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Can the names of black cultural icons save the neighborhood: Relating street names to property values and neighborhood racial composition change in Harlem, New York City

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A B S T R A C T

Gentrification-related concerns are prevalent across much of the US. In many metropolitan areas, housing unaffordability is high, and changes in neighborhood character associated with dispossession and cultural removal of communities of color are not uncommon. These conditions contribute to the need for expanded understanding of space-claiming and place-guarding strategies relevant to race and socioeconomic factors. Answering this call, this study uses street names to quantitatively describe the ways that racialized values and sentiments get absorbed into the housing market and shape neighborhood demographic composition. Using a hedonic pricing model – looking at the gentrifying neighborhood of Harlem in NYC between 2000 and 2020 – this work finds that properties situated on streets named after Black cultural icons experience 13.8 % lower sale prices than otherwise comparable properties on non-Black named streets. This suggests that naming streets after Black cultural icons may help dampen upward pressure on housing costs, contributing to affordability. Specific to demographic change, however, findings reveal that areas surrounding streets named after Black icons do not experience higher shares of Black population retention over time than do other parts of the neighborhood. This work is relevant to advocates and activities, planners and policymakers, interested in advancing housing justice.

1. Introduction

The US is in a state of national housing crisis. Unaffordability – relative to income and lending rates – is more severe than it was at the height of the late 2000s' Global Financial Crisis (Sor, 2023). Homelessness is at a record high (Batko et al., 2024), residents are increasingly housing insecure and cost burdened (Berlin, 2024), housing supply shortage is in the range of 3–7 million units nationwide (Peck, 2023), and 1 in every 20 residents live in structures federally deemed physically inadequate (Wedeen, 2023). Health and wellbeing indices related to housing conditions are in a worrying downward spiral (Chart Book, 2022; Serchen et al., 2024), and inequities across many of these along the lines of race, ethnicity, disability, and income are worsening (Miao & Zayas, 2023).

One particular piece of the crisis puzzle receiving growing attention from media outlets, policymakers, academics, and the public alike is the intensified rate of gentrification that many neighborhoods in cities across the country are experiencing (Smith et al., 2020). Though several

definitions of gentrification exist, most typically involve some combination of residential and commercial displacement with neighborhood socio-demographic characteristic changes (Finio, 2022). Given US legacies of stringently segregated urban development and public investment (Hirt, 2015; Massey, 2001; Rothstein, 2017; Taylor, 2019), this process often takes the form of enclaves of lower income residents of color experiencing influxes of new residents who hold greater degrees of societal privilege (e.g. populations that are wealthier, have higher education attainment, are Whiter) (Rucks-Ahidiana, 2021).

Met with the pressures of physical removal and cultural erasure accompanying these new resident influxes, many housing advocates, community organizers, local policymakers, and residents of color are doing all they can to maintain the affordability and demographic character of gentrifying neighborhoods and of neighborhoods vulnerable to future gentrification. This work has taken many forms including: fighting for legal protections against eviction pressures (Steinkamp, 2019), campaigning in support of rent stabilization policies (Perez-Gonzalez, 2024), securing funding for inclusive development (Rose,

2002), advancing collective ownership and communal living practices (Kaschock et al., 2023), and tenant unionizing (Raghuveer & Washington, 2023), to name but a few. These efforts to advance housing justice (Graziani et al., 2020; Losier, 2019) have thus far had mixed degrees of success at slowing the pace of gentrification across much of the country over the last two decades (Richardson et al., 2020).

Alongside these practice-centered efforts, there is a growing push for more anti-gentrification research to further inform effective protective policies that allow for the benefits of neighborhood-level investment without the realities of loss and removal currently being experienced by the people who live, work, play in and identify with these neighborhoods (Dorazio, 2022; Hwang, 2016; Roy & Rolnik, 2020). Work in this space has examined things such as: the roles of zoning code and litigation (Malsin, 2020; Weinstein, 2015), housing production (Chapple & Loukaitou-Sideris, 2021), and community organizing (Dulchin, 2003; Thurber et al., 2021) in preserving affordability; the extent to which tenant protections, shared equity, and community land trust ownership models mitigate displacement (Bunce, 2018; Ghaffari et al., 2018); the effectiveness of art in place-guarding (Pritchard, 2018); and the potential for decommodification of housing to disrupt racialized patterns of dispossession (Fu & Velasco, 2023; McElroy, 2020; Whitlow, 2023).

Largely still missing from this growing body of research is examination of which parts of neighborhoods have managed to best weather the gentrification storm thus far. Such would require identification of shared characteristics of places that have been able to retain their socioeconomic, demographic, and cultural character while peer areas have metamorphosed. There is an argument to be made that street names could serve as one such shared characteristic. Street names play a vital role in both shaping and reflecting our societies and have influence over the lives we lead within them. Yes, street names hold logistical importance. They contribute to the efficiency and reliability of service delivery (Yildirim et al., 2014) and affect navigation and physical orientation – the "spatial practices of everyday life (Azaryahu, 1996)," such as finding destinations and giving directions. More directly relevant to the subject of neighborhood change, however, is the fact that street names contribute to our self-identities (Augustins, 2004; Dalgiç & Yildirim Okta, 2023; Proshansky, 1978) and sense of social positioning, serving to establish demarcations of othering and belonging (Eriksen, 2012).

This need for further study and identification of street names as a potential-laden tool of analysis, paired with an understanding that much of the force dictating neighborhood characteristic change in gentrifying areas can be attributed to the escalating cost of housing (Glaeser et al., 2020), has prompted us to explore the following questions: All else equal, to what extent does being located on a street named after a Black cultural icon affect a property's value in a gentrifying neighborhood?; How does being situated proximately to a Black icon-named street impact change in an area's Black population share over time?

To answer these questions, we deploy a hedonic pricing model and ordinary least squares regressions using a combination of First American housing sale price data from 2000 to 2020, the American Community Survey, and spatialized neighborhood amenities information provided by the NYC Open Data portal. The neighborhood of Harlem in New York City serves as the geographic context of our analysis, as it offers several cases of streets named for Black cultural icons, has topped numerous nationwide lists of places most rapidly gentrifying (NYU Furman Center, 2016) as well as at greatest risk of continued gentrification over the last decade (Chapple et al., 2016), and is a well-documented site of Black American cultural and historical gravity (Balshaw, 1999; Corbould, 2009; Taylor, 2002).

To our knowledge, this is the first application of the use of street names in attempting to quantitatively relate the ways that racialized values and sentiments get absorbed into the housing market and shape neighborhood demographic character. We view this work as relevant to scholars, advocates, policymakers, and residents interested in expanding their toolbox of space-claiming and place-guarding strategies that have influence over neighborhood affordability and cultural makeup, and can

contribute to advancing housing justice, which the Urban Institute defines as a condition in which "everyone has affordable housing that promotes health, well-being, and upward mobility by confronting historical and ongoing harms and disparities caused by structural racism and other systems of oppression (Pitkin et al., 2022)."

2. Literature review

This work is positioned at the nexus of two bodies of literature: street naming and housing purchase decision-making. This section attends to both.

2.1. Street (re)naming

Space-claiming through street naming has long been used to disenfranchise as well as to empower. Efforts in advancing nationalism (Jones & Merriman, 2009; Yeoh, 1996), colonialism (Berg & Vuolteenaho, 2009; Njoh & Chie, 2019), legacy cementing and memorialization (Azaryahu, 2011; Dwyer & Alderman, 2008; Light & Young, 2014), as well as decolonization and reappropriation (Duminy, 2014; Rose-Redwood et al., 2018) have all employed this tactic to varied degrees of fruitfulness (Rusu, 2021b). Whether making known the dominant ideological ethos of the time or being wielded as the sword of resistance and reclamation, at their core, street names are a tool of communication, constructing geographies of public memory and assigning meaning to space (Alderman & Inwood, 2013; Forrest, 2018; Jaffe, 2015; Shields, 2023).

Within the last decade, the study of street names and naming – a subset of toponomy – has drawn substantially increased attention across a range of fields (Basik, 2024; Giraut & Houssay-Holzschuch, 2022; Rusu, 2021a). Sociologists, urban planners, historians, linguists, and others have all found the world of street names rich in its ability to tell the story of a place. This growing popularity and demonstration of dexterity, with respect to what one can learn from an examination of street names, has even birthed the coining of a new social science discipline: 'streetonomics' - the quantitative measurement of social norms, cultural values, and human behavior through study of street names (Bancilhon et al., 2021). The passages within this subsection shed light on how street naming has evolved through the ages to become the powerful analytical instrument it is today.

2.1.1. A brief overview of common practices

Though record of street naming dates as far back as the 5th century BCE, taking first form as an administrative tool of the Grecian state (Mencken, 1948), street naming as we know it today – featuring commemoration of nation-specific events and persons – is a relatively modern practice. Use of street names as honoration is generally cited as taking hold first and most systematically in France toward the end of the 18th century (Oto-Peralías, 2018). Prior to that, non-numeric naming conventions were typically based on natural features (e.g. River Road, Hill Street, Pine Avenue), structural landmarks (e.g. Capitol Boulevard, Church Road, School Lane) and particular functions and programming (e.g. Market Street, Main Street).

