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Somewhere That's Green: Recreational Space Use and Civic Engagement in Massachusetts'
Urban Areas

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Submitted in Partial Completion of the
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Introduction

Public green spaces, their use, and their accessibility are all crucial indicators of the state of life in urban areas. These spaces can signify the socioeconomic wellbeing of neighborhoods and cities, and often reflect trends accordingly; in one such case, Rehling et al. found in a study in German urban areas that those living at lower socioeconomic levels are often farther from green spaces than those at higher ones.¹ Perhaps unsurprisingly, access to these spaces is also often an indicator of personal physical health. Rundle et al. found that adults in New York City who lived closer to large park areas were more likely on average to have healthier body mass indexes (BMIs).² Trends in public recreational space usage even have significant implications for racial equality; as Lee et al. note, “[p]eople of color are less likely to use public parks and recreation programs” than many of their white neighbors, and municipal recreation departments have begun the work of reaching out to these communities accordingly.³ Research like this makes clear that beyond just the physical benefits of public space use, such spaces can also act as tools by which to gauge the civic health of urban areas. Little research, however, centers specifically on the political implications of recreational space use, particularly as it relates to urban areas in North America, from city centers to edge cities to mid-size cities. To this end, I undertook this project in the hopes of seeing what relationship, if any, existed between the use of public recreational spaces, particularly outdoor ones such as parks, and civic engagement

¹ Rehling, Julia, et al. "Socioeconomic Differences in Walking Time of Children and Adolescents to Public Green Spaces in Urban Areas—Results of the German Environmental Survey (2014–2017)." *International Journal of Environmental Research and Public Health*, vol. 18, 1 Feb. 2021, doi:<https://doi.org/10.3390/ijerph18052326>.

² Rundle, Andrew, et al. "Associations Between Body Mass Index and Park Proximity, Size, Cleanliness, and Recreational Facilities." *American Journal of Health Promotion*, vol. 27, no. 4, 2013, pp. 262-69, doi:<https://doi.org/10.4278/ajhp.110809-QUAN-304>.

³ Lee, KangJae Jerry, et al. "Racial and Ethnic Diversity and Inclusion Efforts of Public Park and Recreation Agencies." *Journal of Park & Recreation Administration*, vol. 38, no. 1, 2020.

(voting, contacting elected officials, etc.) in Boston and the Gateway Cities, which together comprise the bulk of Massachusetts's urban locales.

When seeking to study such effects, Massachusetts makes an exceptional proving ground for examining urban areas. One of the most densely populated states in the country, Massachusetts contains a variety of kinds of urban areas. The most well-known to many, of course, is Boston, the largest city in New England. Additionally, however, Massachusetts is home to 26 so-called "Gateway Cities," so designated by the Commonwealth's legislature in recognition of both their economic importance and their historical socioeconomic challenges. At the 2010 Census, the last completed Census at the time I gathered most of my data, 2,390,454 people - more than a third of the entire population of Massachusetts at the time - lived in either Boston proper or a Gateway City.

The Gateway Cities provide a unique and helpful source for research of this nature because of the diversity among their characteristics. They range in population from 35,177 (Chelsea) to over 181,000 (Worcester, the Commonwealth's second-largest city). The Gateway Cities also vary in their relation to the areas around them. Some are smaller regional centers, such as Pittsfield, Barnstable, and Fitchburg. Others are edge cities, such as Attleboro arguably is to Providence, or Quincy, Chelsea, Revere, and others are to Boston. Still others are semi-regional metropolises in their own right, particularly Worcester and Springfield. Across the board, Gateway Cities represent a wide array of urban and semi-urban areas, making them quite useful for the purpose of studying urban recreational space use habits.

Beyond just their physical characteristics, the demographic characteristics of Boston and the Gateway Cities represent an important cross-section of public space users as well. For example, these cities, by a considerable margin, comprise the most racially and ethnically diverse

areas in Massachusetts; of these 27 total municipalities, 10 are minority-majority, and most of the rest are greatly diverse as well. Most also have large foreign-born populations, in some cases comprising nearly half a city's population; in Chelsea, immediately north of Boston, more than 45 percent of the city's population was born outside the United States, and the vast majority of the city's residents reported speaking a language other than English at home. Boston and the Gateway Cities unfortunately also face challenges that may hinder political involvement for some residents. Many of these cities have higher-than-average poverty rates, which may make more concerted political participation difficult. Foreign-born residents who have not yet become U.S. citizens may also be largely barred from the political process, by virtue of ineligibility to vote. Furthermore, while most people in these cities obviously speak English, political participation may be difficult, if not nearly impossible, for those who do not speak it as fluently. Even staying informed about political issues may be difficult for some residents; in Fall River, for example, fewer than 80 percent of households reported having a computer at home. The potential implications for political equality in these cities, given this information, is all the more important.

Any research on a topic of this nature has to be centered not just on one factor, but on multiple such factors. First, it is important to consider the role of public recreational spaces as community-building tools. These spaces are critical to ensuring that those living in the communities surrounding them feel more "at home" and connected to the community. I have sought to establish such a foundation with my literature review, which focuses on the social, psychological, and even physical health benefits of easier access to physical infrastructure that fosters gathering and personal wellness. Building on this foundation, I have conducted research on both extant demographic and political conditions in Boston and the Gateway Cities, as well as

conducted a survey of residents of these cities as to their everyday lives, their use of green space, and other environmentally beneficial behaviors that may (or may not) have influenced other facets of their lives.

Literature Review

Most any city-dweller will recognize in their own life the importance of green space in urban areas. For the purposes of this project, however, and to more effectively put this research in context, a review of academic literature on the benefits of both green space and common gathering spaces in general for people, especially residents of urban areas, was necessary. To start, I consulted literature that specifically discusses the importance of green space, and environmentally friendly urban design writ large, relative to the areas in which it is situated and where accompanying policies are implemented.

