Are Historic Districts A Backdoor for Segregation? Yes and No

Jamie Bologna Pavlik [*] Yang Zhou [†]

Texas Tech University University of North Texas

December 29, 2021

Abstract

Historic districts preserve the heritage of designated areas and increase the amenity for residents. However, these districts also come with restrictions and increased housing prices that could cause segregation. We study how two historic district programs impact residential segregation in Denver. We find that homebuyers are more likely to be White within historic districts, but that the official historic designation has no effect on this probability. More specifically, we calculate that the predicted probability of having a White homebuyer increases from 77 to over 80 percent when the home is located within a historic district. Similarly, we find that most transactions flow from White sellers to White buyers, regardless of official designation. Thus, while historic districts tend to be more segregated, official designation does not seem to amplify this existing problem.

JEL Codes: R20; R30; J15
Keywords: Historic district; segregation; machine learning

[*]Department of Agricultural and Applied Economics, Texas Tech University, P.O. Box 42132, Lubbock, TX 79409-2132, USA; Email: jamie.bologna@ttu.edu

[†]Corresponding author. ORCID: 0000–0002–4537–9857. Department of Economics & Economics Research Group, University of North Texas, 1155 Union Circle #311457, Denton, TX 76203-5017, USA; Email: yang.zhou2@unt.edu

[1]We would like to thank Aakrit Joshi, Joshua Matti, Amir Neto, Alicia Plemmons, Jeffrey Rous, Shishir Shakya, Margie Tieslau, and seminar participants at the Southern Illinois University Edwardsville for their helpful comments and suggestions. All remaining errors are our own.

1 Introduction

The National Historic Preservation Act (NHPA) was established in 1966 and remains in existence today.[1] Many state and local governments have analogous preservation acts, some of which preceded the federal counterpart. Historic districts, in particular, are relatively common designations that cover specified sections of metropolitan areas. These historic districts are intended to preserve the designated city section and are hypothesized to bring many benefits including tourism income and increased social cohesion. However, an unintended consequence of such a designation may be residential segregation – an endemic characteristic of U.S. cities. These designations frequently come with restrictions that regulate renovation and new construction, where the latter often prohibits the construction of multifamily homes in particular. They also tend to increase property values within and nearby the historic districts (e.g. Been et al. (2016); Koster et al. (2016); Ahlfeldt et al. (2017); Koster and Rouwendal (2017); Ahlfeldt and Holman (2018); Zhou (2021)).[2] Historic districts may therefore exacerbate residential segregation as both mechanisms limit low-income in-migration. Despite this concern, there is little empirical evidence regarding the segregating effects of historic district designation.

Does historic district designation increase segregation? This is the question we explore in this paper. The McCabe and Ellen (2016) study of New York's historic districts suggests that the answer is no. They explore how this designation influenced the racial (White versus Black) composition of the neighborhood and potential mechanisms behind such residential sorting (changes in socioeconomic status, homeownership rates, and rental prices). More specifically, using census tract data they compare the pre-post designation changes in the racial composition of the historic district with nearby, non-designated tracts. They find little evidence of racial turnover or rental price increases, though they do find that socioeconomic status and homeownership rates have increased. However, a potential drawback of this study is its reliance on census tract data. This limits their ability to capture within-area segregation, an important point given that many historic district designations do not encapsulate the entire census tract region.

We expand upon the McCabe and Ellen (2016) study in a number of ways. First, we focus

[1] The NHPA has been amended several times, but the primary purpose has not changed.

[2] While most studies find a positive price effect, there are some that find a null or negative effect (Heintzelman and Altieri, 2013).

on the effects of historic districts on residential segregation in Denver, Colorado - a Western city with comparably less diversity than New York. In 2019, the population of Denver was nearly 53% White with only 32% White in NYC.[3] Second, given Denver's public data reporting system, we have access to transactional level housing data allowing us to focus on segregation at the individual level. More specifically, we employ machine learning methods to predict the race of each homebuyer using their listed name, focusing on White versus several non-White (Black, Asian, and Hispanic) race categories.[4] Given that we have the physical address associated with each transaction, this allows us to explore whether the likelihood of a homebuyer being of a specific race changes following the designation. It also allows us to calculate a buffer region surrounding the designated area for comparison and to explore potential spillovers. Lastly, because we have information on both the buyer and seller, we explore whether racially dissimilar transactions are more or less likely to take place within the historic district. If the designation of a historic district results in segregation, we may expect racially dissimilar transactions to fall.