With the French Revolution and Napoleonic reign came a distinct pivot in naming conventions to more closely align with the values of the Age of Reason (Bancilhon et al., 2021). This is reflected in a movement away from names associated with monarchy and religion in favor of military victories and personnel, heroes of science and art, and philosophical principles. Such use of street names to recreate collective identity, to reset public memory, and to erase past legacies set the foundation for what would become global common practice throughout the 19th and 20th centuries immediately following major regime changes. In these instances, street names of leaders and values of previous ruling groups were replaced with those of the new ones. This served to spatialize power shifts and formalize breaks with the past.

Much of Europe saw waves of street renaming throughout the early

and mid-1900s, namely through Sovietization and through the rise and fall of mid-century Fascism (Azaryahu, 1986; Light et al., 2002; Rusu, 2021b; Sondel-Cedarmas, 2022). Between 1949 and 1966, roughly one in every seven streets was renamed in then-newly socialist Shanghai under Maoist leadership (Howlett, 2022). Pakistan largely replaced the names of Hindu and Sikh individuals with names deemed by political leaders to be more reflective of Pakistani identity after Partition in 1947 (Khan, 2017). Iran, after it's Islamic Revolution of 1979, formed a Street Name Council that went on to change over 500 street names in just a few years (Kashfi, 2023). Similar practices unfolded across much of Northern Africa post-Arab Nationalist Revolutions of the 1950s and 60s (Maddy-Weitzman, 2011), South Africa post-Apartheid (Guyot & Seethal, 2007), and Venezuela post-Bolivarian Revolution (Bjork-James, 2020). All saw their throughfares take on new identities with the changing of the guard.

Street naming has also been a widely toted weapon of colonial silencing of indigenous cultures (Berg & Vuolteenaho, 2009). Colonial powers used codification of street names in their own languages and of their own figures and beliefs to reinforce their wrongful claims to land and legitimize their practices of territorialization. By replacing names used by indigenous peoples, and often imposing formalized naming conventions where such had not previously been used (Bigon, 2020), settler communities inscribed their power on place. This included both the 'place' that is a landscape and the 'place' that is the everyday, as street names feature in conversation regularly as well as in non-conversational self-orientation (i.e. our inner voice) (Azaryahu, 1986; David, 2011; Mask, 2020a; Rose-Redwood et al., 2010; Williamson, 2023).

Interestingly, in the battle for place, fire has often been met with fire; street renaming with further street renaming. The last three decades in particular have seen street renaming deployed as a means of rejecting legacies of colonialism, other oppressive regimes, and forced idols. Indigenous and marginalized ethnic groups across Sudan (Eldin, 2022), Singapore (Yeoh, 1996), Zimbabwe (Dube, 2018), Scotland (Withers, 2000), and Egypt (Meital, 2007), to name but a few, are using this practice to reclaim sovereignty. This is being done through both formal channels – for example the changing of maps, street signage, and mailing addresses – and informal ones – such as the refusal in speech to use an oppressor-ascribed street name despite it being 'official'. Through both top-down and bottom-up processes (Bigon & Arrous, 2021).

2.1.2. Blackness and street renaming in the US: Practices in recent history

Over the last half-century, renaming practices in the US specific to Blackness have taken several forms, been championed by varied stakeholders, and have been shaped by a number of different objectives. Much renaming has been developer-driven. This could be characterized as a practice of renaming for profit. Whether to give an area a 'catchier' name, 'hip' feel, or to draw lines of separation absent jurisdictional or physical divisions, renaming practices shepherded on by developers and real-estate entities have often been symbolic, intentional steps away from perceptions of and associations with Blackness (Reicher, 2017).

Take for example the case of an attempted renaming of a Harlem sub-neighborhood. In the late 2010s, real-estate firm Keller Williams began using the moniker SoHa – South Harlem – to refer to a section of Harlem south of West 125th Street and north of West 110th Street. The agency used SoHa on their listings and across their advertising materials to attract new residents to the area. Press coverage at the time highlighted that existing residents felt the agency was trying to disconnect the area from its legacy of Black cultural concentration to attract non-Black renters and buyers with higher incomes (Johnson & Barker, 2017). Met with powerful community resistance, the firm reverted its naming and marketing rhetoric to 'Central Harlem', the decades-long established name of the area (Hajela & Noble Jr., 2017). This effort, and others like it, have come to be referred to by many a community-based organization as {housing} industry sanctioned gentrification accelerants (Bakare, 2017). While this example is not, strictly speaking, depictive of

a street renaming, its inclusion in this discussion is warranted as SoHa explicitly used particular streets in its demarcation and bounding of space (e.g. 'south of 125th street) and as there is nothing preventing this industry-driven approach to naming from being applied to individual streets.

To be clear, this style of place branding and other efforts of (re) naming with profit in the driver's seat are in no way exclusive to Black spaces or to the US. Toponymic commodification refers to the use of names and naming rights as revenue generating tools, positioning names as assets for sale and brands as destinations. Those with decision-making authority over public infrastructure and private enterprise have both deployed this economic development strategy, resulting in the selling of naming rights constituting a multi-billion dollar global industry (Katz & Bigon, 2023; Rose-Redwood, Sotoudehnia, & Tretter, 2021). Practices of this nature have seen an uptick over the last two decades across many geographies and built environment contexts. They have been studied, for example, in relation to mega-project developments in Minsk (Vuolteenaho & Basik, 2024), mass transit stations in Dubai (Rose-Redwood, Sotoudehnia, & Tretter, 2021), hospitals in San Francisco (McElroy, 2021), and sporting stadiums the world over (Rose-Redwood, Vuolteenaho, et al., 2021). Echoing the principles of Bourdieu's (2011) theory of capital conversion, these works of scholarship all speak to the distinctly transformative work that toponymic commodification does to exchange the symbolic capital of place naming into economic capital. The case of SoHa serves to demonstrate how Black communities have organized to successfully refute the seized power of place branding by for-profit private actors, managing to maintain the privileging of cultural symbolism held in the name 'Harlem' over the attempted distancing and erasure of Black legacy for financial gains encapsulated in the name 'SoHa'.

Profit-oriented renaming is not the only form the practice has taken with respect to Blackness in the US. Street renaming for commemoration and place-claiming have also seen undulating periods of popularity. Two major waves in this vogue came on the backs of national-scale social movements: the Civil Rights Movement and the Black Lives Matter Movement. In 1968, following his assassination, Chicago became the first city to name a street after Dr. Martin Luther King Jr. Over the following 30 years, which saw a surge in Black political representation in elected and appointed public sector roles (Johnson & Stanford, 2002), hundreds more streets were named for the civil rights leader. To give that claim further scale, King's name was attached to 483 streets across the US as of 1996 (Alderman, 2003). By 2018, that count sat at 955 (Alderman, 2018). Furthermore, these near 1000 streets now sit in good company as the names of many of the era's defining Black voices now don street signs across the nation in commemoration of their contributions to both the Civil Rights Movement and Post-Civil Rights Era of Black power-building.

Arguably less focused on commemorating specific individuals, efforts of recent years – in part, riding the momentum of the Black Lives Matter Movement – have often focused on anti-slavery and anti-confederate renamings. Though perhaps only a slight reframing, this phase of onomastic activism less so centered a lifting up of Black 'heroes' in favor of a de-spotlighting of oppressors and celebrating of Black collectivism. For example, years of organizing and activism got Dudley Square in Boston – named for Thomas Dudley, who served as governor of the Massachusetts Bay Colony, is credited with establishing the municipality of Cambridge, Massachusetts, and who was closely associated with perpetuation of the slave trade via the laws he passed and practices of enslavement he and his family engaged in – changed in 2019 to Nubian Square (Vaughn, 2019). Neighborhood residents and business owners involved in the name selection process stressed that 'Nubian' was a term that symbolized both African ancestry and history as well as thriving commerce and enterprise; two pillars they felt neighborhood residents of many backgrounds and identities could support and feel unified by (Garcia & Guerra, 2019).

It is important to note that a change of place name is not necessarily a

symbol of actual societal change. Street naming has been posited by some as a tool of appeasement in the march toward liberation (Alderman et al., 2024); a way to avoid civil unrest, and for political entities to shirk accountability for bringing about improved quality-of-life outcomes for Black individuals and doing the true work of repair. Evincing this sentiment, in 2020, Washington DC Mayor Muriel Bower rechristened a section of 16th street – about one block from the White House – 'Black Lives Matter Plaza'. Shortly after, leadership from the Black Lives Matter chapter of DC tweeted, "This is a performative distraction from real policy changes" as Mayor Bowser and her administration had not engaged with any of the chapters' demands for policy and practice reformation and funding redistribution (e.g. banning stop and frisk, defunding the police, and redirecting resources from the military and prisons to education and health) (Mask, 2020b).

Ultimately, street naming – well beyond that associated with either the Civil Rights Era or the Black Lives Matter Movement – is very much a part of 'Black livingness': the process of (self-)narrating Black stories and asserting Black humanity (McKittrick, 2021); of engaging in world-making activities in the present and for the future (McKittrick, 2022). Black (re)naming affirms Blackness in places from which it has historically been excluded or erased, and in doing so, facilitates expansion of civic/geographic imagination. Through (re)naming, an envisioning of alternatives to present realities, feelings, and experiences is made possible (D'Ignazio, 2017; Hawthorne, 2019). Therefore by extension, Black naming practices are a part of self-determination. Additionally, against a history of (typically White-) imposed nomenclature (Laversuch, 2006; Neal, 2001), the petitions, protests, and art installations that have resulted in the presence of the names of Black figures in public space reflect exercising of Black agency that shapes public consciousness through re-education and re-infrastructuring (Monteith, 2020; Solórzano & Yosso, 2002). Put plainly, the Black place-activism of street naming has long been a mechanism of storytelling and language shaping, inserting Blackness into the fundamental tools used to navigate space and ascribe value by strengthening the position for Blackness in the unending struggle over claims of who gets to 'matter' in American society (Alderman et al., 2024; Brasher et al., 2017).