Perhaps one of the widest-reaching anthologies of case studies of friendly urban design and the multifarious upsides it brings residents is *Happy City*, by Canadian writer and journalist Charles Montgomery. Throughout the book, Montgomery recalls interviews with government leaders and researchers in cities around the world, discussing innovative plans that superseded previously unhelpful or downright harmful urban design. He opens on a conversation with former Bogotá mayor Enrique Peñalosa, who ran Colombia's largest city from 1998 to 2001 (and again from 2016 to 2019, after *Happy City*'s publication). Toward the end of his first term in office, Peñalosa began exploring different ways - far-reaching, previously unheard-of ways - to improve everyday life in the city. He started by banning cars. As Montgomery writes:

In the third year of his term Peñalosa challenged Bogotans to participate in an experiment, a *día sin carro*. As of dawn on February 24, 2000, all private cars were banned from city streets for the day. More than eight hundred thousand vehicles sat still that Thursday. Buses were jam-packed and taxis hard to come by, but hundreds of

thousands of people followed Peñalosa's example and hit the streets under their own steam, walking, cycling, skating to work and school.

It was the first day in four years that nobody was killed in traffic. Hospital admissions fell by almost a third. The toxic haze over the city thinned. People still got to work, and schools reported normal attendance. Bogotans enjoyed the day so much that they voted to make it a yearly affair, and to ban all private cars during rush hour *every day* by 2015. People told pollsters that they were more optimistic about city life than they had been in years.⁴

As radical an upending of urban life as it may have initially seemed to be, Peñalosa's *día sin carro* proved to be an unqualified success, but it was not the final reform he made to Bogotá's public infrastructure. Later in the book, Montgomery returns to his discussion with Peñalosa, who mentions portions of Bogotá's roadways that have been sectioned off for cyclists and pedestrians. Peñalosa tells him,

“These bollards show that pedestrians are as important as people with cars. We are creating equality; we are creating respect for human dignity. We're telling people, ‘You are important - not because you're rich, but because you are human.’ If people are treated as special, as sacred, they behave that way. This creates a different kind of society. So every detail in a city must reflect that human beings are sacred. Each detail!”

Later [Peñalosa] pointed out two workmen in overalls, pedaling along one of his bicycle roads on Bogotá's wealthy north end. “See those guys?” he said, nodding. “My bikeway gives them a new sense of pride.”

The connection was not obvious. How on earth could a bicycle path make someone proud?

“Because it gives them self-respect! Look: before, cyclists were just the poorest of the poor, and they were seen as a nuisance. So the biggest value of the bikeway is symbolic. It shows that a citizen on a thirty-dollar bicycle is equally important as one in a thirty-thousand-dollar BMW.”⁵

Beyond mere environmental benefits, Peñalosa sought in his first mayoral term to uplift Bogotá's working class through urban design that benefited them more, and his plans worked. Even the city's mass transit saw similar overhauls, and Peñalosa oversaw the creation of a new bus rapid transit system, the TransMilenio. According to the TransMilenio's director, “Peñalosa had insisted on choosing the lipstick-red paint color and even the name for the rapid bus system.

⁴ Montgomery, Charles. *Happy City: Transforming Our Lives Through Urban Design*. 1st paperback ed., New York, Farrar, Strauss and Giroux, 2014, p. 8.

⁵ *Ibid*, p. 236.

Both were supposed to imbue the bus with a hip, modern cachet, so that riders would feel that taking public transit was a high-status experience, even if they had no other choice.”⁶

Peñalosa’s improvements at the turn of the millennium did not go unnoticed internationally, either. His reforms made Bogotá an example of how to ensure a city’s social and environmental stability. From Montgomery:

In 2000 Peñalosa and Eric Britton were called to Sweden to accept the Stockholm Challenge Award for the Environment, for pulling 850,000 vehicles off the street during the world’s biggest car-free day. Then the TransMilenio bus system was lauded for producing massive reductions in Bogotá’s carbon dioxide emissions. It was the first transport system to be accredited under the UN’s Clean Development Mechanism - meaning that Bogotá could actually sell carbon credits to polluters in rich countries. For its public space transformations under Mayors Peñalosa, Antanas Mockus, and their successor, Luis Garzón, the city won the Golden Lion prize from the prestigious Venice Architecture Biennale. For its bicycle routes, its new parks, its Ciclovía, its upside-down roads, and that hugely popular car-free day, Bogotá was held up as a shining example of green urbanism.

Not one of its programs was directed at the crisis of climate change, but the city offered tangible proof of the connection between urban design, experience, and the carbon energy system. It suggested that the green city, the low-carbon city, and the happy city might be exactly the same destination.⁷

While Bogotá has found success through improved urban design, other cities and regions have not had the same luck. Montgomery singles out North America as a problem area, citing its typical reliance on automobiles and poor maintenance of public space. He notes that “a third of Americans - those too young, too old, too poor, too infirm, or simply not interested - do not drive at all,” which leaves them in the lurch when public transit and other transportation options are inadequate or simply nonexistent.⁸ Several examples in the United States highlight the troublingly inaccessible state of much urban and suburban infrastructure. Among the first of which Montgomery writes is Stockton, California - specifically, the suburban housing developments in the vicinity of the city. Many Bay Area expats, according to Montgomery, have

⁶ Montgomery, p. 236

⁷ Ibid, p. 254.