The Denver Landmark Preservation Commission (DLPC) was established in 1967. This commission was created to counteract the demolitions of the 1960s initiated by Denver's Urban Renewal Authority. The DLPC preserves both historic landmarks and districts but to be considered the owners must apply. For historic districts in particular, the application process requires coordination amongst residents. Zhou (2021) highlights these collective action costs in the context of the DLPC noting that the residents must receive some sort of benefit for them to be willing to incur such costs. Indeed, he finds that these historic designations generate a 12-23 % value premium to homes located within them.

Does this premium lead to *more* segregation? Or was this designated section already segregated due to certain amenities strongly preferred by a specific race? As mentioned above, Denver is a city with a predominantly White population. A precursory look at our data confirms this observation: 77% of our homebuyers are White. However, if following designation, the likelihood of having a non-white buyer falls within the historic district relative to the counterfactual, this implies that the area is becoming *more* segregated. Similarly, if the likelihood of having a racially dissimilar transaction decreases, our results are suggestive of increased segregation. While this change could

[3]This information is derived from the U.S. Census Bureau. These numbers refer to White alone and without Hispanic ethnicity.

[4]Details concerning our categories are given in Section 3.1 below.

be driven by preferences - where one race strongly prefers to live within a historic district due to its amenities - or through economic channels (e.g. an increasing real estate cost), it would imply more segregation due to historic designation.

Our results suggest that a home located within a historic area increased the likelihood that the home buyer is White. More specifically, we calculate that the predicted probability of having a White homebuyer increases from 77 to over 80 percent when the home is located within a historic district. However, the official designation of the historic district has no impact. In other words, White individuals seem to prefer to live within a historic area regardless of the designation. Similarly, White to White transactions are more likely and White to Nonwhite transactions are less likely in historic districts - even before the official designation. Consequently these programs do not seem to have segregating effects in their own right, but these areas *are* segregated. An interesting avenue for future research would be to consider ways in which one could revise historic district restrictions to both preserve heritage and encourage integration.

The remainder of this paper is organized as follows: Section 2 gives a brief overview of the residential segregation literature, Section 3 discusses our data and empirical strategy, Section 4 summarizes our results, and Section 5 offers a concluding discussion and some suggestions for future research.

2 Residential Segregation

Residential segregation is typical of many U.S. cities, especially between the Black and White population (Boustan, 2013). In general, racial sorting results in racially dissimilar individuals living in different jurisdictions within cities and in different neighborhoods within jurisdictions. The potential consequences of such sorting are vast. For example, many researchers have found that educational attainment, incomes, and employment rates are significantly lower in the segregated Black population (Cutler and Glaeser, 1997; Weinberg, 2000; Li et al., 2013). Commonly proposed mechanisms through which racial sorting can result in these poor outcomes include the physical distance between job opportunities and the minority population (Kain, 1992; Weinberg, 2000; Boustan and Margo, 2009; Stoll and Covington, 2012) and negative neighborhood effects stemming from concentrated poverty (Ellen and Turner, 1997; Durlauf, 2004). Regardless of the underlying mech-

anism, it is clear that residential segregation tends to put the minority population at a significant disadvantage.

Given these well-known consequences of residential segregation, understanding its underlying causes is imperative and has thus received widespread attention in the literature. The three main mechanisms emphasized in this literature include: Black self-segregation (Krysan and Farley, 2002; Ihlanfeldt and Scafidi, 2002), White flight (Shertzer and Walsh, 2019), and collective action by Whites that make Black migration into the neighborhood difficult.[5] The latter mechanism implies there may be legal restrictions set in place that explicitly or implicitly encourage racial segregation. While explicit restrictions (e.g. Troesken and Walsh (2019)) have largely been eliminated in the United States, restrictions that implicitly influence racial sorting are troublesome because their effect on minority migration is sometimes difficult to uncover. We study one such restriction – historical district designation – as this is a restriction put in place with the purpose of preserving the neighborhood, but may have the unintended effect of reducing integration. While there is a relatively extensive literature showing that zoning policies increase segregation (Rothwell and Massey, 2009, 2010; Shertzer et al., 2016, 2021), there is little empirical evidence concerning the effects of historic districts.