2.2. Street names as independent variable

While research on street names is dominated by study of changing trends in naming conventions and what contributes to name selection (street name, in a sense, as dependent variable), some have focused their studies on the things that street names themselves have influence over or can be used to model (street name as independent variable).

Looking at Spain in the early 2000s, Oto-Peralías (2018) related economic performance with faith buy-in using street name data as proxy. He found that an indexed measure of religiosity – in this case, specific to Catholicism – based on street names was negatively correlated with economic outcomes at the local municipal level. Street names offered Oto-Peralias a large, readily available dataset that was able to speak to an otherwise difficult to quantify measure of collective values. Charlie Shackleton (2018) found that street names could be used to gain a sense of a place's past biodiversity beyond what is observable in the present. This South Africa-based study also found that despite the fact that the share of streets named after plants and animals has increased over the last two centuries, local biodiversity memory is at risk of "being subsumed into a more global one" as representation of indigenous species among this collection of street names continues to wane. These studies serve as prime examples of ways that street names can be used to facilitate growth in our understanding of different socio-spatial phenomena: the uptake of religion's relationship to economic performance, conservation of biocultural memory, and much more.

In an attempt to measure collective values, Bancilhon et al. (2021) used street names to determine gender-bias against women (a topic also studied by Zuvalinyenga & Bigon, 2021 in Zimbabwe), which professions are held in highest esteem, and the degree to which cultural histories have been shaped by local versus global influences (also studied by Adebanwi, 2012 in Nigeria). They focused on Paris, London, Vienna, and New York using street name datasets that span from 1666 to 2018. They found that Paris exhibits the greatest gender-bias and Vienna the least (with 4 % and 41 % of streets named after women, respectively). Though celebrated professions evolve overtime, Paris and Vienna were found to most value artists and writers, London its royals, and New York its civil servants. With 45 % of streets named after foreigners, Vienna exhibited the greatest receptiveness to outside influences, while New York exhibited the highest degree of local-centrism with just 3 % of streets named after foreigners. This work reflects the cultural analysis capabilities of street name data.

Others have looked perhaps more explicitly at the direct influence that street names have over facets of daily life. Abrahamian (2017) tested how the street name of one's primary residence affects concepts of national identity. The study found that Yerevan residents living on streets named after military affiliated figures view Christianity as less important to Armenian identity than do those living on streets named after culture affiliated figures. Villamil and Balcells (2021) assessed the impact of street name changes in Spain on political support for certain parties. They found that the removal of Francoist street names significantly contributed to growth in electoral support for a new far-right party. Municipalities where said street name replacements were made saw, on average, a 6 % support increase for this far-right party over municipalities that did not undergo changes to Francoist commemorative street names. Works like these demonstrate that street names and naming practices are not only reflections, they are also catalysts.

Finally, fewer than a handful of studies have looked at the relationship between street names and housing prices. Agarwal et al. (2022) found that homes in Sydney, Australia whose addresses fall on streets with longer names (by letter count) experience a pricing premium of 0.6 %. Properties on 'uniquely' (i.e. infrequently) named streets have, on average, a 1.6 % sales prices premium over those on 'commonly' (i.e. frequently) named streets. They also found that this street name uniqueness premium is greatest at luxury price points. Relatedly, Humphries and Rascoff (2015) of the real-estate marketplace company Zillow found that houses on named streets across the US are, on average, worth more than those on numbered streets – by as much as 33 % more in some cities. These works shed light on the significant role played by street names in real-estate valuation.

2.3. Gaps in the street name literature and research question

The research landscape on street names has undergone significant expansion over the last three decades, with particular increase in rate of publication on the topic in the last five to ten years. Still, as with any research subject, gaps in the literature remain. We find three gaps distinctly noteworthy. Firstly, there is a dearth of work relating street naming and anti-displacement protections. Factors shaping ongoing US housing crises of the last 20 or so years (e.g. stifling unaffordability and the glacial pace of housing supply increase) show no signs of righting themselves any time soon (Botros & Lake, 2023). As a result, worrisome patterns of displacement are likely to continue. Protections that support residents vulnerable to being displaced in their efforts to remain in place, lessen their housing insecurity, and increase their housing choice must therefore advance as well. Whatever role street naming can play in this should be studied.

Secondly, potential for growth exists under the research umbrella of quantification of street name effects on daily life. As previously mentioned, 'Streetonomics' exists, but is still very much in its infancy. A greater collection of quantitatively measured impacts of street names on elements of personal, social, and societal experiences may increase the operationalization of the tool of street naming among changemakers (e. g. politicians, planners, developers, community organizations).

Thirdly, there is much room in the field for an increase in the amount of work that centers Blackness. In the US, Martin Luther King Jr.

boulevards have been the topic of a significant amount of street name research (e.g. Alderman, 2012; Alderman & Inwood, 2013; Mitchelson et al., 2007; Paul, 2023; Tiwari & Ambinakudige, 2020). However, little Black-centered work has been done beyond that. This is a potential growth area, especially as cities move away from a commemorative lens that is predominantly male and national in scale to one that increasing focuses on local (City of Eugene, 2019) and woman-identify figures (Hoeffer, 2022).

In an attempt to shrink some of these gaps, we tackle the following questions: All else equal, to what extent does being located on a street named after a Black cultural icon affect a property's value in a gentrifying neighborhood?; How does being situated proximately to a Black icon-named street impact change in an area's Black population share over time?

2.4. Factors shaping housing purchase decision-making

This question closely relates to the factors that influence housing purchase decisions. Before discussing those factors, however, it is important to note that not all actors in the housing market have true choice – also often called *equal opportunity to participate*. Many people are systematically barred from fully participating in the housing market. These barriers include but are not limited to: discriminatory lending practices (Holloway, 1998; Wyly & Holloway, 2002), lacking enforcement of civil rights protections (Kirk, 2018; Solomon et al., 2019), and a host of other government-backed prejudicial housing policies such as exclusionary zoning and racial covenants (Richardson, 2024). Those commonly barred include people of color, immigrants, people with disabilities, people with criminal records, those unbanked, and those undocumented.

For a consumer to make a housing choice, two things have to happen. She must know that an option exists, and it must be deemed by her to meet a satisfactory combination of her wants and needs (Gibler & Nelson, 1998). Both of these pieces have influence over housing purchase decision-making.

2.4.1. Knowledge of a purchase opportunity

The need to first know a property is for sale before one can consider buying it is clear and warrants no further discussion. However, even how we come by knowledge of a housing option has influence over our decision to purchase or not. Gibler and Nelson (1998) found that purchase opportunities learned of via word-of-mouth receive a selection likelihood premium – are given greater weight in choice calculations – than opportunities learned of any other way (e.g. seeing a 'for sale' sign in person or doing one's own online search). This is in part because we conflate the credibility of the information with the way we feel about the person it came from, and word-of-mouth information is likely to reach us from within our existing social networks; people we align with in some way or are fond of (ibid). It is also in part because word-of-mouth information is often delivered more vividly, more passionately than, for example, pallid printed communications (Herr et al., 1991).

Additionally on the subject of purchase opportunity information dissemination, advertising plays a significant role in option selection. Levitt and Dubner (2005) found that potential buyers attached greater value to certain phrasing used in property advertisements than others. Xiong et al. (2024) found that properties that used ads featuring 3D-viewing features and virtual walkthroughs also received valuation premiums among potential buyers. These added valuations get absorbed into bid-or-pass determinations.

Finally, ease of search also impacts purchase decisions. This includes several factors such as the level of marketplace competition, how often properties hit the market, and volatility and predictability of the market as well (Dieleman, 2001; Shiller, 2015; Turner, 2003).

2.4.2. Wants and needs with decision-swaying power

Beyond needing to be price-eligible to even consider purchasing a home, the collection of factors that combine to inform buyer decision-making is extensive. Several elements that one could categorize as 'neighborhood factors' have impact. For example, the location of a property matters greatly. Buyers place value on being proximate to places they need to be regularly (e.g. work, school, healthcare facility), want to be more often (e.g. cultural and commercial sites like museums, theatres, shopping and dining sites), and are viewed as desirable (e.g. waterfront space and well-maintained parks) when making their bid decisions (Clark et al., 2006; Thanaraju et al., 2019; Chia et al., 2016; Muhammed er al., 2007). They also take into account the reputation of a neighborhood, valuing not only their own reflections on a place, but also the reflections of others (Chin, 2016; Salleh et al., 2015). Unsurprisingly, research has revealed that this care for reputation closely aligns with the quest – by way of ownership – for particular social status (Gibler & Nelson, 1998).