⁸ Ibid, p. 241.

moved to Stockton and its environs in a search for more affordable housing; he focuses in large part on the ill-fated Weston Ranch development. Writes Montgomery:

Imagine you lived, say, along the gentle curve of Erickson Circle in Weston Ranch, a collection of several hundred modest 2,500-square-foot homes just off I-5, south of Stockton. (In a five-minute cruise through this neighborhood, I counted two dozen FOR SALE signs and half a dozen dejected-looking families loading their beds and chairs and big-screen TVs into rented moving trucks.) If you wanted to pick up some milk, you would drive to the closest grocery store, which would be the Food 4 Less, about two miles away. If you wanted to work out, that would be five-odd miles to the In-Shape Health Club, just off Highway 4. Your kids could walk to school, but the nearest community swimming pool would be six miles away, and the happening mall, Park West Place, would be twelve miles north on I-5. As for work, if you were like your neighbors, you would commute sixty miles to San Francisco, a distance that translated into a four-hour round-trip on bad days. This journey would not make you unique: the majority of Weston Ranch's boom-time buyers were commuters escaping high home prices in the Bay Area.⁹

Many transplants to Weston Ranch were drawn in by the promise of more affordable living and the usual “white picket fence” fantasies that many Americans share, but instead found such dispersed living conditions that their misery ended up persisting. Even financial stability remained elusive in the development: Montgomery writes in a footnote that “[a]t the time, there was a higher percentage of bank-owned homes in Weston Ranch than in any other neighborhood in the country.”¹⁰ For many, the move to Weston Ranch was for naught, and often even made life more difficult.

The area's dispersal also hurt community involvement, and strained or simply prevented neighborly relations. Montgomery discusses the example of Randy Strausser, a resident of Mountain House, another Stockton-area development. Randy, who commuted “more than 120 miles round-trip” each day to his job in San José,¹¹ spent such little time at home that his family

⁹ Montgomery, p. 48.

¹⁰ Ibid.

¹¹ Ibid, p. 50.

relationships - his mother and daughter also commuted to the Bay Area - and relationship with his neighborhood suffered greatly. Montgomery writes:

Randy disliked his neighborhood intensely. He couldn't wait to get out of Mountain House. The problem had nothing to do with the aesthetics of the place. It was still as pristine and manicured as the day he and his wife moved in. It was the people who bothered him. He did not know, like, or particularly trust his neighbors. I asked him economist John Helliwell's trust question: What were the chances that he'd get his wallet back if he happened to drop it on his street?

"I'd never see it again!" he said with a laugh. "Look, shortly after we moved in, we were burglarized. The police were the first to say we'd never see any of our stuff again. This happens constantly out here. Everybody turns their head away. Nobody looks out for each other."¹²

Randy is not an exception to the rule, either. As our neighborhoods become more and more spread out, and less conducive to socialization, our relationships with those around us suffer greatly. "By 2004," Montgomery writes, "less than 30 percent of American families ate together every night."¹³ Dispersal also comes at the profound expense of mental health, a topic about which concern has increasingly risen in recent years; Montgomery points out a Swiss study which "found that psychotic disorders, including schizophrenia, are most common in neighborhoods with the thinnest social networks."¹⁴

The warning signal from Montgomery's research is clear: access to community-building resources, public spaces, and associated things are crucial to both personal well-being and, on an even greater scale, public engagement. He even cites research that has found that people "are less likely to say they trust other people and institutions," owing to the increased disconnection many people experience in this day and age.¹⁵ The relationship between access to community spaces and civic engagement - and the negative effects that arise from deprivation therein - are as clear as can be.

¹² Montgomery, p. 51.

¹³ Ibid, p. 54.

¹⁴ Ibid.

¹⁵ Ibid.

As grim as many of the narratives Montgomery traces are, the question remains: what happens when it all goes *right*? Just as the more unfortunate cases are important to consider, so, too, are the success stories. While North America's urban areas are often lacking in beneficial infrastructure, other countries' cities can serve as invaluable resources when figuring out what works best, and reviewing literature that explores these cases is crucial to a project of this nature. Much of it also covers the condition of public spaces in a variety of settings, from cities and towns to university campuses and other locales.

Among the best cities for studying these conditions, particularly relative to urban walkability, is Galway, a mid-sized city on Ireland's western coast. As Hynes and Seoighthe write, "Galway is an ideal site for investigating issues of walkability, thinking and approaches to transportation, and questions associated with liveability as these relate to small developing cities, towns, and urban/semi-rural settings."¹⁶ Even more importantly, the findings of Hynes and Seoighthe in their own research in Ireland correlates with what Montgomery notes about North America: the more available public spaces are, and the better maintained they are, the happier and healthier those who live near and use them are as well. They write that "[d]iminishing space, obstacles, noise, pollution, safety concerns, risk of accident, and generally poor conditions are typical for city dwellers, which in turn has reduced the opportunities for walking as a form of transportation and also placed the social and cultural functions of city space under siege."¹⁷ Conversely, however, they note that reversing this trend produces a number of benefits, "including social cohesion, crime prevention, public safety, multimodal traffic safety, and economic rewards"; even housing values, they say, are higher in more walkable areas.¹⁸ As in

¹⁶ Hynes, Mike, and Eibhlín Seoighthe. "Heading in the Right Direction? Investigating Walkability in Galway City, Ireland." *Urban Science*, vol. 2, no. 2, 9 Apr. 2018, doi:<https://doi.org/10.3390/urbansci2020031>.

¹⁷ Ibid.

¹⁸ Ibid.

North America, public health, social interactions, and even economic conditions benefit when public spaces are better maintained and more available.

Other European cities have found the same results when a city's walkability is prioritized. In Poland, Turoń et al. studied the walkability of several mid-sized cities, as well as the design techniques used to boost each's walkability. They found that according to the Walk Score scale, which measures a city or town's walkability, "[t]heir values range from 68 to 100, which means that using these solutions confirms that pedestrians are prioritized and the respective city is more walkable."¹⁹ On other continents, municipal planners have seen the benefits that come from more accessible urban design, and in places like Ireland and Poland, they have begun to respond accordingly.

