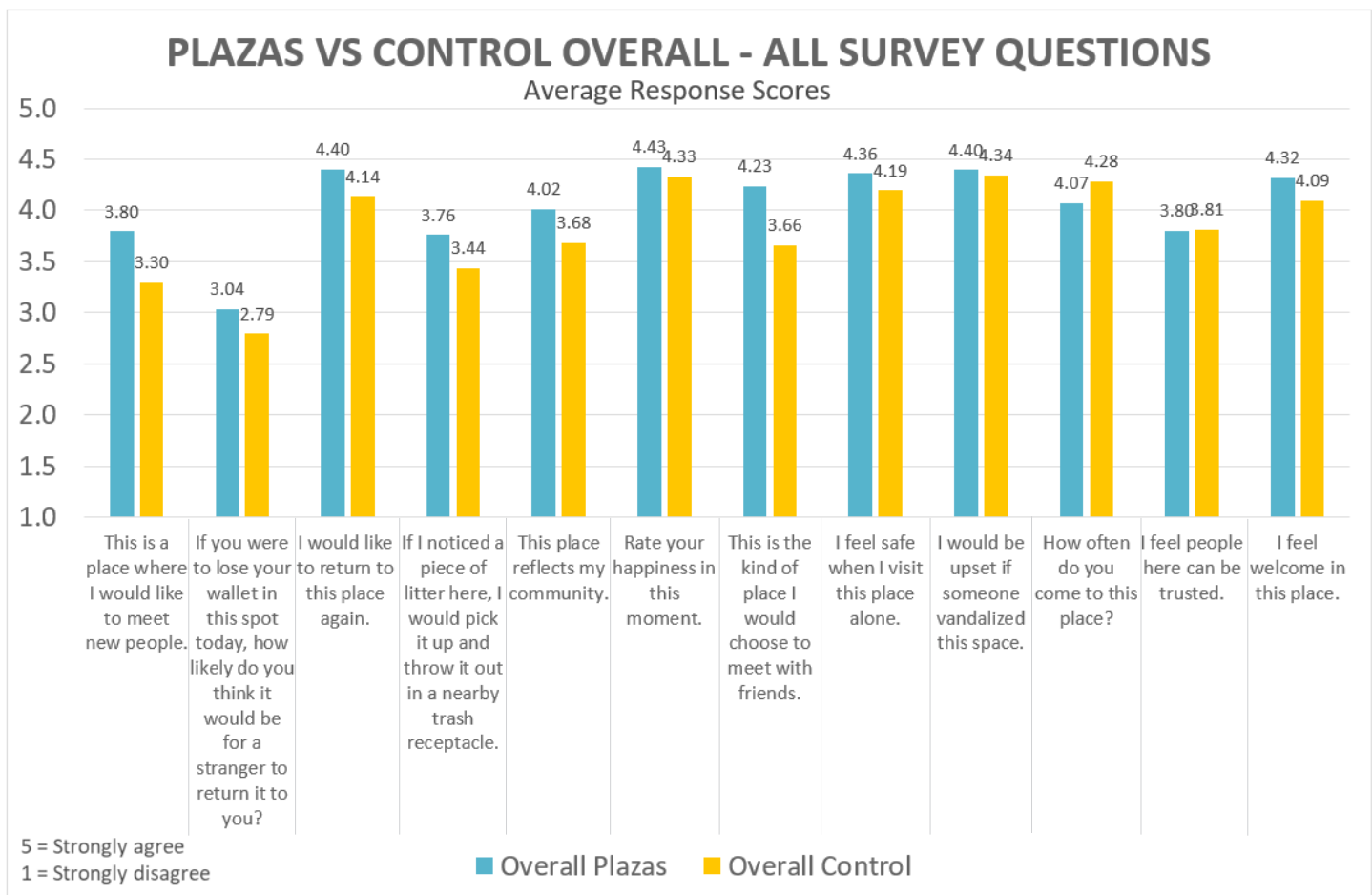


Jim Deva Plaza, 2018

# Overall Comparison of Plazas and Pavement

The Pavement-to-Plaza Well-being Assessment indicates that the plazas are working well as social spaces that support interaction: they are places where people are more likely to want to meet friends or make new ones. The plazas also appear to be functioning as community living rooms where people report feeling comfortable and welcome. This is illustrated by the consistently higher scores at the plazas (compared to the control sites) for perceptions of safety and feelings of being welcome, as well as whether respondents feel those places reflect their community.

Impacts on trust appear to be mixed: people in the plazas scored notably higher for likelihood of wallet return, but trust of others was a statistical tie. Place attachment also varied. The vandalism question yielded results that were a statistical tie, while respondents reported higher rates of willingness to return and throw out litter at the plazas.



## Sociability

The Pavement-to-Plaza program is supporting social connection. This study found that the transformation of roads into plazas is creating new platforms for social interaction. Plazas performed strongly when participants were asked about meeting friends. On a scale of 1 to 5, the average response among participants at the plazas was 0.6 points higher than at the control sites. Nearly 90% of participants at the plazas agreed or strongly agreed with the statement “This is the kind of place I would choose to meet friends,” compared with only 60% of participants at the control sites. In one of the more striking results, the study showed that participants at control sites were four times more likely to disagree with the statement above than those at the plaza sites.

The positive results regarding social interaction were not limited to meeting friends.

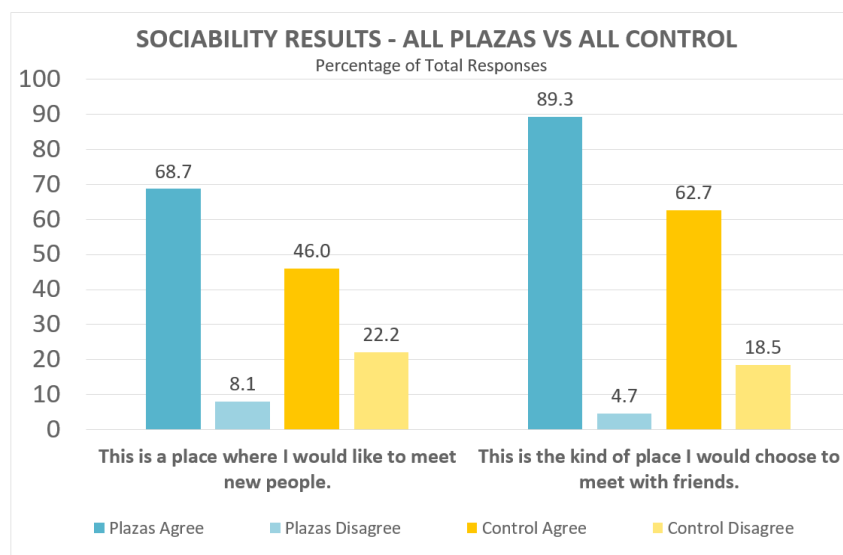
Respondents were substantially more likely (0.5 more on a scale of 1 to 5) to report that they would like to meet new people at the plazas than at the control sites. Further, compared to the control spaces, 33% more plaza participants agreed or strongly agreed with the statement “This is a place where I would like to meet new people.”