Property structural attributes also play a part in decision-making processes. Structural attributes include both dwelling characteristics, like number of bedrooms, and preferential design tastes, such as Mid-century or Victorian stylings (Abhang & Ravi Kumar, 2024; Chia et al., 2016; Mariadas et al., 2019). Additionally, for some buyers, structural elements related to ability are firm parameters in their bid-or-pass calculations. For example, stairs with no vertical movement alternative (e.g. an elevator), or a spatial layout that prohibits the use of a mobility assistance device such as a wheelchair would make certain options not just unenjoyable but unlivable for buyers who are reliant on these features (Burns, 2002; Granbom et al., 2021; Imrie & Hall, 2003).

Beyond neighborhood and property factors, the literature has widely found elements of personhood to be of key significance. For example, for some racial groups, living surrounded by other members of the same race is an important housing selection criterion (Hassan et al., 2021; Sharma, 2018). Other research finds that spatial attachment – to a city or a type of property – heavily influences choice and that spatial attachment varies significantly by gender (Hidalgo & Hernandez, 2001). Studies have also found that feelings about numerology (Chia et al., 2016), as well as religious names and symbology (Mei-Hui et al., 2019) work their way into purchase choice determinations. Family life-cycle and its relationship with household composition – for example, the presence of school-aged children – have been found to shape buyer choices (Abdullah et al., 2012; Abhang & Ravi Kumar, 2024; Muhammad et al., 2007; Mulder & Hooimeijer, 1999; Sharma, 2018). Similarly, first-time buyers have demonstrated having different selection criteria than other buyers at different points of their life-cycle (Hassan et al., 2021).

Buyers with low incomes make different bid-or-pass calculations than middle income buyers who also differ from high income buyers. Illustrative of some of this difference is the reality that middle-income buyers more heavily weigh the potential return-on-investment in making their housing purchase decisions than low-income buyers (Abhang & Ravi Kumar, 2024; Kullmann & Siegel, 2005; Shiller, 2011). High-income buyers place greater selection premiums on security-related factors than other income groups when considering purchasing housing (Clark et al., 2006; Gibler & Nelson, 1998; Sharma, 2018; Thanaraju et al., 2019). They also care more about developer and realtor branding (Abdullah et al., 2012; Chia et al., 2016), as well as design fixtures associated with 'prestige' than do potential buyers of other income groups (Salleh et al., 2015).

2.4.3. Othering and belonging in decision-making

There are several factors related to othering and belonging that have proven influence over housing purchase decision-making. It is this category of decision-impacting elements that speaks most directly to this work's conceptual foundation.

Studies have found that self-concept – a notion that includes characteristics and abilities, goals and life objectives, and perception of self in relation to others – is of import. Buyers make property purchase choices informed, in part, by their concept of 'actual' self – who they see

themselves as presently – as well as choices that they feel could help achieve their 'ideal' self – who they want to be (Gibler & Nelson, 1998; Manzo, 2003; Sirgy, 1982; Sirgy et al., 2005). This link between identity and property is somewhat amorphous, but no doubt present. Some have attempted to clarify the link by framing it in relation to the idea of home. They state that the concept of home cannot be unlinked from shelter, which, in general, cannot be unlinked from physical structure (i.e. property). Following this path, property cannot be severed from feelings of identity and meaning-making (Salzman & Zwinkels, 2017). Perhaps put more plainly, "Real estate is part of the extended self, an object that helps to form identity (Gibler & Nelson, 1998)." Ultimately, there is evidence to support that, at least in some way, we see ourselves as being of the structures we own.

Potential buyers also make purchases that mirror the choices of the reference groups they associate themselves with (Bach et al., 2007; Pais et al., 2014; Sharma, 2018). Entertain the following hypothetic train of thought: 'artists live in Harlem, I am an artist, I should live in Harlem'. In this hyper-simplified example, 'artists' serve as the reference group influencing this buyer's bid-or-pass decision. This is closely related to herd and culture-conforming behavior, which also impact housing decision-making (Fost, 1993; Shiller, 1995). For example, in a place that champions anti-gentrification culture, not moving to a low-income and/

or of color neighborhood might be of importance to a middle-income White home buyer; this would demonstrate culture-conforming. However, if 'everyone' is moving to these neighborhoods, making them the places of the moment, the very same White homebuyer may feel heightened pressure to purchase a home there all the same; this is the pressure of the herd.

3. Methodology

3.1. Theory of change

Against this backdrop, the theory of change outlined in Fig. 1 underpins our research question and design. Here, theorized effects of property values are marked in blue, while effects on area racial composition are shown in pink. We trace the following impact flow: housing purchase decision is affected by many things. This set of things includes elements related to self-concept, reference groups, culture-conforming, and herd behavior. Each of these is related to property value and area racial composition primarily through an interpretation of belonging or not belonging. Belonging determination related to streets named after Black cultural icons gets operationalized via several behavior paths for potential buyers:
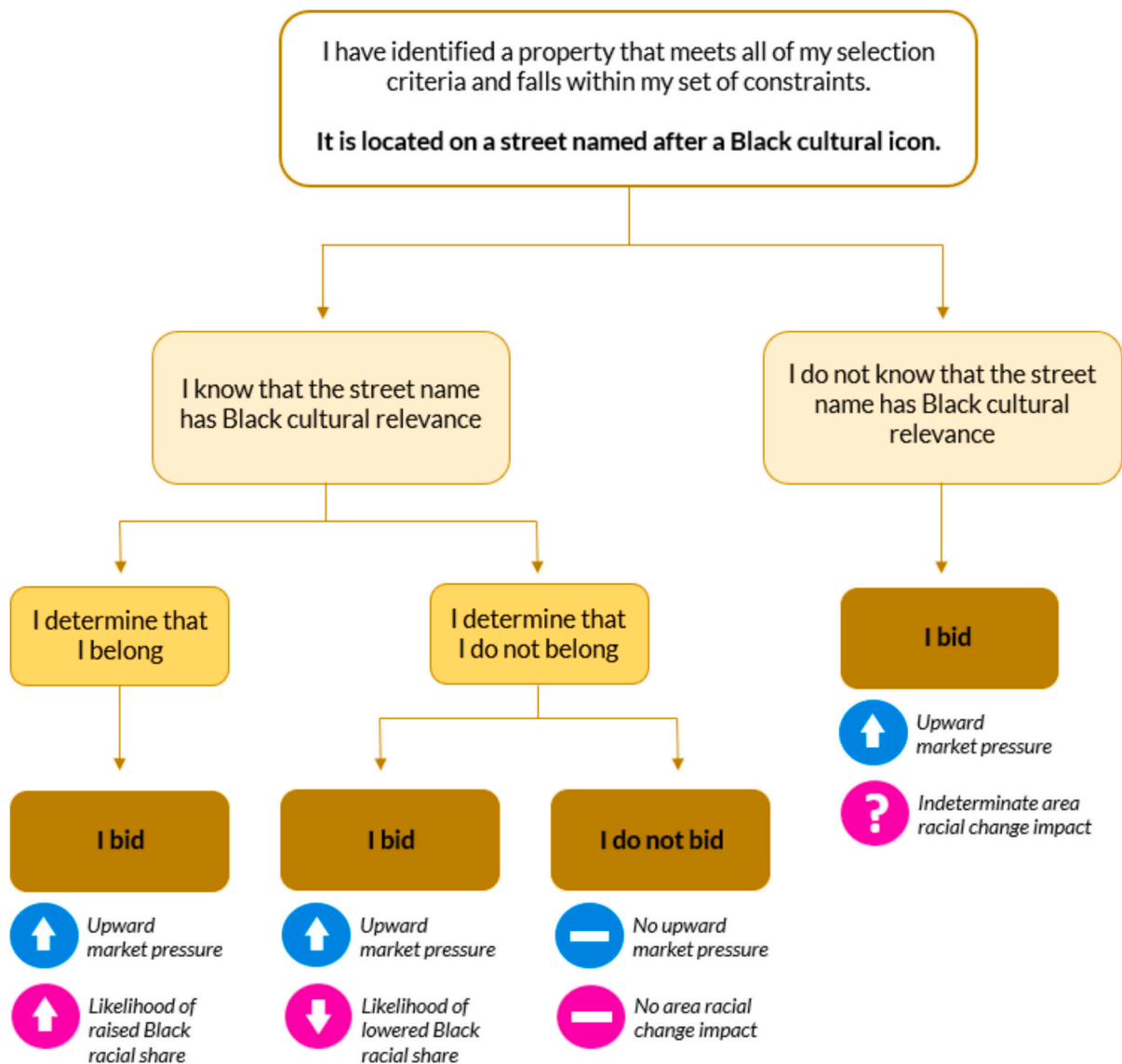

Fig. 1. Theory of change diagram. Flow of Impact from street name to housing market pressures.

Path 1 - I know that this street is commemorative of Black culture in some way. I feel I belong here. I choose to make an offer.

Path 2 - I know that this street is commemorative of Black culture in some way. I feel I do not belong here, but that feeling is not strong enough for me to forego trying to buy. I choose to make an offer.

Path 3 - I know that this street is commemorative of Black culture in some way. I feel I do not belong here and knowing that impacts my desire to try and buy so much so that I choose not to make an offer.

Path 4 - I do not know that this street is commemorative of Black culture in any way. I choose to make an offer.