The civic and psychological benefits of accessible community spaces are already clear from this literature review. These benefits, however, run even deeper than just that - both physical health and even social justice are often directly tied to community involvement, and community/green space access therein, to a significant degree. Several sources detail the various forms these perks take.

In *Happy City*, Montgomery briefly touches on the health concerns that come with typical suburban sprawl in North America. He considers the case of Mableton, Georgia, a suburb of Atlanta. Mableton is spread out and not walkable, and it shows. Montgomery writes that "[a] white male living in Midtown [Atlanta]...is likely to weigh ten pounds less than his identical twin living near Mableton," as a direct result of the discrepancy in walkability.²⁰ In Midtown Atlanta,

¹⁹ Turoń, Katarzyna, et al. "The concept of a walkable city as an alternative form of urban mobility." *Scientific Journal of Silesian University of Technology. Series Transport*, vol. 95, 2017, doi:<https://doi.org/10.20858/sjsutst.2017.95.20>.

²⁰ Montgomery, p. 187 (diagram caption).

basic services - stores, restaurants, schools, places of worship, and other important locations - are within easy walking distance. By contrast, “the spread-out and homogeneous system of Mableton [pushes] destinations beyond walking range, which means residents are likely to drive whether they like driving or not.”²¹

Other research has found potential benefits in aging that come with increased access to green space. Woo et al. point out a study that considered the length of telomeres, positioned at the ends of chromosomes, which have “inverse associations with mortality, chronic diseases, and psychological stress, and can be regarded as a marker of biological ageing.”²² The study examined male senior citizens from two sections of Hong Kong: Kowloon, the city’s densely packed center, and Sha Tin, a neighborhood in the semi-suburban New Territories with significantly more green space. The men who lived in Sha Tin had, on average, longer telomeres than those living in Kowloon. According to Woo et al., “The results show that the presence of green spaces could have health benefits in terms of biological ageing, which is mediated by a mechanism other than age, lifestyle, or socioeconomic status.”²³ The results are clear: in urban areas, more green space means better health.

Unfortunately, far too often, those who lack sufficient green space in cities are among those already most at risk of systemic disenfranchisement and discrimination. Roe et al. highlight research in England that has shown “that black and minority ethnic (BME) groups, together with people living in urban deprived areas, choose to access natural environments far less frequently than the average for the white British population.”²⁴ They point out, however, that this is a result

²¹ Montgomery, p. 187 (diagram caption).

²² Woo, Jean, et al. "Correspondence: Green space, psychological restoration, and telomere length." *The Lancet*, vol. 373, 24 Jan. 2009, pp. 299-300, [www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(09\)60094-5.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(09)60094-5.pdf).

²³ Ibid.

²⁴ Roe, Jenny, et al. "Understanding Relationships between Health, Ethnicity, Place and the Role of Urban Green Space in Deprived Urban Communities." *International Journal of Environmental Research and Public Health*, vol. 13, no. 7, 2016, doi:<https://doi.org/10.3390/ijerph13070681>.

of “inequalities in green space provision in BME groups’ residential areas...i.e., there is simply less green space available, and it is of poorer quality, compared to other groups’ residential areas.”²⁵ Unfortunately, systemic inequality pervades even green space access, and while the locales Roe et al. review are in England, similar inequality in accessibility exists in the United States as well.

Beyond just social and health benefits, there is a third way to view the importance of public space access: with an eye toward civic engagement. In *Palaces for the People*, New York University sociologist Eric Klinenberg considers the benefits of what he calls “social infrastructure,” places, spaces, and locations that foster community and social interaction. Meaningful community engagement, and not just shared ideals, are key to ensuring a community’s wellbeing. Klinenberg notes “that social cohesion develops through repeated human interaction and joint participation in shared projects, not merely from a principled commitment to abstract values and beliefs.”²⁶ Built and planned infrastructure, like public green space, are important, he writes, “because the built environment - and not just cultural preferences or the existence of voluntary organizations - influences the breadth and depth of our associations.”²⁷ For this reason, in order to ensure its role in influencing greater civic involvement, public infrastructure must be conducive to social interaction and greater overall enjoyment.

Several of the case studies Klinenberg considers also have a direct connection to environmental sustainability. Many “social infrastructure” projects are designed with the natural

²⁵ Roe et al.

²⁶ Klinenberg, Eric. *Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and the Decline of Civic Life*. New York, Crown, 2018, p. 11.

²⁷ *Ibid*, p. 16.

environment in mind, serving the dual purposes of making more public space available and protecting nature - or protecting people from nature. Among the first examples Klinenberg highlights is Washington, DC's Potomac Park Levee,

a sloped walking path capped by a curved stone wall. In subsequent years the dual-purpose levee and parkland became one of the most popular public spaces in the city, a place where thousands of people go daily without even knowing that they're on top of a critical infrastructure. Today, a growing number of architects and engineers are designing hard infrastructure, such as seawalls and bridges, so that it also functions as social infrastructure by incorporating parks, walking trails, and community centers. These projects, which already exist in places like Istanbul, Singapore, Rotterdam, and New Orleans, provide multiple benefits, from protecting against storm surges to promoting participation in public life.²⁸

As the Potomac Park Levee shows, it is possible to have one's cake and eat it, too, when balancing environmental infrastructure and social gains for urban locales.