The McCabe and Ellen (2016) study is the first, and to our knowledge only, to explore the segregating effects of historic district designations. They find no evidence of increased segregation, however they rely on aggregate measures of racial sorting. This sort of measurement problem is common in the segregation literature. Researchers have traditionally relied on two alternative measures: an index of dissimilarity and an index of isolation (Cutler et al., 1999; Troesken, 2002; Cutler et al., 2008; Boustan, 2013). The former is intended to capture the evenness of which two groups are distributed across subunits of a given geographic area; the latter focuses more on the degree of exposure between groups. While useful in deriving an estimate of segregation in an urban context, these measures are limited insofar as they cannot estimate within-area segregation and are dependent on the definitions of arbitrary subunit boundaries (e.g. census tracts). As a result, researchers have searched for better alternatives in recent years. Logan and Parman (2017), for example, utilize the ordering of historical census manuscript files to identify the racial similarity of next-door neighbors. This method has the benefit of capturing both within- and across-area

[5] See Boustan (2013) for a thorough review of each.

segregation. We adopt a similar method using transactional housing data in conjunction with machine learning tools. This will allow us to better identify the segregating effects of historic districts and expand upon the McCabe and Ellen (2016) analysis. We discuss this method in detail in the following section.

3 Empirical Analysis

3.1 Predicting Race by Names

Research exploiting the link between race and names is common. For example, Bertrand and Mullainathan (2004) conduct a field experiment on labor market discrimination in the United States and find that resumes with White-sounding names receive 50 % more callbacks than resumes with African American names, *ceteris paribus*. Cook et al. (2014) document the existence of unique African American names in late nineteenth and early twentieth centuries, which suggests that the racial-name link among African Americans existed before the Civil Rights Movements. Cook et al. (2016) use these race-specific names to study health outcomes for African Americans with these distinctive names compared to those without.

These studies all assume an explicit name-ethnicity relationship for every observation. However, there are situations where researchers must identify race across thousands of different names making a one-for-one definition cumbersome. In this scenario, researchers rely on classification inference methods to predict race from the individual's name. More specifically, researchers use machine learning methods to predict the race/ethnicity (probability) based on the names and race given in a training dataset.

This race/ethnicity-name matching is widely used in biomedical research, motivated by genetic commonalities within racial/ethnic groups (Coldman et al., 1988; Fiscella and Fremont, 2006). For example, Coldman et al. (1988) develop a methodology to classify ethnic status by name using a simple probabilistic model, with names from death certificates. Gill et al. (2005) use country of birth as proxy for ethnic group. Ambekar et al. (2009) use the names from open sources, i.e. Wikipedia. More specifically, they use hidden Markov models (HMMs) and decision trees to classify names into different ethnic groups. It is also common in economic research. Nowak and Sayago-Gomez (2018) use the Olympic rosters as the training data set and develop a binomial ethnicity classifier based

on names to predict whether home buyers are Arabic or not. Humphreys et al. (2019) use the same method to predict whether home buyers are Chinese or Korean. Xu (2019) uses the dictionary of Anglicized surnames by Reaney (2005) to directly identify the ethnicity based on names to predict the probability of the ethnicity of immigrants from Germany, Poland, and Russia in the 1920 and 1930 U.S. Censuses.

On the one hand, these papers use slightly different methods: Nowak and Sayago-Gomez (2018) and Humphreys et al. (2019) use a first or last name as the token to train and predict the ethnicity, and they use a logistic model and Lasso (least absolute shrinkage and selection operator) approach. Xu (2019) develops a naïve Bayesian probability model and predicts the ethnicity using unique strings in last names, e.g. "the string $NOV*$ should appear frequently among Russian surnames", where $*$ represents the end of a name (Xu, 2019). On the other hand, these recent papers all use some form of machine learning. As explained above, these methods first train a model based on the frequency of those names with race/ethnicity labels to minimize the predicting errors; then it can give a probability of any new input name without a race/ethnicity label.

Xu (2019) notes that full names generally provide higher accuracy for predictions. Moreover, using more segmented unique strings rather than a complete name can help better identify the race. However, distinguishing English names of White and African American individuals is more challenging than distinguishing names in different languages. In the specific context of this paper, our major task is to identify the race of home buyers and sellers based on their names, with a focus on White and Nonwhite groups. Because the main goal of this paper is not to provide a methodology of identifying race based on names, we do not feel the need to "reinvent the wheel." Therefore, we employ the "ethnicolr" Python package to predict our race. The use of this package is becoming common in the literature, e.g. Anginer et al. (2020) and Parasurama et al. (2020).