The lessening of demand that results from Path 3 could, one would expect, result in weaker upward pricing pressures on streets named after Black cultural icons relative to otherwise comparable properties (comparable across all other decision-impacting variables, that is) in the same neighborhood on other streets. With respect to area racial composition, under the assumption that a sense of belonging may stem from a shared racial identity, Path 1 could render an influx of Black residents in an area with Black place-claiming through street naming. Relatedly, if a sense of non-belonging is similarly racially driven, then Path 2 could render an influx of non-Black residents. It is from this base that our work extends.

3.2. Harlem context

New York City, featuring increasing housing unaffordability (Zapatka & de Castro Galvao, 2023) and accelerating rates of neighborhood-level racial transition (Sutton, 2020) combined with well-established majority Black neighborhoods (Sanjek, 2000) and a comparatively extensive networks of Black-icon-named roadways, serves as the perfect context in which to explore the potential interplay between race, street names, and both housing prices and neighborhood demographics.

3.2.1. Harlem as a widely recognized hub of black cultural significance

Since it's renaissance in the early 20th century, Harlem has come to represent the cultural capital of Black America for many, both within and outside of the US (Fearnley, 2018; Mallory, 2011; Spahr, 2015). Though patterns of Black residential clustering have changed significantly over time, particularly in the last few decades (Rennert et al., 2023), the neighborhood unquestionably holds historical relevance has a stronghold of Black artistic excellence, Black political power-building, and Black collective wellbeing (James, 2018; Schiffman, 1984).

This magnitude of renown is highly relevant to our study. As described in the discussion of this work's theory of change, the mechanism by which internalized belonging or non-belonging would have influence over housing price and area racial composition is dependent on would-be buyers having at least some awareness of a place's (potential) importance to Black America.

3.2.2. Harlem's concentration of streets eligible for analysis

Further contributing to Harlem's high suitability to this work is the quantity and length of streets the neighborhood has that are officially named after Black cultural icons. Spurred on by the Civil Rights Movement, New York City in the 1970s and 80s saw a wave of street renaming for Black cultural icons and others systematically oppressed and marginalized by existing structures of power (e.g. immigrants, Indigenous peoples, queer icons, women) (Jelly-Schapiro, 2021). With specific respect to Black icons, and as a result of local organizing and engagement with City Council and the Committee on Parks, Recreation, and Cultural Affairs by community groups, this practice was particularly widely exercised in the neighborhood of Harlem (Rose-Redwood, 2008).

Over these two decades, the following Black icon street renamings were made in Harlem. Seventh Avenue was changed to Adam Clayton Powell Jr. Boulevard in 1974. Eighth Avenue to Frederick Douglass Boulevard in 1977. In 1984, 125th Street became Martin Luther King Jr. Boulevard, and in 1987, what was Sixth Avenue then Lenox Avenue – renamed in 1887 – became Malcolm X Boulevard. In total, these streets

account for 8.5 miles of roadway (see Fig. 2).

But what is meant by 'officially' named streets, and why is that distinction important? For a street name to be considered 'official', it must be the assigned name of a street in The City Map, maintained by the City of New York. Mailing addresses used by postal services and official records – such as deeds, mortgages, and tax documents – all pull from the City Map and, therefore, these types of records and place identifiers also all use 'official' street names.

In addition to officially renamed streets, dozens of street segments in Harlem have 'honorarily' been named after Black cultural icons. An honorary street name, also sometimes referred to as a 'secondary' street name or 'co-name', is a name given to a street that does not replace the street's official name and, under Local Law 28 of 1992, does not require alteration to the official City Map. Still, honorary street names go through a bureaucratic process that requires bill approval by City Council or the Commissioner of Parks and mayoral signoff. The result of this naming practice is a street with two names: an official street name, which would be a part the mailing address for any property situated on that street, and an honorary street name not a part of said mailing address. It is not uncommon for as many as fifty to one hundred honorific street names to be awarded annually citywide. For example, in the year 2018 alone, the City honorarily co-named 164 streets.

The City of New York does not have a single, official data source detailing their honorarily named streets. However, the NYC Honorary Street Name Honoree Index, created and maintained by former City employee Gilbert Tauber, is widely considered the most comprehensive and up-to-date tabulation of this information (Moon, 2022; Schlossberg, 2015). Tauber's index is informed by his fine-toothed review of City Council committee reports and mayoral press release specific to street naming between 1992 and 2022. According to this dataset, 458 street segments have received honorary names just in the borough of Manhattan. Of these 458, 47 have been honorarily named after Black people renowned to the extent that they have their own Wikipedia page. These included, for example, Count Basie Place, James Brown Way, Paul Robeson Boulevard, Willie Mays Drive, Matthew Henson Plaza, Althea Gibson Street, and Dr. Betty Shabazz Way.

Though the number of streets honorarily named after Black cultural icons far exceeds the number of officially named streets, we decided not to use these in our analysis for several reasons. Firstly, we found honorary streets to be inconsistently signed. In some cases, both a street's official name and its honorary name are posted, stacked one atop the other, on the street signpost. In other cases, the honorary street name is not visible in the field at all. Relatedly, honorary street names also do not appear on real-estate platforms where would-be buyers are scanning through available listings (e.g. Zillow or Redfin). Only via online records would one know that the street has been honorarily named after someone. Secondly, honorary streets are often very short street segments. Sometimes, as in the case of the segment named for legendary artist activist couple Ossie Davis and Ruby Dee, they are no longer than a single intersection (Paolicelli, 2019). Finally, in our tabulation of honorary street names, we found that this classification of street commonly bares the names of individuals who would not be considered widely known (e.g. fallen service persons – fire or police department, for example – or local children devastating involved in car accidents). All of these factors made honorary street names ill-suited to our analysis.

3.2.3. Harlem's socio-demographic change over recent decades

Finally, Harlem further makes for a primed site due to its experiences of neighborhood change. The story of the last four decades for Harlem has been one of decreasing shares of Black residents paired with upward trending median household incomes and rent costs.

These changes have been particularly pronounced for Central Harlem, a sub-neighborhood of Greater Harlem, where the area's Black population had historically been most concentrated (see Table 1). Work from the New York University Furman Center (2016) that assessed the state of gentrification by neighborhood across the entire city of New
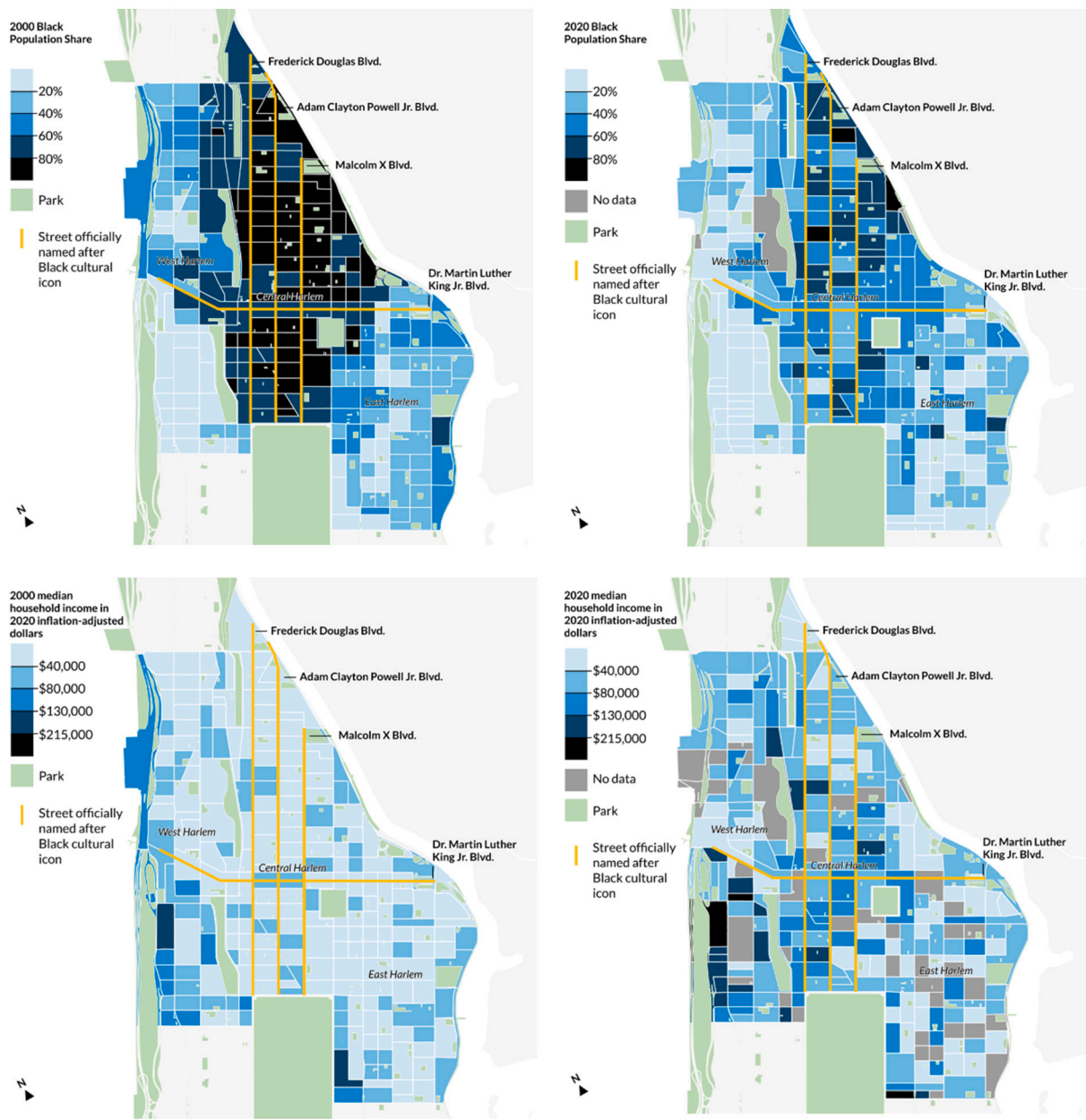
Fig. 2. Changing socio-demographics of Harlem: 2000–2020. **Sources**: American Community Survey 5-year estimates.