Other areas have found still more innovative ways to create more green space, with dramatic benefits. One of Klinenberg's most prominent case studies is in Philadelphia, a city that has struggled in the past with both urban blight and violent crime. In one chapter, he rides along with Keith Green, who works for the Pennsylvania Horticultural Society (PHS). In his capacity with PHS, Green works to convert vacant lots in Philadelphia into "pocket parks," smaller green spaces for residents to enjoy. The positive effects, he tells Klinenberg, were immediate:

I remember one of the first jobs: The city asked us to clean up a two-block area in North Philadelphia where there was a flea infestation. We got there and it was like the entire area had turned into a jungle. Weeds, tall grass, messed-up trees. People were using it as a dumping ground. There were junk piles. Old cars. Broken bottles. Mattresses. Just a mess. We wound up treating 125 empty lots on four city blocks. I'm not kidding: 125! It was a horrible job, but when we finished you could tell that the neighborhood was going to be different. And people were so happy. I'd have kids running up to my truck yelling, "Mr. Keith! Mr. Keith! Can you come back tomorrow?" They treated me like I was Mister Softee!²⁹

²⁸ Klinenberg, p. 17.

²⁹ Green, Keith, from Klinenberg, p. 66.

The children's enjoyment was no fluke, either: adults and kids alike took solace in the new pocket parks. In their travels, Klinenberg and Green hear from Joyce, an area resident:

'I've been staying here ten, twelve years now. Those lots were bad when I first got here. Drugs and all that. Kids up to no good. People would let their dogs run all around them too, and oh, did it smell!' She grimaced and shivered a little from the memory. 'But they fixed it up pretty soon after I got here. Put them tables in, big umbrellas too. Kids started coming around. We got the garden going. Before, everybody would avoid this block. It was ugly, and dangerous, 'cause you didn't know who was gonna jump out of those bushes. Now it's a lot better. We've got the park, we've got shade. It's a pretty good place to be.'³⁰

Loretta's assertions of increased neighborhood safety are backed up by research, too.

Klinenberg discusses a collaborative project by John MacDonald, a criminologist at the University of Pennsylvania, and Charles Branas, an epidemiologist at Columbia University, which sought in the abstract to understand what led to violence in particular cities and areas of cities. With Philadelphia as their laboratory, they compared violence statistics in two different kinds of areas: those where vacant lots and abandoned buildings had been rehabbed by PHS, and those where said spaces remained untouched and in poor shape.

Branas was...surprised by the dramatic findings from their first experimental study on blighted environments and violence: There was a 39 percent reduction in gun violence in and around abandoned buildings that had been remediated. There was a smaller but still meaningful 5 percent reduction in gun violence in and around vacant lots that had been remediated as well...Equally powerful, he said, is that there was no evidence that the violence had simply shifted to nearby places: the declines were real. Moreover, these reductions lasted from one to nearly four years, making the benefit far more sustainable than those in other crime reduction programs.³¹

Akin to the Potomac Park Levee, the lots rehabilitated by PHS and turned into parkland served dual purposes: not only did they become a welcoming space for local residents to gather and be proud of their neighborhood, they also appeared to have caused a definitive drop in gun violence

³⁰ Klinenberg, p. 68.

³¹ Ibid, p. 69.

in the areas they now populated. While not specifically a boon to the natural environment, these parks contributed to improved conditions in the local urban environment.

Other urban areas have taken approaches to public space creation that sit on an even grander scale than the block-to-block. Klinenberg points out Los Angeles as one example of a larger investment in these spaces. He writes about 2016's Measure A, "a 1.5-cents-per-square-foot parcel tax to help build and maintain city parks, [which passed] with nearly 75 percent of voter support."³² Although Measure A's estimated revenue generation sits below \$100 million annually - a pittance for one of the largest urban areas in North America - "it has no expiration date, so it promises to deliver a steady supply of new resources to the city's parks and public spaces."³³ The overwhelming support for Measure A demonstrates clearly that demand exists for public spaces; given all its benefits, particularly for civic life, that demand is no surprise.

Boston and the Gateway Cities: Preexisting Demographic Data

Few U.S. states represent the concerns of urban areas more than Massachusetts. The Bay State is heavily urbanized, particularly in its eastern third, where most of its residents live. Civic engagement in Massachusetts also has important implications for social justice; 2019 estimates from the U.S. Census Bureau show that around 1 in 5 residents of the Commonwealth self-identify as people of color, and nearly 17 percent of the population is foreign-born.³⁴ Moreover, it is clear that urban areas are the epicenter of everyday life in Massachusetts. At the 2010 Census, Massachusetts was home to three of New England's largest cities, Boston, Worcester, and Springfield. At the same Census, nearly 2,400,000 people, representing more than a third of

³² Klinenberg, p. 144.

³³ Ibid.

³⁴ "Massachusetts: Population estimates, July 1, 2019." United States Census Bureau, www.census.gov/quickfacts/MA.

the Commonwealth's population, resided in either Boston or a Gateway City, and virtually all of these cities have seen population growth in the decade since.

To lay the foundation for my study of political engagement in these cities, I first turned to publicly available data of exactly this kind: data from the 2010 Census, the last complete Census at the time I undertook most of this research in the summer of 2020, as well as voter registration data from the Secretary of the Commonwealth as of 2012, relatively close to that Census in terms of the time when it was recorded. By comparing these data, I hoped to uncover any existing correlation between demographics and partisan affiliation (or lack thereof), which could possibly inform later findings on both public space use and political engagement.

For the Census data, I examined several discrete types of information, including racial/ethnic background (White Alone (including Hispanic/Latino), Black/African American Alone, American Indian/Alaska Native Alone, Asian Alone, Native Hawaiian/Pacific Islander Alone, Two or more races, Hispanic/Latino, and White Alone not including Hispanic/Latino); percentage of foreign-born residents; percentage of housing that is owner-occupied; travel time to work, in minutes; percentage with a computer at home; percentage that speaks a language other than English at home; and percentage over the age of 16 in the civilian labor force.