The "ethnicolr" Python package (version 0.4.0) is developed by Sood and Laohaprapanon (2018).[6] Similar to the research mentioned above, the general methodology of this package is to find a Bayes optimal solution. In particular, they " model the relationship between the sequence of characters in a name and race and ethnicity using Long Short Term Memory Networks" (Sood and Laohaprapanon, 2018). The training data sets they used include the 2000 and 2010 U.S. census data, the 2017 Florida voting registration data (Sood, 2017), and the Wikipedia data collected by

[6] https://pypi.org/project/ethnicolr/

Ambekar et al. (2009). They use these datasets to predict race and ethnicity based on the first and last name, or just the last name. Note that they did not directly use a complete name as in Nowak and Sayago-Gomez (2018) and Humphreys et al. (2019), while they split the strings into two character chunks (bi-chars) similar to that in Ambekar et al. (2009) and Xu (2019). Eventually, the "ethnicolr" Python package provides six unique functions, and we employ two of them which predict race from names in the US context: $pred\_census\_ln$ and $pred\_fl\_reg\_name$. With $pred\_census\_ln$, we are able predict the ethnicity based on the last name of a home buyer or seller, using 2000 or 2010 Census as the training data set. With $pred\_fl\_reg\_name$, we are able to predict the ethnicity based on the first name and last name of a home buyer or seller, using the 2017 Florida registered voter information as the training data set. In the "ethnicolr" package, as suggested by Xu (2019), Sood and Laohaprapanon (2018) also note that using both first and last names leads to a higher accuracy rate, which is intuitive as both names means more information. Because using both the first and last name results in more accurate predictions, we focus on the predictions using the Florida voter data. Predictions using the Census data are available in Appendix A.

The average out of sample (OOS) performance of the full name LSTM model on the Florida voter registration data is not perfect but reasonably good: the average precision, recall, and f1-score are 0.83, 0.84, and 0.83, respectively. In particular, it performs the best for White names, where the average precision, recall, and f1-score are 0.86, 0.95, and 0.90, respectively. It is lower than that reported in Xu (2019), who reports a 0.92-0.94 range. However, Sood and Laohaprapanon (2018) is trying to predict the race of English names within the U.S. into four categories: White, Black, Asian, and Hispanic. Xu (2019) is predicting ethnicity for people from Poland, Germany, and Russian, who tend to have more unique strings in their names; so is the case for the Arabic setting in Nowak and Sayago-Gomez (2018) and the Chinese and Korean setting in Humphreys et al. (2019).

3.2 Logit Model Specification

The main empirical model is a logit model.[7] For home i in census tract c transacted in year t, the probability of its home buyer being from a specific racial group (White, Black, Asian, or Hispanic) is estimated as:

$$Pr(Race_{ict} = 1|H_{ict}, X_{it}, \mu_c, \delta_t, \rho_a) = \frac{e^{\beta H_{ict}+\phi X_{it}+\mu_c+\delta_t+\rho_a}}{1 + e^{\beta H_{ict}+\phi X_{it}+\mu_c+\delta_t+\rho_a}} \quad (1)$$

where H_{ict} is the matrix of historic district characteristics for that specific house transaction, and β is the coefficient of interest. We estimate this equation for each racial group separately. That is, our dependent variable is a binary value taking on a 1 for the specific race in question and zero otherwise. Because historic district designation process is endogenous (Been et al., 2016; Ahlfeldt et al., 2017; Zhou, 2021), H_{ict} includes both the time-invariant historic heritage and its interaction with the time-variant designation, which is akin to a difference in differences (DID) specification. Following Zhou (2021), the particular specification is $\beta_H Heritage_i + \beta_{HD} Heritage_i \times Designation_{it}$. $Heritage_i$ is a time-invariant dummy variable indicating whether home i is in a district which has been or will be designated later in the sample as a historic district, which captures the internal historic heritage. $Designation_{it}$ is the treatment dummy indicating whether home i is in an officially designated historic district at time t. If individuals of the specific race in question prefer historic homes, regardless of the designation, then β_H should be positive. If the official designations of historic homes amplify this preference, then the interaction (a positive β_{HD}) should be positive as well.