## Safety & Trust

This project assessed the effects that plazas had on participants’ sense of trust and safety compared to the control sites. Participants were asked to rank the likelihood of having a lost wallet returned to them by a stranger should they lose it at their current location. There was a strong difference between plaza and control respondents on this point, with plaza participants 25% more likely to believe someone would return their wallet if they lost it there.

Interestingly, when participants were asked directly about their trust in others, in both the plazas and control areas 68% of participants agreed with the statement “I feel people here can be trusted,” with an average rating of 3.8 out of 5.

Results indicate that plaza locations have a positive impact on feelings of safety when compared to the control sites. When asked if they felt safe visiting the space alone, participants were more than twice as likely to give a negative response at the control sites compared to plaza locations. It’s worth noting that the sense of safety was high among participants at all sites—indicating that the city, at least in these areas, is perceived overall as a safe place.



## Belonging & Inclusion

The impact of plazas on overall feelings of inclusion and belonging were studied through several survey questions. The results suggest that welcomeness and reflection of community are notable strengths of the plazas overall.

Plazas scored highly in response to the question “I feel welcome in this place,” with 93.3% of participants in agreement. More plaza participants stated that they would like to return to these locations again, compared to those at control sites, and plaza respondents were also 30% more likely to agree with the statement “This place reflects my community.”

## Place Attachment

In the Pavement-to-Plaza Well-being Assessment, the team surveyed participants’ care and attachment to the spaces by asking whether they felt strongly enough about the space to clean up any litter they may notice, and whether they would be upset if they noticed vandalism in the space.

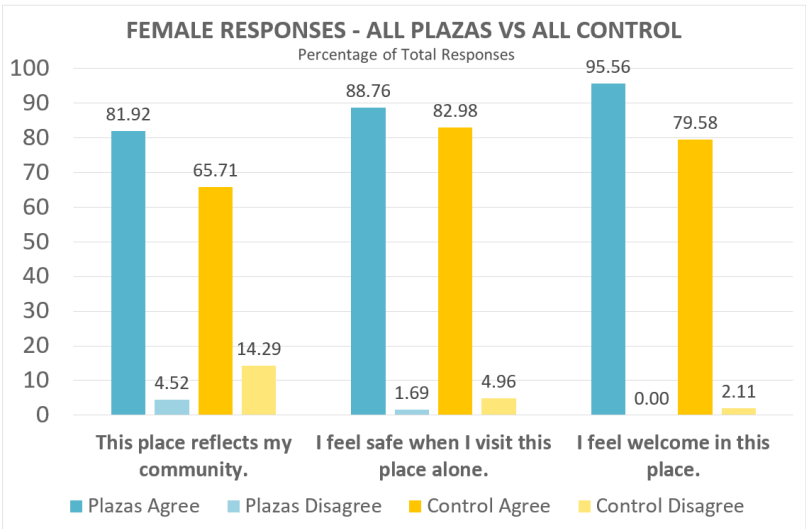
Plazas showed higher levels of attachment and care in both questions. In plazas, the average response to the question on litter was 3.8 out of 5, with 65.5% of participants agreeing that they would pick up the litter— compared to only 3.4 out of 5 and 52.9% agreeing in control locations. Differences between control and plaza sites were

not as notable for the question on vandalism, with participants reporting that they would be slightly more upset about vandalism in plazas (4.4 average) compared to control sites (4.3 average). If nothing else, this demonstrates the general feeling towards vandalism and willingness to pick up litter amongst people in the neighbourhoods surveyed.

## Gendered perspectives

Overall, plaza locations increased feelings of safety in both males and females compared to control sites. Survey results showed that 1.5% of females felt unsafe at the plaza sites, compared with 5% of females at the control sites. Comparatively, 1.5% of males also felt unsafe at the plaza sites, while 3.3% of males reported feeling unsafe at the control sites.

Assessments of feelings of inclusion also showed higher scores in both males and females in plazas compared to control locations. Females were 25% more likely to agree with the statement “This place reflects my community” in plaza locations compared to control sites; similarly, they were three times more likely to disagree with the statement when surveyed in control locations. Notably, none of the females surveyed responded that they felt “unwelcome” in the plaza sites.



## A Comparison of the Three Pairings

In averaging the scores for all questions, the 14th-Main Plaza scored highest for various well-being measures in relation to its control site. It also received the highest overall score among the three plazas. The gap between control and plaza was smallest at Jim Deva Plaza, where both sites scored quite well. The Bute-Robson Plaza and its control site scored lowest among plaza and control sites respectively. However, it is notable that Bute-Robson Plaza scored consistently higher than its control site, suggesting that the plaza is doing a good job of contributing to local well-being.

These results could be influenced by broader social and physical factors present within the City of Vancouver. The limited differences between Jim Deva Plaza and its control site may reflect the strong sense of place attachment, comfort and social connection that is evident along the southern part of the West End, as well as the proximity of the plaza and control

site. The relatively low scores and participation rates at Bute-Robson Plaza and its control site may reflect the presence of a number of other pocket parks and plazas in the area or relatively lowly share of permanently occupied dwellings in nearby Coal Harbour. High scores at the 14th-Main Plaza could be an indication of the unmet demand for public space in this area beyond the downtown peninsula.

The primary focus of this study was to assess how well each plaza performed in relation to its respective control site. As noted, the 14th-Main Plaza's success—in consistently outperforming the other five sites in responses on sociability, inclusion, safety and place attachment—was the most striking.



14th-Main Plaza, 2018, Photo: Alison Boulter

## A Note on Happiness, Trust and Visit Frequency

There was minimal variation in self-reported happiness at two of the three pairings. This suggests that other factors beyond environment design—and specifically, plaza implementation—may be having a greater direct influence on individual happiness.

This result may also reflect people's process of self-assessment. The other survey questions asked people how they felt specifically about the site; the happiness question, however, asked them about their personal happiness in the moment. This is a more general question, potentially implicating a far broader array of influences. While questions regarding the site elicited a focused response, their answers for the happiness question could well have been mediated by their experiences in public space before they reached the site, as well as other personal and emotional factors currently affecting their day or life.

Even though visitors at both the control and plaza sites reported feeling roughly the same level of trust in other people, they felt a strong difference in how strangers would actually behave in those places. Respondents at the plaza sites were much more confident that, should they lose their wallet at the site, someone would return it. In this case, the “wallet question” encourages participants to critically consider place in their response. Like the happiness question, the statement “I feel people here can be trusted” is open to more general influences and interpretation: rather than being specific to the location, “here” could be interpreted more broadly as the neighbourhood or even the city.