To start off, I sorted the Census data by race, examining the list of cities from lowest to highest percentage of residents identifying as White Alone, not including Hispanic/Latino. Simultaneously, I sorted the voter registration data by Democratic affiliation, listed from highest to lowest percentage of registered Democrats. Though residents of any city or state may affiliate with a variety of parties, Massachusetts, despite having a Republican governor at this writing, is otherwise obviously considered a historically Democrat-friendly state. Democratic nominees for President have handily carried Massachusetts in every election since 1988, the Commonwealth's

entire congressional delegation consists of Democrats, and Democratic supermajorities currently occupy the State Senate and House of Representatives. Even the Governor's Council, a relatively obscure elected body designed to provide advice and consent to the Governor, currently consists entirely of registered Democrats.

At a glance, these data suggest that cities in Massachusetts with more residents of color have more registered Democrats, as opposed to those registered as Republicans, "unenrolled" (the Commonwealth's term for independent voters), Greens, or with other parties and designations. Of the ten cities in Massachusetts with the lowest percentages of residents self-identifying as "White Alone, not Hispanic/Latino", seven of them - Lawrence, Chelsea, Springfield, Brockton, Lynn, Everett, and Boston - are also among the ten cities with the highest percentages of registered Democrats.

To examine if the inverse was true, I sorted each dataset according, inverting the Census data to show percentages of residents identifying as "White Alone, not Hispanic/Latino" from highest to lowest, and viewing the percentages of registered GOP voters from highest to lowest. While not necessarily statistically significant, I did observe that six of the ten whitest cities in the Commonwealth - Westfield, Barnstable, Attleboro, Haverhill, Chicopee, and Pittsfield - were among the most heavily Republican (a relative term, as registered Republicans do not make up anything near a majority in any of the cities in this study). Given these relationships, it can at least be inferred that across these cities, residents of color are more likely to vote for Democrats, and white residents, while not especially likely to vote for Republicans, are more likely to do so than their neighbors of color.

Another trend for which I looked was any correlation between geography within the Commonwealth and commute times to work. I specifically looked for any correlation here

because of a question on the survey I later administered, a pair of questions on which asked respondents about how they commuted to work, and whether or not, if employed, they worked in their city of residence. My initial hypothesis was that cities situated outside the beltway of Interstate 495 - thereby having less or no Massachusetts Bay Transportation Authority (MBTA) service - would have longer commute times on average, owing to traffic; conversely, I presumed that Boston and cities near it would have shorter commute times, because many people in these areas work in Boston or its environs, and can more regularly rely on a greater wealth of MBTA service.

Interestingly, however, according to the 2010 Census data, this was not the case. Four of the five cities with the longest commute times - Quincy, Everett, Revere, and Chelsea - all border Boston; Malden, which had the third longest commute time, is within two miles of Boston at each's nearest edge. The six cities with the shortest commute times - Pittsfield, Chicopee, Holyoke, Barnstable, Springfield, and Westfield - all sit well outside of I-495. This could be the result of increased car usage in these areas. None of these cities, most of which sit deep in Western Massachusetts, receive MBTA service, and what public transportation exists is not as frequent or readily available.

Finally, among the relationships for which I looked for any potential causation was between partisan affiliation and percentage of households with a computer. It was my assumption that households with computers would be more likely to be informed about political issues, and, as a result, would potentially be more involved in politics and other civic actions. My aim is not to imply that one partisan affiliation or another is a sign of one being more or less informed about politics and civics; rather, I simply hoped to see if there was any sort of correlation before administering the survey. While I remain unsure of the statistical significance,

it is interesting to note that the four cities with the highest percentages of households with a computer at home - Barnstable, Methuen, Haverhill, and Attleboro - were the four cities with the highest percentages of registered Republicans. Meanwhile, three of the five cities with the lowest percentages of households with computers - Fall River, Lawrence, and Springfield - were among the five cities with the highest percentages of registered Democrats. I believe this relationship, however statistically significant it may or may not be, to be reflective of economic effects on voter affiliation. It is a long-known trend that wealthier voters are more likely on average to be Republicans, and that poorer voters are more likely on average to be Democrats. It should also be noted again that this is all relative to the specific state of voter registration in Massachusetts. Independents made up a majority of voters in the Commonwealth in 2012, and despite Massachusetts's popular reputation as a "liberal state," this dynamic often makes political distinctions and vote choices more difficult than meets the eye. As I mentioned earlier, in two consecutive statewide elections, Bay State voters have elected Democratic supermajorities to the legislature while simultaneously sending a Republican governor to join them on Beacon Hill.

Survey Methods and Data

While the census and voter registration data tell an interesting enough story for the sake of setting context, they only tell part of the story. Voter registration data, for example, might show with what party voters tend to affiliate (or not affiliate) from city to city, but those same data do not show whether or not each resident actually votes in elections, or contacts their elected officials about policy concerns of any kind. Census data may tell us the average commute time to work for residents of each of the cities being studied, but it does not tell us *how* those residents commute to work; crucially for the specific purposes of this project, it also does not tell

us the amount of time residents of these cities spend outside. To examine data points like these, and any potential relationships between them, a survey was developed in Qualtrics, a survey-building and data analytics software commonly used in research of this nature. Once completed and approved by Bridgewater's Institutional Review Board, the survey was administered via Amazon Mechanical Turk, a task marketplace of sorts where users complete so-called Human Intelligence Tasks, or "HITs", typically for nominal monetary payments. Mechanical Turk's wide reach and inexpensiveness make it an exceedingly useful tool in social science research of this kind.³⁵ Using Mechanical Turk's distribution settings, the survey was only made visible to users residing within either Boston or one of the Gateway Cities.