X_{it} is the matrix of hedonic control variables, including square footage of living area, number of bedrooms, number of full bathrooms, number of half bathrooms, and the distance to the central business district (CBD).[8] μ_c is a census tract level fixed effect, which controls for the heterogeneity across difference census tracts and neighborhoods. δ_t is a year sold fixed effect, which controls for

[7] We also conduct robustness tests with a probit model, and the results are robust. For example, Tables B.1, B.2, and B.3 in Appendix B display results similar to that of Tables 4, 6, and 8 in the main analysis. We also conduct robustness tests with a linear probability model. Overall, the results are still robust. In particular, the effect for local historic districts is significant for most specifications with a few exceptions; the effect for national historic districts is significant across all specifications. Results are available upon request.

[8] We additionally estimate our results holding housing price constant. However, because real estate prices are the main channel through which designation is likely to impact segregation (i.e., it is a bad control), we exclude this variable from our main analysis. Results are qualitatively similar with this variable included and are available upon request.

the market trend in different years. ρ_a is a year built sold fixed effect, which jointly controls for the age effect with δ_t. Note that $Race_{ict}$ here stands for $White_{ict}$, $Black_{ict}$, $Asian_{ict}$, and $Hispanic_{ict}$, respectively.

We additionally explore inter-race transaction flows. More specifically, we utilize the logit model to study the seller-buyer relation, i.e. whether the seller and buyer race is White - White, White - Nonwhite, Nonwhite - White, or Nonwhite - Nonwhite, respectively. Thus, for the transaction of home i in census tract c transacted in year t, the probability of the racial flow of the buyer to seller is estimated as:

$$Pr(Flow_{ict} = 1|H_{ict}, X_{it}, \mu_c, \delta_t, \rho_a) = \frac{e^{\beta H_{ict} + \phi X_{it} + \mu_c + \delta_t + \rho_a}}{1 + e^{\beta H_{ict} + \phi X_{it} + \mu_c + \delta_t + \rho_a}} \tag{2}$$

where H_{ict}, X_{it}, μ_c, δ_t, and ρ_a are the same notations as that for Equation (1). As above, we estimate this equation for each potential seller-buyer relation separately. If White individuals prefer historic homes, we should see more historic transactions between or to White individuals. Likewise, if the official historic designation influences diversity within a historic district, we should also see a statistically significant β_{HD}.

3.3 Data

The housing transaction data in Denver comes from the Denver Assessor's Office (City and County of Denver Assessor's Office, 2019). This data is available from January 01, 1990 through June 30, 2016. The data set has information on all housing transactions in both the city and county of Denver.[9] This includes the transaction price, living area square footage, number of bedrooms, full bathrooms, half bathrooms, street address, etc. To exclude those that are potentially inner-family transfers, we drop transactions with a price lower than $50,000, though our results are robust to their inclusion. We also exclude a couple hundred house transactions with zero full bathrooms, which do not seem reasonable to use.[10] In the end, there are 174,779 single-family home transactions remaining in our sample. Using Microsoft Bing Maps Location API (Microsoft, 2018), we geo-code (latitude and longitude) the street address of every single-family home. Thus, we can precisely identify whether or not a home is located within a historic district. The transaction data also has

[9] Denver is a consolidated city-county, such that the city of Denver and county of Denver are the same jurisdiction.
[10] The inclusion of these homes does not meaningfully change our results.

the names of the buyer (grantee) and seller (grantor), with which we can predict their race.

There are two main parallel historic district systems in Denver. One is the Denver Landmark Preservation Commission (DLPC) founded by the local government of Denver in 1967. The other one is the National Park Service National Register of Historic Places (NRHP), which also has a list of National Register Historic District and is run by the National Park Service covering the whole United States. There is also a state level historic district system in Colorado, which automatically includes all the historic districts in NRHP but also has some unique areas. However, there are no state-level-only historic districts in Denver, only historic districts defined by the DLPC and NRHP.

Denver's local historic district information and shape files are directly accessible from the official website of Denver Government, Denver Open Data Catalog (City and County of Denver, 2019b). Because the online GIS system for ArcGIS by National Park Service (National Park Service, 2014, 2019a) is read-only and inaccurate, the NRHP historic districts information and shape files are hand collected and constructed from various sources: NPGallery Digital Asset Management System of the National Park Service (National Park Service, 2019b) and History Colorado (History Colorado, 2019). When constructing the GIS shape files, we also referred to Google Earth Pro[11] to check inter-temporal changes of every historic district to make sure that there are no dramatic changes of the land's use. For more details concerning the construction of the historic district GIS files please refer to Zhou (2021).