Table 1
Central Harlem neighborhood characteristics.

	Black Population Share	White Population Share	Median Household Income 2020 adjusted US dollars	Real Median Gross Monthly Rent 2020 adjusted US dollars
1990	88 %	1 %	$29,823	$837
2000	77 %	2 %	$31,583	$912
2010	54 %	10 %	$42,608	$1060
2020	45 %	18 %	$50,580	$1333

Sources: American Community Survey (ACS) estimates for 2006–2010; Decennial Census of Population and Housing 1990, 2000, 2010, 2020; NYU Furman Center *State of NYC's Housing and Neighborhoods*.
Notes: 'White' refers to non-Hispanic White residents.

York between 1990 and 2015 found that Central Harlem saw a 53.2 % increase in average rent over this time period; the second largest increase of any neighborhood in the entire city. Comparison of this rate of change to the citywide average over the same time period of 22.1 % (ibid) reveals the severity of change taking place and further strengthens Harlem's position as an apt case study.

Though perhaps not as starkly as in Central Harlem, the rest of Greater Harlem has also experienced significant economic and demographic changes in recent years (see Fig. 2). For example, between 2010 and 2020, the population of Greater Harlem – comprised of East, Central, and West Harlem – increased by 18,754 White residents and decreased by 10,805 Black residents (Garber, 2021). Average one-bedroom rent across all of Harlem was $2661 in 2023 (Saltonstall, 2023). That is up 23 % from 2010 when average one-bedroom rent was $2051 (in 2023 inflation-adjusted dollars). The citywide average change in this metric over the same period was an increase of 16 % (NYU Furman Center, 2023).

Taken in concert, the neighborhood's historical importance to both

realities and perceptions of Black America, its comparatively high availability of relevant data, and the magnitude of its eco-racial composition change of late make Harlem an ideal context in which to situate this research.

3.3. Data and analytical approach: Property value

We set out to isolate the effect that naming a street after a Black cultural icon may have on housing prices. Either a difference-in-differences (DiD) – useful for comparing a particular outcome between groups before and after an intervention – or a repeat sales (RS) – which would compare the sales price of the same property to itself over time – modelling technique would have been apt in running this analysis. (For greater detail on difference-in-differences see Banzhaf, 2021 and for repeat sales see Oust et al., 2020). Unfortunately, data limitations prohibited the use of either of these regression designs.

These limitations included the fact that official renaming of Black icon-named streets in Harlem occurred in the 1970s and 80s. Because our data featured nearly no observations before 2000, it was not possible to establish true pre- and post-periods required for DiD. Additionally, we lacked sufficient volume of multiple sales of the same properties to take a RS approach. Instead, we employed an ordinary least squares (OLS) hedonic pricing model with panel data from 2000 to 2020 to study the effect that being on a Black-icon named street had on housing sale prices over that two decade period of interest, controlling for other property and neighborhood characteristics.

We used 2000 to 2020 property records data from First American Data & Analytics. This source provides property-level mortgage transaction data, including information about property characteristics, deeds, and assessments. To restrict the data for NYC to just the neighborhood of Harlem, we utilized the tigris packages and shapefiles of NYC neighborhoods to crosswalk properties in New York County (i.e. Manhattan) and within the neighborhood of Harlem. Treated observations were sales of properties whose address was on any of Harlem's four officially Black icon-named streets: Adam Clayton Powell Jr. Blvd, Malcolm X Blvd, Frederick Douglass Blvd, and Dr. Martin L King Jr. Blvd.

From the First American data, we utilized the home sale price, sale year, and property-level characteristics (e.g. unit size, building age, single or multi-family structure) associated with each transaction. The property characteristic data had some idiosyncratic characteristics. For example, a sizable amount of the bedroom and full bathroom data skewed toward zero. Additionally, we encountered 75 % missingness for the living area square footage data. We addressed this concern of not having an exact measure of unit size by instead creating a proxy: dividing building area square footage by the number of residential units in a building. We calculated building age by subtracting the year a unit was built from the year 2024. We included the square of this term in our regression to normalize its non-linear relationship with sale price; a premium on very old and very new properties.

The process of data cleaning entailed the following. We filtered the First American property records by land-use code and included only residential properties. These were then typologized as either single- or muti-family style structures. We removed bulk sales transactions, open-ended mortgages, non-arm's-length transactions, and transactions with missing sales year or price information. About 14.7 % of observations were removed due to missing sales or price information. Additionally, we converted all sales prices into 2020-inflation adjusted dollars and excluded outliers, such as properties with sales prices below $5000 and above $5000,000. These upper and lower bounds were selected to exclude values that were likely data errors – such as single digit amounts – and extreme values at the far edge of the sale distributions. Overall, the filtering of outliers resulted in a dropping of a further 2.5 % of sales observations from our initial dataset.

In addition to the property records data, we obtained information regarding area characteristics to incorporate as neighborhood-level controls. Block group data was preferred, so that the characteristics

influencing property price could be captured differently across various sub-neighborhoods within the larger area of Harlem. First, we utilized the tidycensus() package in R software from the 2016–2020 US American Community Survey data to obtain three neighborhood-level characteristics at the block group level: median household income, percent of household that are renters, and percent of households below the poverty line.

Beyond these, informed by the previously discussed housing pricing and purchase decision literature, we collected neighborhood characteristic information specific to elements of the built environment. These included locations of public parks, health centers, universities, and subway stations. To incorporate this data into our regression analysis, we identified the nearest of each of these features and calculated the distance in miles to the residential property in question. After the data was compiled, both property and neighborhood characteristics were normalized prior to being included in the regression models, and the home sales price was logged.

One further action was taken to capture facets of streetscape with potential influence over housing price. Traffic volumes, as measured by total vehicle counts over the course of a day, have been found to be negatively capitalized into residential property values for reasons such as their relationship to noisiness, to negative health and environmental outcomes, and to feelings of vehicular unsafety (Larsen & Blair, 2014; Ozdenerol et al., 2015; Rennert, 2022). Traffic volume relates to the carrying capacity of a street. Given this, we characterized all properties in our dataset by whether their address fell on a numbered or lettered – meaning a non-number word – street. We did this because, with rare exception, numbered streets in Harlem host one-way traffic via a single travel lane, while lettered street host two-way traffic via one to three (most commonly two) travel lanes in either direction. The consistency of this reality allowed us to use lettered versus numbered street classification as a proxy for traffic counts in the absence of a complete, block-level, neighborhood-wide dataset. We checked this assumption against the NYC Open Data Automated Traffic Count data from 2023, which provides a sample of count sites throughout Harlem. This process confirmed that indeed, average daily traffic volumes on lettered streets were higher than those of numbered streets.

Descriptive statistics for the compiled data set to measure the impact of treated streets on sale price are shown in Table 2. Note that the 'non-treated' group here refers to transactions in Harlem during the study period whose address was not on a street named for a Black cultural icon.

Table 2

Descriptives for property and neighborhood characteristics. Summary statistics for property and neighborhood characteristics on treated and non-treated streets in harlem between 2000 and 2020.

	Treated	Non-Treated
Sale Price	$375,329.40***	$653,145.70
Bedrooms	0***	0
Building Age	50.16***	70.76
Approximate Unit Size (sq ft)	1078.76***	1246.56
Residential Type (1 is single-family housing)	1.4 %***	2.8 %
On a Lettered Street (vs. numbered)	99.70 %***	19.53 %
Median HH Income	$80,263.69***	$118,486.10
Percent Renter	80.54 %***	66.46 %
Percent Poverty	15.72 %***	7.88 %
Distance to Nearest Park (miles)	0.05***	0.09
Distance to Nearest Subway Station (miles)	0.16***	0.18
Distance to Nearest Health Clinic (miles)	0.17***	0.16
Distance to Nearest University (miles)	0.28***	0.38
N	1783	52,547

Notes: Table shows mean of values in the study period in Harlem, NYC for the treated (observations on named streets) and non-treated observations. Two-sample *t*-tests were used to compare means across the treated and non-treated group.

$* = p < 0.1$; $** = p < 0.05$; $*** = p < 0.01$.

For this OLS hedonic pricing regression, we estimated the following equation:

$$ln(sale\ price)_{it} = \beta_0 + \beta_1 Treated\_Street_{it} + \beta_2 X_{it} + \beta_3 Z_{it} + \lambda_t + \varepsilon_{it}$$

where the outcome variable is the natural log of the sale price for property record i and sale year t; $Treated\_Street_{it}$ is the variable of interest, a binary variable measuring whether or not a given property is located in renamed street; X_{it} is a set of property characteristics, including number of bedrooms, bathrooms, approximate unit size, and building age; Z_{it} is a set of neighborhood characteristics, including median household income, percent of household that are renters, percent of households below the poverty line, and distance to nearest public park, health clinic, subway station, and university, respectively; λ_t is a set of year dummies; and, ε_{it} is the error term. Robust standard errors were clustered at the block group level.