The survey, which drew 155 responses in total, asked respondents a brief series of questions about their residence and everyday life, their political engagement, and the time they spend outside on a given day. For residential/daily routine information, the survey asked for the respondent's ZIP code; the length of time the respondent has lived in their city of residence; whether or not the respondent, if currently employed, works in their city of residence; the manner by which they commute to work, regardless of whether or not they work in their city of residence; whether their children attend school in their city of residence, if applicable; whether their partner or spouse, if they have one and live with them, works in their city of residence; and, given a list containing Boston and each of the Gateway Cities, for what purposes they use each city (including living there). The survey also asked if the respondent currently uses or has ever used any of a set of public benefits (e.g., Medicare/Medicaid, GI Bill benefits, SNAP benefits, etc.). For political engagement, the survey asked the respondent if they are registered to vote at their current address; whether the respondent has ever voted in a municipal election in their city

³⁵ Berinsky, Adam J., et al. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis*, vol. 20, no. 3, 2012, pp. 351-68, doi:<https://doi.org/10.1093/pan/mpr057>.

of residence; and whether the respondent has ever contacted their city’s mayor/manager, their city councilor (or an at-large councilor if their city has them), or their state senator or representative. Finally, for outdoor space use, the survey asked the respondent how much time they spent outside on an average day, how often they use public parks and recreational facilities in their city of residence, and what kind of recreational spaces they most often use. The survey was administered over the course of March 2021, with the blessing of the Institutional Review Board at Bridgewater State University.

Among the benefits of using Qualtrics for survey administration is the wealth of tools it provides for statistical analysis. With its “Crosstabs” feature, one can easily check for a statistically significant relationship between the results of any two questions on the survey. The first place I sought to observe strong relationships was in time spent outside, and the ways that time is spent. The survey asks the respondent what public recreational facilities they use; the options are “Neighborhood park,” “Larger green space (e.g., a town common),” “Public playground, jungle gym, or other built play structure,” “Multi-use path or linear park,” “Public beach or seashore,” “State park or conservation lands,” and “Other.” When measured against the amount of time spent outside on a given day, most relationships are not particularly strong; however, the relationship between “State park or conservation lands” and time spent outside per week was, in fact, statistically significant.

	Total	(blank)	State park or conservation lands
Less than 1 hour	33.5 %	40.5%	26.3%
1-2 hours	35.5%	29.1%	42.1%
3 or more hours	22.6%	13.9%	31.6%

Overall Stat Test of Percentages: <0.1, statistically significant.

Though many respondents did leave this question blank, enough completed it to render this relationship statistically significant. In a nutshell, those who use state parks or conservation lands for outdoor recreation tend to spend more time outside on average per week than those who use other kinds of facilities. A similar relationship, also statistically significant, was found among residents of Boston: respondents who stated that they lived in Beantown proper spent more time outside on average each week than most respondents.

	Total	(blank)	I live here (Boston)
Less than 1 hour	33.5%	36.6%	14.3%
1-2 hours	35.5%	34.3%	42.9%
3 or more hours	22.6%	19.4%	42.9%

Overall Stat Test of Percentages: <0.1, statistically significant.

Next, I examined relationships within everyday life factors, such as respondents' commutes to work, living situations, and other data points. Specifically, I sought to look for factors that might cause, or prevent, more conventionally environmentally friendly behavior. I was able to observe one such statistically significant relationship, between driving to work and whether or not the respondent worked in their city of residence. The survey data showed that those working outside their city of residence were decidedly more likely on average to drive themselves to work than those working within their city of residence.

	Total	Yes	No	N/A
(blank)	46.7%	52.2%	25%	100%
Drive	53.3%	47.8%	75%	0%

Overall Stat Test of Percentages: <0.1, statistically significant.

Most interesting of all was the relationship between factors of these two kinds, combining life factors and outdoor enjoyment. A small handful of statistically significant relationships arose

herein. For example, those who stated they ordinarily walk to work comprised a disproportionate amount of those who stated they use their local public parks “all the time.”

	Total	All the time	Often	Sometimes	Rarely	Never
(blank)	90.1%	70.6%	97%	88.9%	96.6%	88.9%
Walk	9.9%	29.4%	3%	11.1%	3.4%	11.1%

Overall Stat Test of Percentages: <0.1, statistically significant.

Next, I sought to observe the relationship between personal factors and political involvement, be it voting or contacting elected officials. Again, several statistically significant relationships arose in these comparisons. For example, while most comparisons involving public benefits usage did not yield any statistically significant relationships, the survey did find that those who reported receiving Social Security benefits were far likelier than average to have voted in a municipal election in their current city of residence.

	Total	(blank)	Social Security
Yes	63.3%	59.5%	89.5%
No	34%	37.4%	10.5%
N/A	2.7%	3.1%	0%

Overall Stat Test of Percentages: <0.1, statistically significant.

Perhaps unsurprisingly, a statistically significant relationship was found between the amount of time respondents had lived in their current city and whether or not they had voted in a municipal election there. On average, the longer a respondent had lived in their current city, the likelier they were to have voted in a local election there.

	Total	Less than 1 year	1-2 years	3-5 years	6-9 years	10 or more years
Total count (answering)	150	15	21	26	14	74
Yes	63.3%	33.3%	57.1%	46.2%	64.3%	77%
No	34%	66.7%	38.1%	46.2%	35.7%	21.6%
N/A	2.7%	0%	4.8%	7.7%	0%	1.4%

Overall Stat Test of Percentages: <0.1, statistically significant.

Interestingly, however, for most respondents, voting seemed to be the upper limit of political participation. For example, great majorities of respondents, across every length of time residing in their current city, stated that they had never contacted their state representative or senator, their city’s mayor/manager, or a city councilor; this trend, though, is not particularly unexpected.