Table 1 presents summary statistics for home transactions in Denver. The average home is transacted with a price of \$270,000, 1,500 ft^2 living area, 2.8 bedrooms, 2 full bathrooms, and 0.3 half bathrooms. The average year built is in 1951, while the newest ones in the sample were built in 2015. $Local\,Historic\,District$ is a dummy variable equal to 1 if a home transaction was in an officially designated local historic district and 0 otherwise. $Local\,Historic\,District\,Buffer\,100m$ is a similar dummy variable for its 100-meter buffer zone. $Local\,Historic\,Heritage$ is a time-invariant dummy variable if a home transaction was in a district which had been designated as a local historic district or would be designated as one later in the observation period. $Local\,Historic\,Heritage\,Buffer\,100m$ is a corresponding variable for its 100-meter buffer zone. Similarly, the variables starting with $National$ are analogous dummy variables for national historic districts. Among the eight historic

[11]Google Earth Pro currently provides the satellite images of Denver areas about every 12- 15 months, from June, 1993 to May, 2018, as in April 2019.

heritage/district related variables in Table 1, the proportions of house transactions that experienced the designation treatment range from 1.8% to 4.4%, which correspond to about 3,150 - 7,690 house transactions. This gives a reasonably large number of transactions to be used for regression analysis.

Table 2 gives the summary statistics of the historic districts in Denver. There are 77 areas in the local historic district system as of April 2019, while there are only 55 local historic districts, since some historic districts have more than one area. Among the 55 local historic districts, 39 were designated between January 01, 1990 to June 30, 2016 (City and County of Denver, 2019b). Among the 32 national historic districts, 7 were designated between January 01, 1990 to June 30, 2016 (National Park Service, 2019b; History Colorado, 2019). The area size of historic districts varies too, and the mean size is 0.127 km^2 and 0.251 km^2, for local and national districts, respectively.

We start with the predicted racial breakdown of buyers, sellers, and transaction flows with the Florida voter full name model, which are reported in Table 3.[12] As the table shows, 77% of buyers are classified as White, 4.3% are classified as Black, 2.8% are classified as Asian, and 15.9% are classified as Hispanic. The breakdown is similar for sellers. The "ethnicolr" package predicts the race well, but it has the highest precision rate for Whites (Sood and Laohaprapanon, 2018). The highest precision rate for Whites also means an equivalently high rate for Nonwhites. As such, when studying the inter-racial flow of house transactions, we focus on Whites versus Nonwhites only. Of all buyer-seller transactions, 66% are White-White, 16% are White-Nonwhite, 10% are Nonwhite-White, and 8% are Nonwhite-Nonwhite.

According to the 2010 Census, the demographic makeup of Denver is 52.15% non-Hispanic White, 9.73% Black or African American, 3.32% Asian, 31.82% of Hispanic or Latino origin, and other minorities (City and County of Denver, 2019a). At first glance, the demographic composition in Denver and our racial predictions look a bit off. However, White individuals have a higher home ownership rate in general and especially in Denver. For example, "home ownership rates in metro Denver in 2015 were 63.7 percent for White households, 48.3 percent for Asian households, 47.4 percent for Hispanic households and 29.1 percent for black households (The Denver Channel, 2017)." A rough demographic composition of homeowners using the data of City and County of Denver (2019a) and The Denver Channel (2017) suggests the following proportions for each racial

[12]Summary statistics using the census names prediction model are available in Appendix A.

group: 63.00% non-Hispanic White, 5.37% Black or African American, 3.03% Asian, 28.60% of Hispanic or Latino origin. The approximated weighted proportions are close to the buyers and sellers percentage in each racial group predicted by our model.

Figure 1 shows all the historic districts and the 2010 census tracts with the percentage of White population in Denver, with the highest one being 92.56% and the lowest being 7.26%. Figure 1 seems to suggest that most historic districts are located in the areas with a higher White population. In Denver, the boundary lines of census tracts overlap that of cultural neighborhoods well (Noel and Wharton, 2016), thus we are also talking about neighborhoods when talking about census tracts. In other words, most historic districts are located in the neighborhoods with a higher proportion of White population.

Figure 2 gives two examples of historic district and house transactions, one for the local historic district (top panel) and the other one for the nation historic district (bottom panel). With help of the detailed geo-coded location information of every single-family home transaction and every historic district and their buffer zones, we can identify the exact relationship between them. The green dots represent home transactions with a White buyer, and the orange triangles represent home transactions with a Nonwhite buyer. Meanwhile, some homes are transacted multiple times in our sample, and the latter transactions' label is placed on top of the former ones'. Overall, we can see that the dataset we put together has a great amount of information for a reasonable empirical analysis.