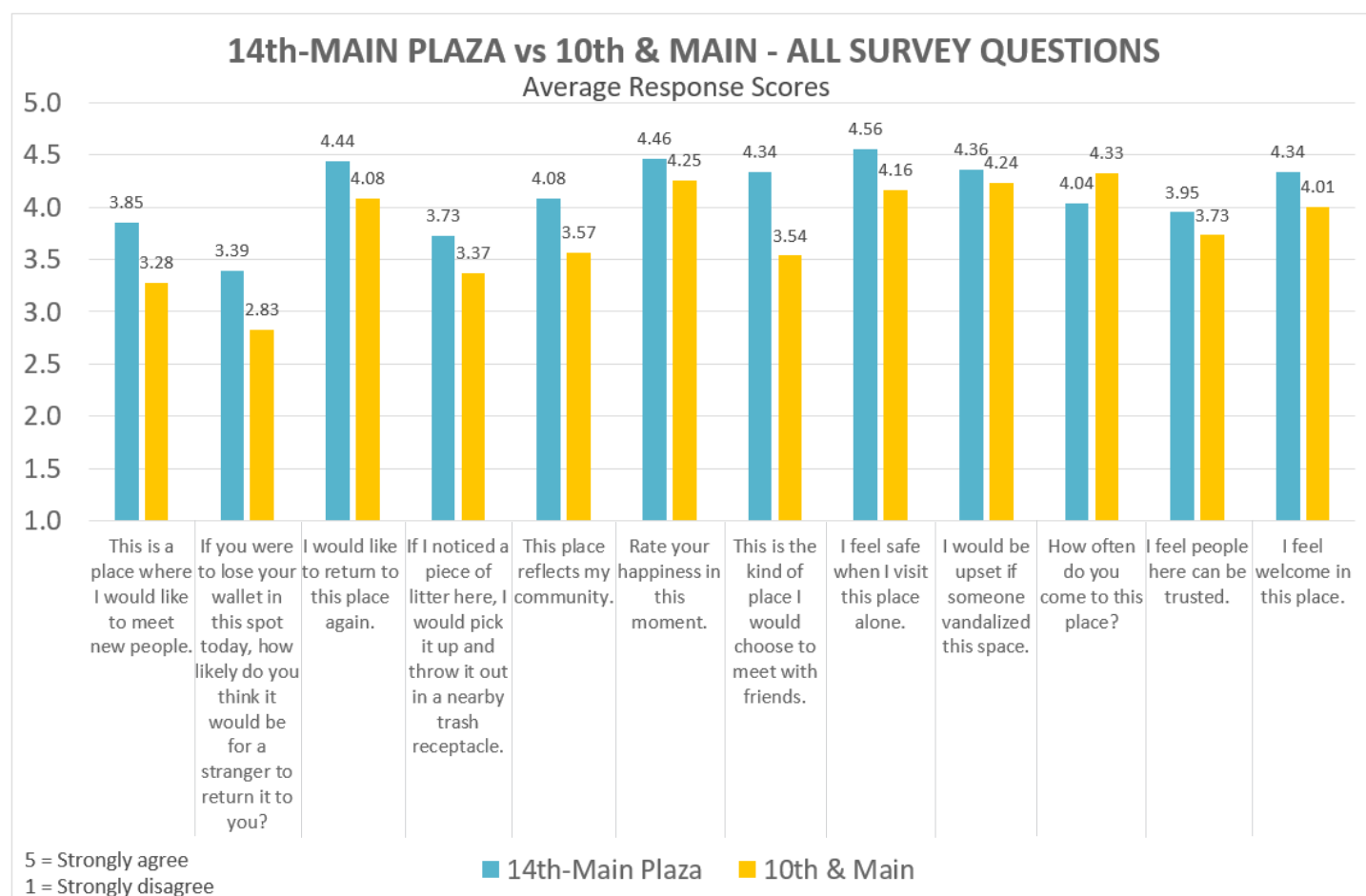
The control sites scored higher than the plazas at all three locations. This result could reflect daily travel patterns more than place attachment.



Public Disco at Alley Oop, Vancouver, 2018

# 14th-Main Plaza

The 14th-Main Plaza Well-being Assessment indicates that the plaza is supporting a variety of subjective well-being metrics. The plaza is supporting sociability among friends and strangers. It performed well in regards to trust and perceptions of safety. Study participants reported that it was a welcoming and inclusive place that reflected their communities. Study results also suggest that the plaza is supporting place attachment among visitors.



## Site Descriptions

Located on the east side of the Main Street and 14th Street intersection, 14th-Main Plaza sits next to the JJ Bean coffee shop's existing outdoor seating area, as well as a city sidewalk. This creates an extended cafe patio; coffee shop patrons often spill out onto the plaza with their purchases. The plaza area incorporates silver tables and chairs and a painted piano, and also includes a red and blue mural painted by Luke Ramsey and curated by Vancouver Mural Fest. A Mobi bike-share station is adjacent to the site.

The plaza takes up half the width of 14th Street, sharing the road with a bike lane. This intersection of Main Street is regulated by a traffic light, with two lanes each for northbound and southbound traffic. On the northeast side

of 14th, there is a yoga studio and a Starbucks Reserve coffee shop. The plaza's edges are lined with planters containing flowers, but aside from one tree on the corner, the area does not offer access to trees or shade.

The 10th Street and Main Street intersection was selected as the control site. Located four blocks north of the plaza location, the intersection has a traffic light on Main Street, and hosts a well-used bike route on 10th Street. At the four corners, there are various retail stores including a grocery store, a pizza restaurant and two clothing retailers (one of which was visibly out of business during the time surveys were conducted).



14th-Main Plaza, 2018



10th & Main, 2018



14th-Main Plaza, 2018



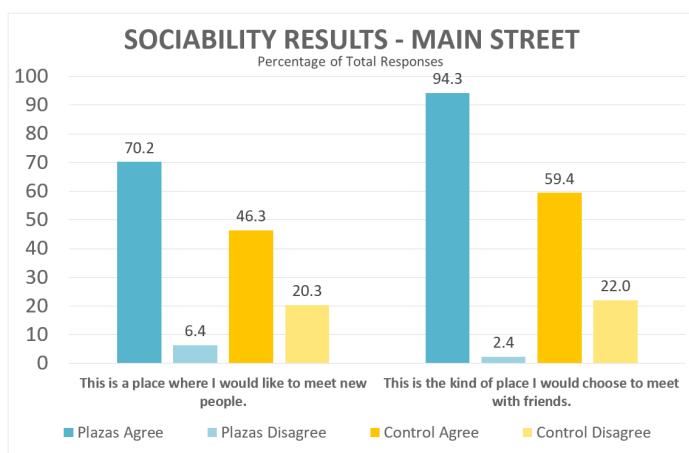
10th & Main, 2018

## Sociability

The Pavement-to-Plaza Well-being Assessment showed that people were substantially more likely to want to engage in social interactions at the plaza compared to the control site. At the plaza, 93% of respondents said that they would like to meet their friends there, while only 60% of participants felt the same way about the control location. Similarly, 90% of people agreed with the statement “This is a place where I would like to meet new people,” compared to only 45% at Main and 10th.

## Safety & Trust

When comparing participants’ sense of safety and trust in others, the 14th-Main Plaza also scored higher than the control location. Participants showed higher confidence that a lost wallet would be returned at the plaza, with 48% agreeing (compared to 29% at the control site). Conversely, twice as many participants reported that it would be unlikely to have a lost wallet returned to them at Main and 10th (40%) compared to 14th-Main Plaza (18%). None of the plaza participants disagreed with the statement “I feel safe when I visit this place alone,” suggesting that it instills a sense of safety among a diverse group of people.