3.4. Data and analytical approach: Racial composition change

As a secondary line of questioning, we set out to examine changes in area racial composition. To do this, we ran a second OLS regression measuring how the independent variable of a given block group having a treated (Black icon-named) street cross through it impacted its change in share of Black residents between 2000 and 2020. Unlike our first regression, where the focal unit of analysis was at the property level, the focal unit of this analysis was the block group.

We utilized the tigris package's and shapefiles of NYC neighborhoods to obtain all block groups in Harlem. We built our treated independent variable, a binary indicator of whether a treated street intersects with a given block group, by implementing a spatial intersection. We then constructed our outcome variable of interest, the change in the share of Black residents in a given block group between 2000 and 2020, by using the tidycensus() package in R software to pull 2000 and 2020 US Decennial Census data on total population and population of Black residents in a given block group, and rendered the difference between the demographic share in 2020 and 2000.

For the control regressors, the same neighborhood characteristics of median household income, percent of households that are renters, and percent of household below the poverty line featured in the sales price regression were used here. We also utilized the same shapefiles on NYC public parks, health centers, universities, and subway stations of our sales price regression to calculate the amount of a given amenity available within a 0.25 mile radius from the block group.

Descriptive statistics for the compiled data set to measure the impact of treated streets on the change in racial share are shown in Table 3. Here, the non-treated group refers to block groups in Harlem during the study period not intersected or bordered by any street named after a Black cultural icon.

Table 3
Descriptives for the ols regression on demographic difference at the block group level. Summary statistics for neighborhood characteristics on treated and non-treated block groups in Harlem between 2000 and 2020.

	Treated	Non-Treated
Difference in percent Black	−19.72 %***	−13.05 %
Median household income	$51,863.93***	$82,446.53
Percent renter	83.53 %***	79.52 %
Percent poverty	16.00 %	17.41 %
Total parks in 0.25 mile radius	29.99***	21.53
Total subway stations in 0.25 mile radius	5.28***	4.03
Total universities in 0.25 mile radius	0.49***	0.70
Total health centers in 0.25 mile radius	7.58***	4.75
N	120	1147

Notes: Table shows mean of values in the study period in Harlem, NYC for the treated (block groups on treated streets) and non-treated observations. Two-sample t-tests were used to compare means across the treated and non-treated group.
* = p < 0.1; ** = p < 0.05; *** = p < 0.01.

Black cultural icon.

For this OLS regression, we estimated the following equation:

$$difference\_racial\_share_i = \beta_0 + \beta_1 Treated\_Street_i + \beta_2 X_i + \beta_3 Z_i + \varepsilon_i$$

where the outcome variable is the difference in the percent of Black individuals between 2000 and 2020 for block group i; $Named\_Street_i$ is the variable of interest, a binary variable measuring whether or not a given block group is intersected by a renamed street; X_{it} is a set of neighborhood characteristics, including median household income, percent of household that are renters, and percent of households below the poverty line; Z_{it} is a set of frequencies of neighborhood amenities, including the amount of public parks, subway stations, health clinics, and universities within a 0.25 mile radius from given block group i; and, ε_{it} is the error term. Robust standard errors were clustered at the block group level.

4. Results

Our regression results largely align with our theory of change (see Table 4). We find that, all else equal, residential properties on streets named after Black cultural icons experience lower sales prices than residential properties on other streets in the same neighborhood. In other words, Black-icon street naming gets negatively capitalized into the housing market. With all property and neighborhood controls included (model 6), the size of the effect of a home being on a Black icon-named street is, on average, −13.8 % on sale price at the 1 % significance level.

Outcomes for our control variables generally mirror the literature on housing price influencers. These points of consensus with respect to property characteristics include our findings that on average: single-family properties experience a price premium as compared to multi-family properties; newer homes sit at higher price points than older homes though not in a purely linear fashion as historic properties are also subject to sale price premiums ('building age squared' variable); and, quite intuitively, property size positively affects sale price. With respect to conditions of the built environment, we find, as have others before us, that housing sale price decreases with greater distances from subway stations and from universities. Our named-vs-numbered proxy for roadway carrying capacity (i.e. traffic) also performs in alignment with previous findings demonstrating negative and statistically significant relationship with sales price. Our neighborhood factors of shares of area residents renting and living below the federal poverty threshold round out the collection of as-expected performers both returning negative impacts on housing value. The outcomes associated with parks and health centers reveal that these are seen as disamenities in our Harlem context, meaning that sale prices increase as distance from these places increases. For greater discussion of why and how the disamenity effects of these two factors are reflective of racialized, often stigmatized realities we encourage engaging with the works of Harris et al. (2021), Castillo-Castillo et al. (2025), Byrne and Wolch (2009), and Rivas et al. (2019).

Our second regression, which measures how being intersected by a Black icon-named street relates to the change in share of Black residents in a given block group from 2000 to 2020, renders a negative effect (see Table 5). This means that, compared to block groups not intersected by Black icon-named streets, treated block groups lost larger shares of their Black residents over the twenty year interest period. The size of the effect observed was, on average, a 20 % larger Black population share loss.

Given the vast demographic change experienced in Harlem between 2000 and 2020 (see Fig. 2), one interpretation of these findings is that the effect of gentrification and lack of affordability throughout the neighborhood may have overwhelmed the potential effect of racialized place-guarding a Black icon-named street could have on demographic composition at the block group level. Phrased differently, the lower housing prices of Black icon-named streets, as found in our first line of

Table 4
OLS regression results for the dependent variable of sale price. OLS regression results for property and neighborhood characteristics of properties on treated and non-treated streets in Harlem between 2000 and 2020.

| | *Dependent variable:* Log of Sale Price | | | | | |
	(1)	(2)	(3)	(4)	(5)	(6)
Treated Street	−0.282***	−0.300***	−0.308***	−0.219***	−0.183***	−0.138***
	(0.031)	(0.025)	(0.031)	(0.032)	(0.032)	(0.032)
Number of Bedrooms	0.013	0.011*	0.013*	0.013*	0.013*	0.012*
	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
Number of Full Bathrooms	−0.005	−0.002	−0.005	−0.005	−0.005	−0.005
	(0.009)	(0.006)	(0.009)	(0.009)	(0.009)	(0.009)
Approximate unit size (square feet)	0.064***	0.062***	0.060***	0.062***	0.061***	0.063***
	(0.004)	(0.015)	(0.004)	(0.004)	(0.004)	(0.004)
Building Age	−0.120***	−0.039	−0.078***	−0.047***	−0.175***	−0.186***
	(0.029)	(0.027)	(0.030)	(0.030)	(0.032)	(0.032)
Building Age (squared)	0.119***	0.037	0.079***	0.051*	0.192***	0.210***
	(0.029)	(0.028)	(0.030)	(0.031)	(0.033)	(0.032)
Residential Type (1 = single-family housing)	0.408***	0.447***	0.464***	0.461***	0.432***	0.449***
	(0.027)	(0.039)	(0.027)	(0.027)	(0.027)	(0.047)
Distance to nearest park			0.047***	0.038***	0.035***	0.018***
			(0.005)	(0.005)	(0.005)	(0.005)
Distance to nearest subway station			−0.035***	−0.036***	−0.029***	−0.014**
			(0.005)	(0.006)	(0.006)	(0.006)
Distance to nearest health center			0.045***	0.051***	0.039***	0.016***
			(0.005)	(0.005)	(0.005)	(0.005)
Distance to nearest university			−0.085***	−0.072***	−0.058***	−0.048***
			(0.006)	(0.006)	(0.006)	(0.006)
Property is on a lettered street (vs numbered street)				−0.113***	−0.199***	−0.086***
				(0.013)	(0.013)	(0.013)
Percent renter					−0.297***	−0.099***
					(0.024)	(0.025)
Percent poverty						−1.025***
						(0.040)
Constant	12.876***	12.671***	12.659***	12.693***	12.897***	12.865***
	(0.005)	(0.006)	(0.021)	(0.021)	(0.025)	(0.025)
Standard Errors	Clustered	Clustered	Clustered	Clustered	Clustered	Clustered
Year Dummies	No	Yes	Yes	Yes	Yes	Yes
Observations	43,685	43,685	43,685	43,685	43,685	43,685
Adjusted R²	0.014	0.043	0.052	0.054	0.057	0.070

Note: All regressors are normalized to ensure comparability across different scales. Unit of analysis is at the property transaction level.
* = p < 0.1; ** = p < 0.05; *** = p < 0.01.

analysis, would support a wider range of eligible housing market participants irrespective of race, pricing fewer people out. As Black people arguably face greater barriers to participating competitively in the housing market than do members of other races (Archer, 2019; Cammett, 2015; Korver-Glenn, 2021; Taylor, 2019), would-be residents of other races may be capitalizing on these lower prices more frequently than Black would-be residents. As a result, any potential place-guarding through race-based belonging determination that Black-icon named streets would offer is being outweighed by the price depreciating effects of those very same streets.

Another interpretation centers the high share of renters in treated block groups as compared to non-treated block groups (see Table 3). Areas with higher owner-occupancy rates have been found to experience a slower pace of neighborhood socio-economic change aligned with patterns of gentrification (Landis, 2016). The fact that treated block groups do not feature this gentrification pace-reducing factor to as great an extent as block groups not intersected by Black icon-named streets, may further be contributing to the observation of larger lost shares of Black population from treated areas.