4 Results

4.1 White Buyers of Historic Homes

As explained above, it is more powerful and precise when using the full name rather than only the last name to predict the race. We therefore focus our results on the "ethnicolr" package predictions using 2017 Florida voter registration full name model. Results with census last name predictions are made available in Appendix A Tables A.2 through A.4. The census results largely confirm the main findings of this section.

We present results for our main variables of interest in Table 4. We additionally calculate the mean of the predicted probability for cases where there is no historic designation at any point

(*Heritage* and *Designation* both equal zero), cases where the designation occurred during our sample period but after certain transactions (*Heritage* equals 1 and *Designation* equals 0), and cases where the designation occurred either before our sample period or during the sample period but before certain transactions (*Heritage* and *Designation* both equal 1). These results are summarized in Table 5.

The results presented in Column 1 of Table 4 suggest that the probability of a homebuyer being White increases if a home is located within a historic district, regardless of its the designation. This effect is statistically significant at the 1% level. In terms of probability, a historic district increases the probability of the homebuyer being White by more than 3 percentage points. This puts the (mean) predicted probability of a White homebuyer at above 80 percent, indicating significant concentration of White individuals within historic districts in an already concentrated area. However, the official historic district designation does not have a significant (either statistically or in magnitude) effect. Adding the official designation increases the predicted probability by a little over 0.1 percentage points (see Table 5). Column 2 of Table 4 implies a similar pattern for national historic districts: location matters but not the official historic district designation. However, the results suggest that living within a historic district is not as appealing to Black, Asian, or Hispanic individuals (see Columns 3 through 8). In most cases the historic heritage dummy is insignificant with the only instance of significance being negative (for Hispanic individuals). Again, official historic designation has no impact on the race of the buyer.

Because historic districts likely have important spillovers onto nearby areas (Noonan and Krupka, 2011; Been et al., 2016; Ahlfeldt et al., 2017; Koster and Rouwendal, 2017; Ahlfeldt and Holman, 2018; Zhou, 2021), it is possible that the impact from the designation expands beyond the boundaries of the district. We explore this possibility in Table 6. Our main findings are unchanged. A home located within a historic area is more likely to be bought by a White individual and increases this probability by a bit more than 3 percentage points (see Table 7). The official historic district designation has no impact on the race of the homebuyer. Historic district location and historic district designation have *mostly* no impact on the race of the homebuyer in the surrounding buffer region. The exception is that Hispanic individuals, while less likely to live within a national historic district are more likely to live in the buffer. However, the designation effect is insignificant in both cases. This could suggest that the national historic district has naturally

segregating effects.

4.2 Inter-Race Transactions

The above results suggest that White buyers are more likely to buy historic homes than Black, Asian, or Hispanic buyers, regardless of the official historic district designation. Designation does not influence this likelihood. However, this is simply focusing on the inflow of new individuals. If most transactions are amongst White individuals, then this does indeed suggest that the racial composition is unchanged following the designation. However, if there is an increase in sales from Nonwhite to White individuals following designation, or a decrease in sales from White to Nonwhite individuals, this is indicative of a change in composition favoring the White population. We explore this possibility in this section.

For the sake of simplicity we focus on White and Nonwhite groups rather than studying all the 16 possible inter/inner-racial flows. More specifically, we study four racial flows: White to White, White to Nonwhite, Nonwhite to White, Nonwhite to Nonwhite. Pooling all Black, Asian, and Hispanic individuals together as Nonwhite has a few advantages. First, White has the highest prediction accuracy with the "ethnicolr" package; if with this we can classify a buyer or seller as White more precisely, we can then also classify the rest as Nonwhite more precisely. Second, it seems that only White individuals have a preference for historic homes. This makes the pooling acceptable and reasonable.

The corresponding results of the inner/inter-racial flows are reported in Table 8 and the predicted probabilities are calculated in Table 9. As shown in Columns 1 and 2, if the transaction of a home is in a district with local historic heritage or national historic heritage, it increases the likelihood of the flow being White to White by 4 percentage points. However, as with the buyer only results, the official historic district designation does not seem to matter. Likewise, Column 3 suggests that while being in a district of local historic heritage reduces the likelihood of a home transaction being from White to Nonwhite, designation has no influence. Indeed, the results support that these historic homes are more popular among White buyers, regardless of the official historic district designation.