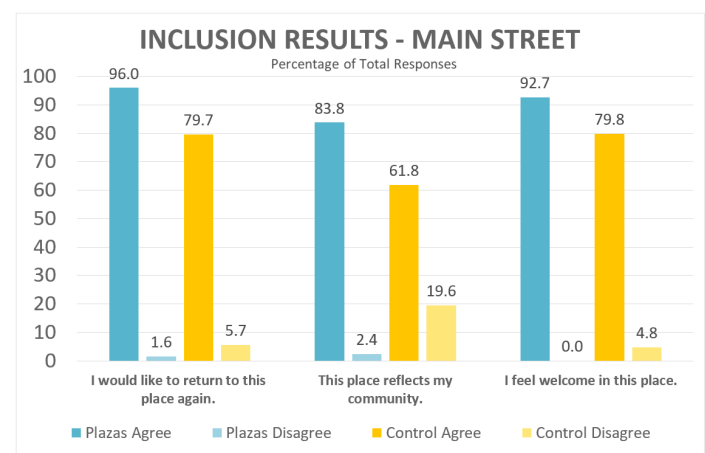


## Inclusion

The plaza’s effect on inclusion was also more positive than that of the control site. 96% of participants agreed that they would like to return to the plaza. Similarly, the plaza scored higher on reflection of community compared to the control. Participants were nearly 10 times more likely to disagree with the statement “This place reflects my community” at the control location compared to the plaza. Overall, survey results showed that people feel a high degree of welcomeness at the 14th-Main Plaza compared to the control site, with 92% of participants agreeing with the statement “I feel welcome in this place,” and no participants disagreeing.

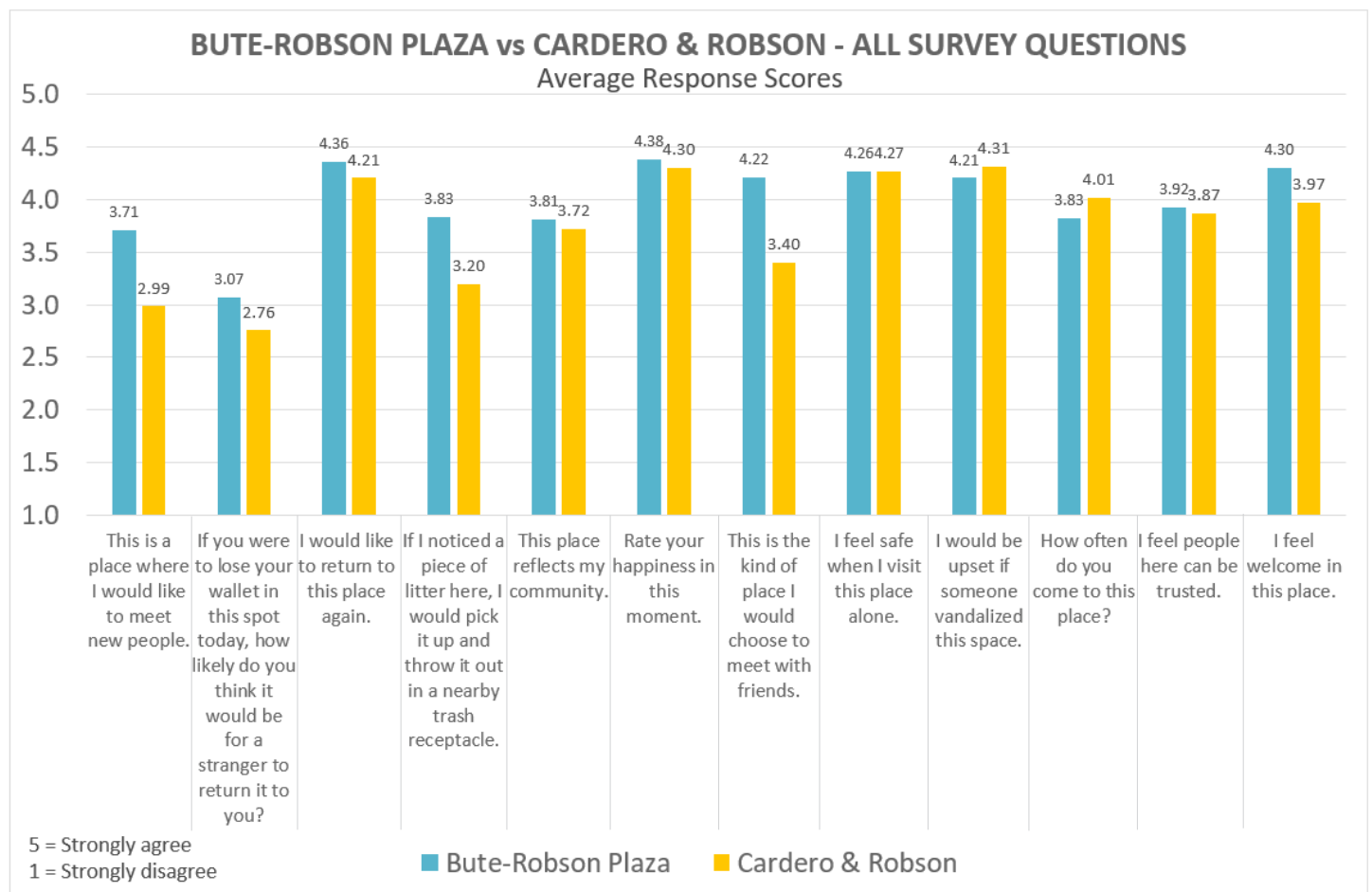
## Place Attachment

The Pavement-to-Plaza Well-being Assessment showed that people were substantially more likely to want to engage in social interactions at the plaza compared to the control site. At the plaza, 93% of respondents said that they would like to meet their friends there, while only 60% of participants felt the same way about the control location.



# Bute-Robson Plaza

The Bute-Robson Plaza Well-being Assessment indicates that the plaza is supporting some of the subjective well-being measures studied in this project. The plaza is serving as a social venue and is providing a basis for sociability among friends and strangers. It is perceived as a safe place and was associated with some positive trust measures. There was minimal difference in perceptions of inclusion at the plaza and control site; however, both sites performed relatively well in this area. Finally, according to some measures, people are feeling a higher degree of place attachment at the plaza.



## Site Descriptions

The Bute-Robson Plaza is situated on the south side of the Bute and Robson intersection. Spread across the full width of Bute Street, it offers bench seating and patio umbrellas on one side, and a painted piano, bike rack and a Mobi bike-share docking station on the other. Silver tables and chairs, as well as bright yellow planters, are placed on either side of the plaza. Tall trees line it on both sides. A considerable number of cyclists pass through the plaza, which is located along a bikeway, and bicycle stencils mark entry points to the plaza. Pedestrians can bypass it using sidewalks on both sides of Bute. A coffee shop and ice cream shop are on the southeast side of the plaza, facing a restaurant and luggage store on the other. There are traffic lights on all four sides of this intersection.



Bute-Robson Plaza, 2018, Photo: Alison Boulier



Bute-Robson Plaza, 2018

The south side of the Robson and Cardero intersection was selected for the control site. Four blocks west of Bute, this intersection offers an entrance to the Robson Public Market on one side of Cardero, and has a seafood restaurant patio on the other. Trees line sidewalks on both sides, creating a canopy that provides near-complete shade coverage. There is a traffic light on Robson street; vehicle traffic is permitted but minimal along Cardero.