Finally, I compared the relationships between outdoor activity and political behavior. These comparisons proved to yield some of the most intriguing results in this survey. Tying back into contacting elected officials, for example, the survey found a statistically significant relationship between the frequency of park usage and contact with state representatives and senators. Though the majority of respondents in general stated they had never contacted their state representative or senator, those who used public parks and recreational areas “all the time” or “often” were more likely to have contacted those officials than those who used them “sometimes,” “rarely,” or “never”; in fact, a majority of those who use parks “all the time” have contacted their representative or senator.

	Total	All the time	Often	Sometimes	Rarely	Never
Yes	34%	52.9%	50%	27.8%	20.7%	22.2%
No	66%	47.1%	50%	72.2%	79.3%	77.8%

Overall Stat Test of Percentages: <0.1, statistically significant.

Additionally, while no usage group had a majority of respondents contacting their city's mayor or manager, those who used parks more frequently were likelier to do so than those who did not.

	Total	All the time	Often	Sometimes	Rarely	Never
Yes	23.2%	41.2%	36.4%	20.4%	6.9%	11.1%
No	76.1%	58.8%	60.6%	79.6%	93.1%	88.9%

Overall Stat Test of Percentages: <0.1, statistically significant.

On average, frequent park users were also more likely to vote in municipal elections in their city of residence.

	Total	All the time	Often	Sometimes	Rarely	Never
Yes	61.7%	64.7%	69.7%	64.8%	57.1%	22.2%
No	36.2%	23.5%	30.3%	35.2%	42.9%	66.7%
N/A	2.1%	11.8%	0%	0%	0%	11.1%

Overall Stat Test of Percentages: <0.1, statistically significant.

Park usage was even positively associated with voter registration. Frequent park users were more likely on average to be registered to vote at their current addresses than infrequent park users.

	Total	All the time	Often	Sometimes	Rarely	Never
Yes	86.6%	82.4%	93.9%	90.7%	79.3%	66.7%
No	10.6%	5.9%	3%	9.3%	20.7%	22.2%
Not eligible	2.8%	11.8%	3%	0%	0%	11.1%

Overall Stat Test of Percentages: <0.1, statistically significant.

Park usage was not the only generally environmentally conscious behavior associated with political engagement; however, not all such trends were positive, either. Most notably, respondents who reported walking to work were also less likely on average to vote in municipal elections in their cities of residence. Much of this decline, however, seems to be the result of an elevated proportion of walkers answering “N/A” to the question asking whether they had voted in a municipal election in their city of residence.

	Total	(blank)	Walk
Yes	63.3%	65.4%	42.9%
No	34%	33.1%	42.9%
N/A	2.7%	1.5%	14.3%

Overall Stat Test of Percentages: <0.1, statistically significant.

Conclusion

Writ large, the primary implication of this research, particularly the survey, is that open space use is fairly closely related to political participation in Massachusetts's urban and edge-city areas. The more Bay Staters use open space, the more likely they are to register to vote, vote in municipal elections, and even contact their elected officials. In the future, more research might be necessary to ascertain whether open space access itself sparks political engagement in Massachusetts, or whether those who are more politically involved also just happen to be those who are more likely to take advantage of public recreational space. Nevertheless, as the literature reviewed for this project indicated, the benefits of public green space in urban areas are such that its increased presence only serves to benefit communities. These spaces are crucial to civic life in cities, and the data gathered here seem to bear that out in the specific case of Massachusetts, one of the densest and most heavily urbanized states in the country.

To be sure, public space is not the only solution necessary to ensure the continued stability of our political processes by way of public involvement. Longtime inequalities, increased assaults by lawmakers on the ability to vote, and a slew of other forces have served to dampen participation in politics at all levels; the COVID-19 pandemic has almost certainly exacerbated these trends as well. As cities look toward greener futures, however, it is important to also consider the auxiliary perks of open space access. Ensuring that residents can feel tied to their communities through places like these only serves to improve political participation rates, particularly as residents become more likely to advocate on behalf of said spaces.

Though a relationship between public space use and political engagement clearly exists, one aspect this research admittedly did not establish is the factor of causation. It remains unclear at present whether increased public space use causes increased political engagement, or whether

those who are more politically involved are also more frequent public space users by virtue of coincidence alone. Further research to this end would be beneficial; even though the relationship is known, the point of causation is crucial to fully understanding it.

Furthermore, the existing socioeconomic details of Boston and the Gateway Cities could also have had any of a variety of effects on the results of both the Census data and the survey. The demographic factors of many of these cities are of the kind that would certainly affect political involvement and public space use alike. Many of these cities, for example, have fairly large foreign-born populations; residents who are not U.S. citizens, of course, would be ineligible to vote in elections, and may feel discouraged from other forms of political involvement as a result. Additionally, many of these cities have sizable proportions of residents who speak a foreign language at home; in six cities - Lawrence, Chelsea, Everett, Lynn, Malden, and Revere - majorities of residents reported doing so. While this is obviously not a reflection of the proportion of residents who speak English, it is worth noting that for those who are not as proficient in English, political involvement can be difficult or even impossible, regardless of citizenship or immigration status. Furthermore, both of these factors aside, many of these cities have higher-than-average poverty rates; those struggling with poverty will, of course, also face roadblocks to both public space use and political involvement, whether due to a lack of time, resources, or both. It would behoove political actors and public space planners/maintainers alike to consider the communities with which they are engaging, and act accordingly.

The implications of this research for both government officials and campaigning candidates could be considerable. In cities with lower rates of political participation, for example, extra attention could be paid to the revitalization and/or maintenance of public spaces such as parks, in addition to other voter outreach tactics and programs. Candidates, and the

groups that support them, could pledge to make such changes happen; sitting officials could begin to enact these changes insofar as their positions allow them to do so. The improvement of such public spaces could very realistically encourage more people to come to the polls, and vice versa.

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