5. Conclusion and discussion

This study makes use of street names to quantitatively describe the ways that racialized values and sentiments get absorbed into the housing market and shape neighborhood demographic composition. Grounded in a theory of change that relates housing purchase decision making and property sale price to concepts of othering, belonging, and racial identity, we use a hedonic pricing model in exploring to what extent being

located on a street named after a Black cultural icon affects a residential property's value in a gentrifying area. Concentrating on Harlem in New York City between 2000 and 2020, we find that homes on streets named for Black cultural icons, on average, sell for 13.8 % less than otherwise comparable properties on streets in the same neighborhood not named after Black cultural icons.

This work also examines how being situated proximately to a Black icon-named street impacts change in an area's Black population share over time. Here we similarly find a statistically significant relationship. Our analysis reveals that block groups intersected by a Black icon-named street saw a greater decrease – of about 20 % - in their share of Black residents between 2000 and 2020 than other block groups throughout Harlem. We interpret this somewhat counterintuitive result in the following way: the comparative affordability of Black icon-named streets paired with the comparatively low rate of owner-occupancy in block groups intersected by these streets may be attracting higher influxes of new, non-Black residents to such an extent as to outweigh any place-guarding power for Black residents (Kilson, 2000; Pritchard, 2018) that commemorative street renaming may provide.

5.1. Implications

So, what are the implications of these findings from a practice and policy standpoint? There are two sides to the housing value coin. On the one side, those who own property on Black named streets looking to sell may want to get the most value out of their asset. In Harlem, many of these sellers are Black. Having their asset devalued impacts their ability to build wealth. In this sense, our finding of a sales price dampening

Table 5

OLS regression results for the dependent variable of the difference in racial demographics. OLS regression results for neighborhood characteristics and amenities of block groups on treated and non-treated streets in Harlem between 2000 and 2020.

	Dependent variable:
	Difference in percentage of Black people
Block group is intersected by treated street	−0.201**
	(0.096)
Median household income	0.062
	(0.043)
Percent renter	−0.070*
	(0.039)
Percent poverty	−0.0006
	(0.034)
Total parks within a 0.25 mile radius	−0.020
	(0.029)
Total subway stations within a 0.25 mile radius	−0.173***
	(0.028)
Total universities within a 0.25 mile radius	0.007
	(0.029)
Total health centers within a 0.25 mile radius	0.024
	(0.024)
Constant	−0.005
	(0.028)
Standard Errors	Clustered
Observations	1067
Adjusted R^2	0.055

Note: All regressors are normalized to ensure comparability across different scales, so regressors are interpreted as standard deviations. Unit of analysis is at the block group level.

$* = p < 0.1; ** = p < 0.05; *** = p < 0.01.$

factor of 13.8 % would have, to some extent, contributed to the country's growing racial wealth gap over the last several decades (Perry et al., 2024), particularly as it relates to Black households. Because of this, those seeking to maximize property values and the wealth building associated with them may not want to see additional streets officially take on the names of Black cultural icons.

On the other side of the coin sit renters facing climbing pressures of housing insecurity fueled by rising unaffordability (Community Service Society, 2024). For this group, who comprise the majority of Harlem residents, the housing cost depressant of naming streets after Black cultural icons may be the difference between being able to stay in their homes and being priced out, having to make unwanted moves, having to move in with family or friends, or having to relocate out of Harlem entirely. Those seeking to maximize the affordability of the neighborhood may be in favor of officially naming more streets after Black cultural icons.

In truth, these groups might not actually have such opposing interests, as finances are not the only reasons to rename streets. Cementing, celebrating, and commemorating Harlem's Black history – actions which street naming contributes to – is likely of importance to many of its residents, renters and owners alike. Some owners may be willing to forego potential wealth gain to keep their neighborhood's legacy alive. They may also want to see their neighbors' ability to remain strengthened and may be willing to put the livability – with respect to housing cost – of Harlem above their own financial self-interest. Those with these feelings may be much in favor of naming more streets after Black cultural icons. The potential for this reality serves to emphasize the need for additional, qualitative research that explores the hierarchy of priorities among residents of gentrifying neighborhoods, marginalized and disenfranchised residents in particular. Research of this nature would speak to a growing body of policy work exploring the potential for, and public receptiveness to, the decommodification of housing (Fu et al., 2024; Roy, 2019; Whitlow, 2023).

It is important to stress that while naming streets after Black icons serves as a housing price dampener, our findings do not suggest that that alone would contribute to keeping Harlem Black; a desire expressed by many (Adams, 2016). To elevate the likelihood of accomplishing this, naming practices should be coupled with other actions proven to contribute to the sustainability of neighborhood cultural character. This could include, for example, a strengthening of programs that support Black local businesses (Jennings, 2021; Tuttle, 2022), that champion community land trusts and other shared equity ownership models (Choi et al., 2018), or that increase the supply of (government subsided) affordable housing (Levy et al., 2007).

We should also note that the theory of change we propose here, which centers a sense of belonging, is likely not the only explanatory force behind our findings. Though our model strives to create an 'all-else-equal' condition, there are unquestionably racialized realities of American society – both historical and ongoing – that our analysis does not fully capture that shape the housing market. For example, Black neighborhoods have long been subject to government-backed divestment in streetscape and public infrastructure (Bereitschaft, 2017; Hood & Tada, 2020; Rennert, 2016), as well as over-policing and false narratives of hyper-unsafety (Boddie, 2022; Jones-Brown & Williams, 2021; Rennert, 2023; Wilson, 2005). The associations between these negative conditions, be they realized or perceived, and Blackness may be contributing to stigmatization that makes people less likely to invest – in this case via the purchase of a home – in areas linked to Blackness.

This link may be acutely internalized by some at the individual street level in cases where the name the street bares is a distinctly clear signifier of Black livingness. Research has detailed this reality in the case of streets named for Dr. Martin Luther King Jr. across the country (Alderman, 2002; Tiwari & Ambinakudige, 2020). Some of what this body of work has found is that despite economically performing in much the same way that non-Black-named, similarly zoned streets across the US perform, streets named after King are stereotyped as being places of distinctly heighted poverty and blight (Mask, 2016; Mitchelson et al., 2007). Perceptions such as these, and the overt racism commonly underpinning them are likely at work alongside our hypothesized notions of othering and belonging in shaping the findings of our analysis. So though the results of our study speak positively to the potential power that street names have to affect people's material lives and place-guard against Black dispossession, this effect (e.g. property value depressant factor of −13.8 %) is in part a symptom of the nation's deplorable legacy of anti-Blackness. Street renaming itself cannot do the work of anti-racism, and we wound not want our findings to be interpreted as suggesting that it can.

5.2. Limitations and further research

No work is without its shortcomings. As previously mentioned, our sales data unfortunately only went back as far as 2000, while all of the streets in Harlem officially bearing the names of Black cultural icons underwent their renaming over two decades prior to that. This prevented us from using modelling techniques less likely to be subject to confounding factors or any potential effects of selection bias. Also, the quality of bedroom and bathroom information in the First American housing dataset for New York City available to us was notably poor. Future research could strive to improve upon these realities by selecting a case study condition and/or securing a detailed sales transaction dataset that supports the use of a difference-in-differences or repeat sales analysis approach.

Additionally, data limitations contributed to our choice to combine all of the streets in Harlem officially named after Black cultural icons into a single classification: 'Black-named', or 'treated' street. However, it is likely that different icons, having lived different lives and left different marks on history, are perceived differently. An individual's reputation could influence how and to what magnitude their name impacts property values and neighborhood racial composition change over time.

Does the name 'Harriet Tubman' elicit different feelings and associations than the names 'Marcus Garvey' or 'Fred Hampton'? One would imagine so. Future research could explore this further and should considering attempting to account for how different members of the public – for example, people of different racial identities, genders, or countries of origin – perceive different Black cultural icons. Such an exploration would not only add nuance to the channel of research opened here, but would serve as a step away from research's problematic tendency to mistreat Blackness as monolithic (Badr, 2023; Muno, 2023); a feat we failed to accomplish within this work.

Posing similar data-related limitation, the City of New York does not have an official dataset of street names coded by race. For our purposes, which focused on renowned historical figures whose racial identities are well known, this was not a problem. However, for any future street name research similar to this interested in using the far larger set of honorary street names – a collection containing both widely and lesser known people – the absence of such a racially delineated dataset would potentially require researchers to interpret an individual's race, which is strongly ill-advised, or to lessen the specificity of their analysis. The creation of a dataset of all street name honorees that contains demographic information (e.g. race and gender) and logistical information (e.g. when was the street renamed, what was it previously named, who/which groups campaigned for the name change) would be an asset to any city. A resource such as this could facilitate the deepening of our understanding of the many dynamics active in a city's socio-geographic evolution.

Finally, our theory of change is based on an assumption of true choice within the housing market. We know that true choice is not the condition that many seeking to purchase a home find themselves in. Though we acknowledge this reality, we do not operationally account for the role that things like racially prejudicial lending practices (Perry, 2019) play in the relationships identified within this research. Herein lies a worthy avenue for continued study of street name impacts on social, economic, and cultural conditions of the built environment.

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The authors do not have permission to share data.

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