Cardero & Robson, 2018



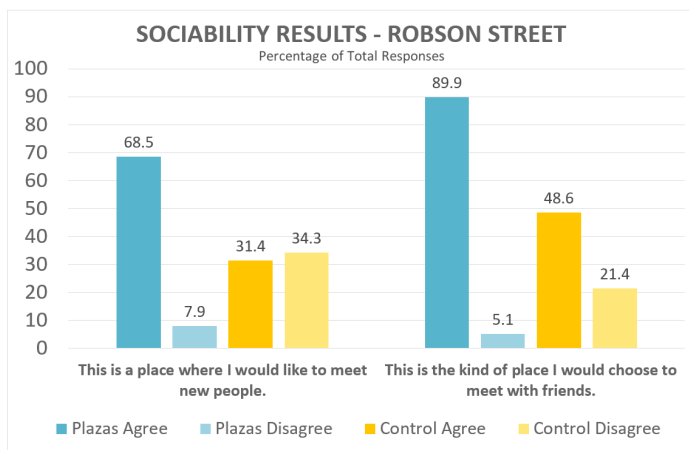
Cardero & Robson, 2018

## Sociability

Results showed that compared to the control location, people were substantially more likely to want to engage in social interactions at the plaza. Specifically, plaza participants were twice as likely to agree with the statement “This is a place where I would like to meet new people” relative to the control site. Similarly, people surveyed at the Bute-Robson Plaza were nearly twice as likely to agree with the statement “This is a place where I would choose to meet with friends”. Control participants were four times more likely to disagree with that statement.

## Safety & Trust

While results were less pronounced, the Bute-Robson Plaza showed higher levels of safety and trust in others. People at the plaza were twice as likely to think that they would have a lost wallet returned to them, with nearly 50% agreeing or strongly agreeing that it would be returned, compared to 27% at the control site. In addition, when asked if they felt people in their location could be trusted, participants at the plaza were 25% more likely to agree. Notably, no participants at either location reported that they felt unsafe, indicating a remarkably high degree of perceived safety in this area adjacent to Downtown

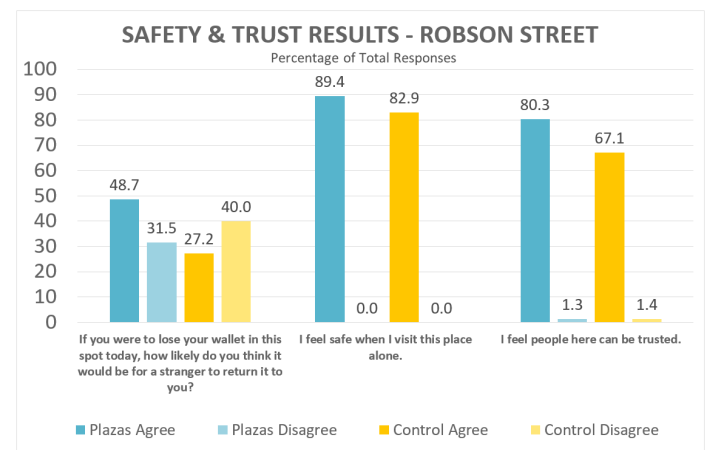


## Inclusion

Inquiries regarding feelings of inclusion did not result in significant differences between the Bute-Robson Plaza and the control site. However, participants did show a slightly stronger desire to return to the plaza compared to the control location, with 90% of participants agreeing that they would like to return to the plaza location. When asked if the space reflects their community, there was no significant difference between control and plaza responses: at the plaza, 70% of participants agreed, and at Cardero, 67% were in agreement.

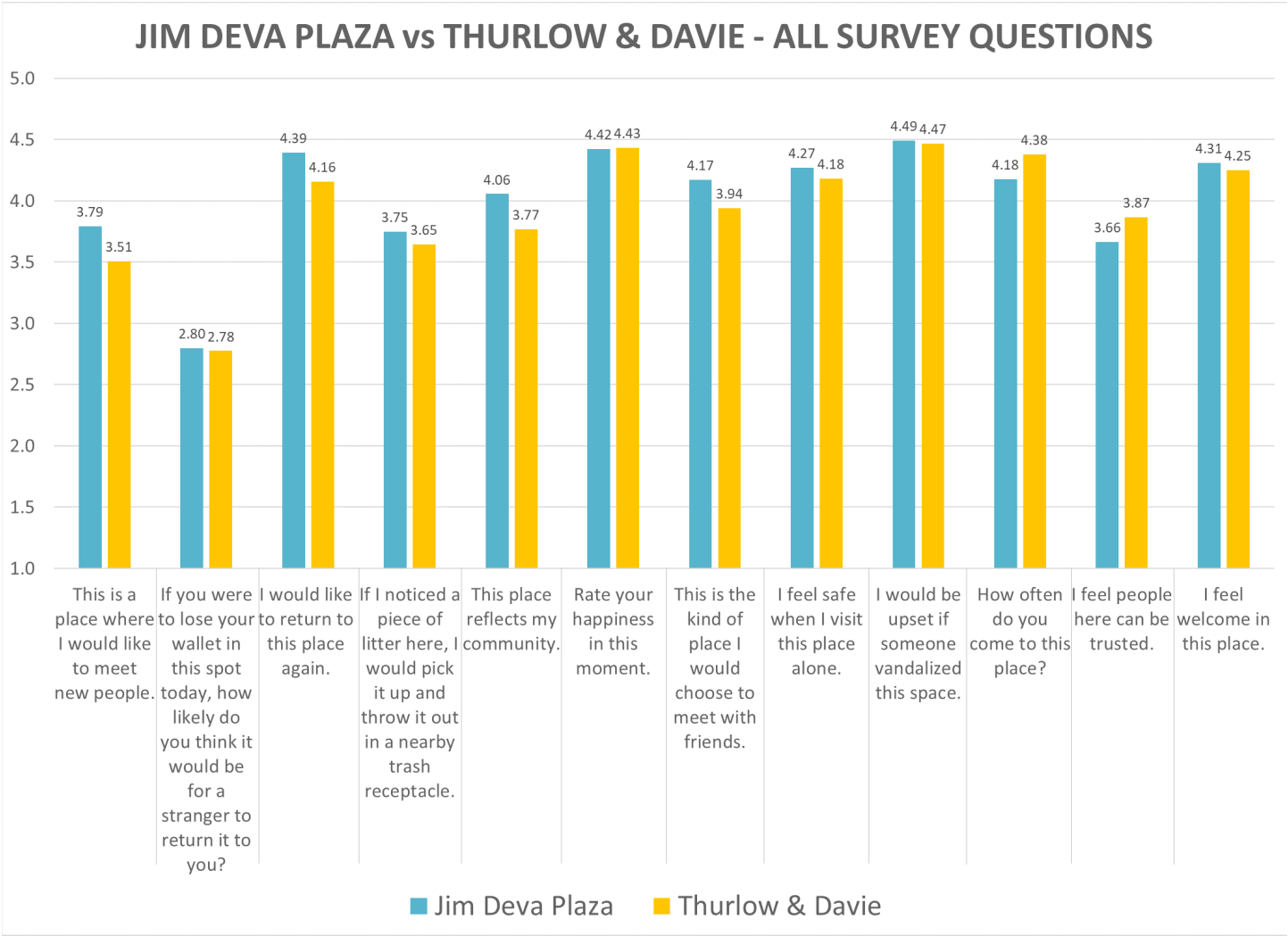
## Place Attachment

Analyzing the responses on place attachment at these two sites showed contrasting results. While participants were twice as likely to agree that they would pick up litter found at the plaza compared to the control site, there was no significant difference between the sites for the question on vandalism. Ninety percent of participants reported that they would be upset to see vandalism compared to 83% at the control site. This suggests that place attachment is strong in both locations.



# Jim Deva Plaza

The Jim Deva Plaza Well-being Assessment indicates that the plaza is supporting a variety of subjective well-being metrics, but that there is limited differences between the plaza and control site. The plaza is supporting sociability among friends and strangers, as is the control site. While results were generally positive, inquiries regarding safety and trust yielded minimal differences between the plaza and control site. Study participants reported that the plaza was a welcoming and inclusive place that reflected their communities. Study results also suggest that people feel a sense of attachment to the plaza, although there is room for improvement.



## Site Descriptions

The Jim Deva Plaza is located on the south side of the Davie and Bute intersection. It covers the full width of Bute Street. The plaza offers coloured chairs and tables, as well as benches and adirondack chairs for seating throughout. Trees line both sidewalks on either side of the plaza, providing significant shade coverage. The plaza also contains a large, pink and turquoise sculpture shaped like a megaphone, which serves as a gathering space and pays tribute to the plaza's namesake. This intersection has traffic lights on all four sides and is known for its rainbow crosswalks.

Davie and Thurlow, one block east of the plaza, was selected as the control site. This busy intersection contains a Starbucks, a Denny's

restaurant, a 24-hour market, and patio space for a nearby restaurant on its four corners. Both vehicle and pedestrian traffic is significant at this intersection, with Thurlow's southbound, one-way traffic intersecting with Davie's four lanes of two-way traffic. The Starbucks' outdoor tables and chairs were often occupied by coffee shop patrons during our surveys.



Jim Deva Plaza, 2018, Photo: Alison Boulier



Davie & Thurlow, 2018



Jim Deva Plaza, 2018



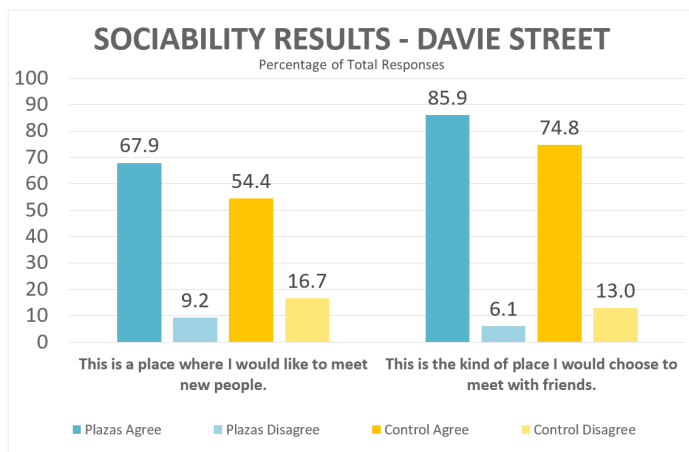
Davie & Thurlow, 2018

## Sociability

Overall response averages showed that people were more likely to want to engage in social interactions at the plaza, compared to the control location. Seventy eight percent of respondents agreed with the statement “This is a place where I would like to meet new people” at the plaza and with 55% agreeing at the control site. Eighty percent of participants at Jim Deva Plaza responded that it was the kind of place they would choose to meet with friends, compared to 75% at Davie and Thurlow.

## Safety & Trust

Similarly, responses to questions analyzing overall feelings of safety and trust did not show significant improvements at the plaza compared to the control site. When asked about the likelihood of having a lost wallet returned, participants scored similarly at both sites—and scored notably lower than other questions at this pairing of sites. Interestingly, the statement “I feel people here can be trusted” scored higher at the control site compared to the plaza. Participants’ overall feelings of safety when visiting each space alone were strong at plaza and control sites, with 88% and 76% agreeing respectively.

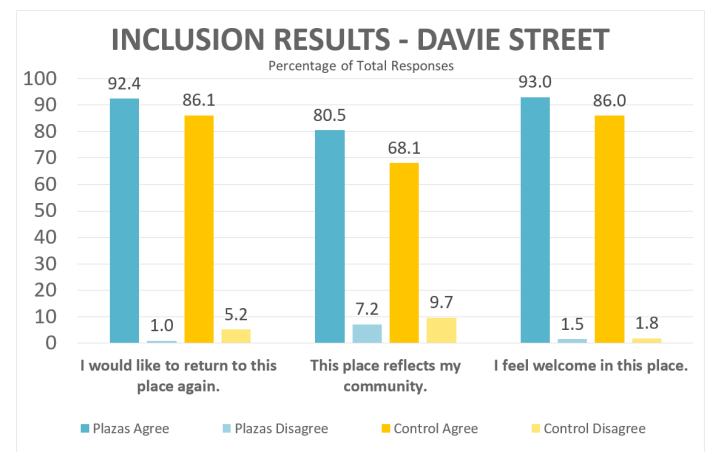


## Inclusion

Inclusion was a particular point of interest at these sites due to Jim Deva Plaza’s significance and symbolism in the City of Vancouver and particularly the West End. At the plaza, participants showed a slightly higher likelihood of wanting to return compared to the control site. Overall, more people felt that the plaza reflected their community compared to those who responded at Thurlow and Davie, supporting the idea that the plaza is acting as a reflection of its surrounding community. Both locations scored highly when participants were asked if they would like to return to the space, with 92% agreement from people surveyed at Jim Deva Plaza.

## Place Attachment

Survey questions on place attachment showed little differentiation between the two sites. Sixty-five percent of participants responded that they would throw out litter that they noticed in the plaza, while 62% agreed at the control site. Interestingly, both locations scored very highly on the question of vandalism, with 90% percent of people agreeing they would be upset if the plaza or control site were vandalised.



# Conclusion

The City of Vancouver’s Pavement-to-Plaza program correlates with improved well-being. Our research supports the conclusion that, from a well-being perspective, the transformation of underused streets into plazas is an important and worthwhile endeavour that should continue.

There was considerable variation in the performance of the respective plazas. Of all of them, 14th-Main Plaza performed most strongly. It outperformed the other two plazas in nearly every category, and also out-scored its control site in all questions but one: “How often do you come to this place?” (This result appears to be a reflection of daily movement patterns rather than place attachment.) 14th-Main Plaza was the only site located beyond the downtown peninsula, and relative to the other plazas it also appears to be located in the area with the fewest plaza and public space offerings. This suggests that in expanding the Pavement-to-Plaza program, the City of Vancouver and VIVA Vancouver would see the greatest well-being returns in cases where they undertake transformations in in neighbourhoods outside of Downtown.

The assessment of the Jim Deva Plaza saw surprisingly limited positive well-being impacts when compared with its control site. This may be in part due to the fact that this plaza has been in place the longest—more than two years as of this writing. The generally high scores at both sites also suggest that there are limited opportunities to further boost well-being through public space interventions in neighbourhoods already rich in such offerings. Moving forward, maintenance, site management and community-sensitive design tweaks may suffice at this plaza and neighbouring pocket parks.



14th-Main Plaza, 2018, Photo: Alison Boulier



Bute-Robson Plaza, 2018 Photo: Alison Boulier

The well-being influence of the Pavement-to-Plaza program at the Bute-Robson Plaza was also limited. Similar to Jim Deva Plaza, this may reflect the wide array of public space offerings in proximity to the site. Limited differences between this site and its control site may also reflect the high quality of the public realm at the control site: the Robson and Cardero control site includes an excellent tree canopy and limited vehicular traffic.

However, it is notable that the Bute-Robson Plaza received the lowest overall rating of the three plazas and a noticeably lower response rate.

This suggests that it is not attracting the same number of people as the other plazas, despite its high-density surroundings. Without studying the specific challenges at this site and its surroundings, it is difficult to identify the exact reasons for this lower performance. Lower well-being responses may have something to do with the presence of numerous other public spaces in the area, cyclists riding through the plaza diminishing perceptions of safety, and a limited sense of community in the area, as well as neighbouring Coal Harbour. Further study and design tweaks are suggested for this site.

# Further Research and Action

Following the Happy Streets Living Lab, the Pavement-to-Plaza Well-being Assessment reflects the City of Vancouver and VIVA Vancouver's commitment to improving people's lives through enhancements to public spaces. There are a number of opportunities for further study and action.

During the course of this study, a wealth of demographic data was collected. While gender perspectives were noted, the limited scope and budget of this study meant that the varying lenses of age, income, transportation mode, ethnicity and residential location were not accounted for. We recommend additional analyses that incorporate these factors, as they would provide a much richer understanding of how the plazas are perceived and how they influence well-being among specific demographic groups.

Given the pervasive nature of affordability issues in the city, we suggest income be prioritized in such an analysis, followed in order of priority by: gender at individual plaza scale; age; transportation mode; ethnicity; and residential location. Ideally, this would encompass all three plazas and their

respective control sites—but with an eye to cost-effective approaches, they could be limited to the 14th-Main Plaza and Jim Deva Plaza, where high response rates allow for more confident fine-grained analysis.

We also suggest further analysis and design tweaks at Bute-Robson Plaza. Testing solutions that limit conflict between cyclists and plaza visitors would be a wise primary focus for any such efforts.

There are also a number of other downtown plazas that we suspect are currently underperforming in both traditional and well-being measures of public space success. There appears to be an opportunity to study and improve these spaces through design, site management and programming actions in a cost-effective way.



Muralfest, Mount Pleasant, 2018

Results suggest that expanding the Pavement-to-Plaza program in first-ring suburbs such as Mount Pleasant, Grandview-Woodland and Kitsilano could yield the strongest positive well-being effects. Should VIVA Vancouver wish to explore this option, we recommend conducting pre- and post-intervention analyses at the same location (as well as at a control site during post-intervention analysis) in order to control for a greater array of environmental factors.

Building on multiple well-being assessments of public space, as well as a series of tactical activations, Happy City would also be available to provide design and programming input at any new plaza, in a first-ring suburb or elsewhere.

The Pavement-to-Plaza Well-being Assessment has underlined the potential of small-scale plaza interventions to strengthen social connection, inclusion, safety and trust among friends and strangers. In this report, we assessed three plaza sites where relatively low-cost measures made a significant impact on well-being. Based on this study, we see room for improvement at the Bute-Robson Plaza, but also opportunity to expand this program to additional neighbourhoods. The Pavement-to-Plaza program appears to be a promising way to continue making Vancouver a more sociable and inclusive city that offers an array of affordable recreational activities.



Pro Walk, Pro Bike, Pro Place Conference, Vancouver, 2016

## Appendix A: Average Score at Study Sites

	Overall		Main		Bute		Davie	
	Overall Plazas	Overall Control	Main 14th Plaza	Main 10th Control	Bute Robson Plaza	Cardero Robson Control	Jim Deva Plaza	Thurlow Davie Control
3. This is a place where I would like to meet new people.	3.80	3.30	3.85	3.28	3.71	2.99	3.79	3.51
4. If you were to lose your wallet in this spot today, how likely do you think it would be for a stranger to return it to you?	3.04	2.79	3.39	2.83	3.07	2.76	2.80	2.78
5. I would like to return to this place again.	4.40	4.14	4.44	4.08	4.36	4.21	4.39	4.16
6. If I noticed a piece of litter here, I would pick it up and throw it out in a nearby trash receptacle.	3.76	3.44	3.73	3.37	3.83	3.20	3.75	3.65
7. This place reflects my community.	4.02	3.68	4.08	3.57	3.81	3.72	4.06	3.77
8. Rate your happiness in this moment.	4.43	4.33	4.46	4.25	4.38	4.30	4.42	4.43
9. This is the kind of place I would choose to meet with friends.	4.23	3.66	4.34	3.54	4.22	3.40	4.17	3.94
10. I feel safe when I visit this place alone.	4.36	4.19	4.56	4.16	4.26	4.27	4.27	4.18
11. I would be upset if someone vandalized this space.	4.40	4.34	4.36	4.24	4.21	4.31	4.49	4.47
12. How often do you come to this place?	4.07	4.28	4.04	4.33	3.83	4.01	4.18	4.38
13. I feel people here can be trusted.	3.80	3.81	3.95	3.73	3.92	3.87	3.66	3.87
14. I feel welcome in this place.	4.32	4.09	4.34	4.01	4.30	3.97	4.31	4.25
<b>Total</b>	<b>4.05</b>	<b>3.84</b>	<b>4.13</b>	<b>3.78</b>	<b>3.99</b>	<b>3.75</b>	<b>4.02</b>	<b>3.95</b>

5 = Strongly positive response

3 = Neither positive or negative response

1 = Strongly negative response

Positive Difference of 0.5 or more

Positive Difference of 0.1 or more

Statistical tie

Appendix B: Overall Pavement & Plaza Comparison: Share of responses per answer

	Plazas							Control						
	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6	Quick Analysis	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6	Quick Analysis
3. This is a place where I would like to meet new people.	2.5	5.6	23.2	47.2	21.5	0.0	68.7	6.2	16.0	31.9	33.9	12.1	0	45.9
4. If you were to lose your wallet in this spot today, how likely do you think it would be for a stranger to return it to you?	12.0	19.5	29.5	31.0	8.0	0.0	39.0	14.5	27.4	27.7	24.8	5.5	0	30.3
5. I would like to return to this place again.	0.7	0.5	5.5	44.5	48.8	0.0	93.3	1.6	2.6	12.1	47.7	35.9	0	83.7
6. If I noticed a piece of litter here, I would pick it up and throw it out in a nearby trash receptacle.	3.0	8.3	23.3	41.0	24.5	0.0	65.5	3.9	17.1	26.1	37.4	15.5	0	52.9
7. This place reflects my community.	1.3	4.3	15.2	50.3	29.0	0.0	79.3	3.3	10.5	21.0	45.6	19.7	0	65.2
8. Rate your happiness in this moment.	1.8	2.8	8.8	24.4	62.3	0.0	86.7	1.6	3.9	9.8	28.8	55.9	0	84.6
9. This is the kind of place I would choose to meet with friends.	0.7	4.0	6.0	49.9	39.4	0.0	89.3	4.9	13.6	18.8	36.4	26.3	0	62.7
10. I feel safe when I visit this place alone.	0.3	1.3	7.5	44.2	46.7	0.0	91.0	0.0	3.9	10.7	47.4	38.0	0	85.4
11. I would be upset if someone vandalized this space.	0.2	1.2	9.0	37.7	51.9	0.0	89.5	0.0	1.0	11.7	39.8	47.6	0	87.4
12. How often do you come to this place?	5.3	6.3	14.3	24.1	50.0	0.0	74.1	4.0	5.0	9.0	23.3	58.8	0	82.1
13. I feel people here can be trusted.	0.3	3.3	28.2	52.4	15.9	0.0	68.3	0.6	3.6	26.9	51.3	17.5	0	68.8
14. I feel welcome in this place.	0.2	0.5	6.0	53.7	39.6	0.0	93.3	1.0	1.6	16.9	48.4	32.1	0	80.5

Appendix B: Main-14th Plaza + Main & 10th Comparison: Share of responses per answer

	14th-Main Plaza						10th & Main Control					
	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6
3. This is a place where I would like to meet new people.	2.4	4.0	23.4	46.0	24.2	0.0	7.3	13.0	33.3	37.4	8.9	0.0
4. If you were to lose your wallet in this spot today, how likely do you think it would be for a stranger to return it to you?	4.8	12.8	34.4	34.4	13.6	0	11.3	28.2	31.5	24.2	4.8	0.0
5. I would like to return to this place again.	1.6	0	2.4	44.8	51.2	0	1.6	4.1	14.6	43.9	35.8	0.0
6. If I noticed a piece of litter here, I would pick it up and throw it out in a nearby trash receptacle.	3.2	8.8	24.8	38.4	24.8	0	2.4	22.6	21.8	41.9	11.3	0.0
7. This place reflects my community.	1.6	0.8	13.8	55.3	28.5	0.0	3.3	16.3	18.7	43.9	17.9	0.0
8. Rate your happiness in this moment.	3.2	1.6	5.6	24.8	64.8	0.0	2.5	4.1	8.2	36.1	49.2	0.0
9. This is the kind of place I would choose to meet with friends.	1.6	0.8	3.2	50.8	43.5	0.0	5.7	16.3	18.7	37.4	22.0	0.0
10. I feel safe when I visit this place alone.	0.0	0.0	3.2	37.6	59.2	0.0	0.0	4.9	8.9	51.2	35.0	0.0
11. I would be upset if someone vandalized this space.	0.0	2.4	7.3	41.9	48.4	0.0	0.0	2.4	15.4	38.2	43.9	0.0
12. How often do you come to this place?	3.4	5.9	20.2	24.4	46.2	0.0	2.5	5.0	9.9	22.3	60.3	0.0
13. I feel people here can be trusted.	0.0	1.6	21.8	56.5	20.2	0.0	0.8	4.8	26.6	55.6	12.1	0.0
14. I feel welcome in this place.	0.0	0.0	7.3	51.6	41.1	0.0	1.6	3.2	15.3	52.4	27.4	0.0

Appendix B: Bute-Robson Plaza + Cardero & Robson: Share of responses per answer

	Bute-Robson Plaza						Cardero & Robson Control					
	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6
3. This is a place where I would like to meet new people.	2.6	5.3	23.7	55.3	13.2	0.0	5.7	28.6	34.3	24.3	7.1	0.0
4. If you were to lose your wallet in this spot today, how likely do you think it would be for a stranger to return it to you?	11.8	19.7	19.7	47.4	1.3	0.0	14.3	25.7	32.9	24.3	2.9	0.0
5. I would like to return to this place again.	0.0	1.3	7.7	44.9	46.2	0.0	0.0	0.0	13.2	52.9	33.8	0.0
6. If I noticed a piece of litter here, I would pick it up and throw it out in a nearby trash receptacle.	2.6	5.3	26.3	38.2	27.6	0.0	5.7	18.6	38.6	24.3	12.9	0.0
7. This place reflects my community.	1.3	5.1	24.4	50.0	19.2	0.0	1.4	8.7	23.2	49.3	17.4	0.0
8. Rate your happiness in this moment.	0.0	3.9	10.5	28.9	56.6	0.0	1.4	1.4	17.4	24.6	55.1	0.0
9. This is the kind of place I would choose to meet with friends.	0.0	5.1	5.1	53.2	36.7	0.0	7.1	14.3	30.0	28.6	20.0	0.0
10. I feel safe when I visit this place alone.	0.0	0.0	10.5	52.6	36.8	0.0	0.0	0.0	17.1	38.6	44.3	0.0
11. I would be upset if someone vandalized this space.	0.0	1.3	15.4	44.9	38.5	0.0	0.0	0.0	10.0	48.6	41.4	0.0
12. How often do you come to this place?	5.8	8.7	15.9	36.2	33.3	0.0	6.0	7.5	11.9	28.4	46.3	0.0
13. I feel people here can be trusted.	0.0	1.3	18.4	67.1	13.2	0.0	0.0	1.4	31.4	45.7	21.4	0.0
14. I feel welcome in this place.	0.0	0.0	5.1	59.5	35.4	0.0	0.0	0.0	27.5	47.8	24.6	0.0

Appendix B: Jim Deva Plaza + Thurlow & Davie: Share of responses per answer

	Jim Deva Plaza						Thurlow & Davie Control					
	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6	Strongly Negative response 1	Negative response 2	Neutral response 3	Positive response 4	Strongly positive response 5	Did not Answer 6
3. This is a place where I would like to meet new people.	2.6	6.6	23.0	44.9	23.0	0.0	5.3	11.4	28.9	36.0	18.4	0.0
4. If you were to lose your wallet in this spot today, how likely do you think it would be for a stranger to return it to you?	16.6	23.6	30.2	22.6	7.0	0.0	18.1	27.6	20.7	25.9	7.8	0
5. I would like to return to this place again.	0.5	0.5	6.5	44.2	48.2	0.0	2.6	2.6	8.7	48.7	37.4	0
6. If I noticed a piece of litter here, I would pick it up and throw it out in a nearby trash receptacle.	3.0	9.0	21.1	43.7	23.1	0.0	4.3	10.3	23.3	40.5	21.6	0
7. This place reflects my community.	1.0	6.2	12.3	47.2	33.3	0.0	4.4	5.3	22.1	45.1	23.0	0
8. Rate your happiness in this moment.	1.5	3.0	10.2	22.3	62.9	0.0	0.9	5.2	7.0	23.5	63.5	0
9. This is the kind of place I would choose to meet with friends.	0.5	5.6	8.1	48.0	37.9	0.0	2.6	10.4	12.2	40.0	34.8	0
10. I feel safe when I visit this place alone.	0.5	2.5	9.1	45.2	42.6	0.0	0.0	5.2	8.7	48.7	37.4	0
11. I would be upset if someone vandalized this space.	0.5	0.5	7.5	32.2	59.3	0.0	0.0	0.0	8.6	36.2	55.2	0
12. How often do you come to this place?	6.3	5.8	10.0	19.5	58.4	0.0	4.4	3.5	6.2	21.2	64.6	0
13. I feel people here can be trusted.	0.5	5.1	36.0	44.2	14.2	0.0	0.9	3.5	24.6	50.0	21.1	0
14. I feel welcome in this place.	0.5	1.0	5.5	52.8	40.2	0.0	0.9	0.9	12.2	44.3	41.7	0