4.3 Home Transactions with Historic Heritage Only Sub-samples

As an additional robustness check, we re-estimate our main results using historic heritage area only sub-samples. That is, we limit our sample to transactions occurring within a local historic district, either before or after the official designation. Thus *Local District Heritage* will always equal 1, allowing us to focus exclusively on the pre-post changes in segregation following the official designation. Similarly, we use an analogous sub-sample for the national historic districts. The sample size of the local historic district sub-sample is 7,194, and the sample size of of the national historic district sub-sample is 4,269.

About two thirds of local historic districts were officially designated post 1990, and about one third national historic districts were officially designated post 1990. As shown in Table 1, among all the home transactions, 4.1% were within local historic heritage areas regardless of the designation, and 3.0% of were in an officially designated local historic district. In other words, 1.1% of these home transactions were within a district with local historic heritage but before the designation. Similarly, among all the transactions, 2.4% were within national historic heritage areas, and 2.1% were within officially designated areas. Therefore, 0.3% of the total home transactions were in a district with national historic heritage but before the designation.

The results for buyer's races are displayed in Table 10, and the null effects of local and national historic district designations are both confirmed. The results for the inter-race transaction flows are displayed in Table 11, and the null effects of local and national historic district designations are both confirmed, too.

4.4 Placebo Tests

As a final robustness check, following Kim et al. (2020), we move the location of historic districts southerly, northerly, easterly, and westerly by 1000 meters respectively. As shown in the buffer zone analysis, homes within the buffer zones of a historic districts have little impact on the racial composition of the area. In the context of Denver, 1000 meters is a "reasonable" distance, resulting in placebo areas that are located close to the original districts without much overlap. For example, as shown in Figure 3, we move the local and national historic districts southerly by 1000 meters, making placebo areas that sit right next to real historic district areas without much overlap. Moving

the boundary by less than 1000 meters does not separate the placebo versus real areas well, while moving by more will create a placebo that overlaps with other historic districts.

For brevity, we focus on the placebo results after moving the boundary 1000 meters southerly. Table 12 displays the results for home buyers' race, and Table 13 displays the results for interracial flows. Both tables show that there are no significant effects found from the placebo historic districts.

In Appendix C, we also provide results after moving the boundary 1000m easterly, westerly, and northerly. Overall, when the placebo areas do not have much overlap with real historic areas, there are no significant effects found for historic districts. However, when there is a large degree of overlap between the original and placebo areas, significant results are found for White and White-White and other interracial flows. We believe this is driven by the real historic homes that remain in these placebo districts. For example, as shown in Figure C.1, there is a large portion of overlap between the real and placebo local historic districts when moving easterly by 1000 meters, and we do see some significant results for local historic districts. This is also true for the results where the boundary is moved westerly by 1000 meters.

5 Conclusion

Residential segregation is an endemic characteristic of many U.S. cities. There are a number of reasons given for this segregation, some of which emphasize personal preferences while others focus on the collective action of the majority. The latter is especially concerning insofar as it legally limits the migration of the minority population. Most such incidences of outright exclusion have been eliminated in the U.S. (Troesken and Walsh, 2019), but laws with implicit restrictions remain. One such example is zoning laws, which have been shown to increase segregation (Rothwell and Massey, 2009, 2010; Shertzer et al., 2016). Another potential restriction on minorities are those imposed by historic district designations. The designation of a historic district tends to come with restrictions concerning new construction (e.g. construction of multi-family homes is typically prohibited) and increased housing prices. Both effects work to limit low income in-migration.

We study how two different historic district programs impact residential segregation in Denver, Colorado. Denver has two main historic district systems in Denver: Denver Landmark Preservation Commission (DLPC) and National Park Service National Register of Historic Places (NRHP). We

use definitions of districts according to each program to construct maps for each district type. We then identify housing transactions that occur within and outside of each historic district. We employ machine learning methods using the "ethnicolr" Python package to predict the race (White, Black, Asian, or Hispanic) of both the buyer and seller involved in the housing transaction. We then test if home buyers are more or less likely to be of a specific race in historic districts, relative to non-historic areas. We additionally see if being officially designated a historic district amplifies or mitigates such effects.

Our results suggest that a home located within a historic area increased the likelihood that the home buyer is White. However, the official designation of the historic district has no impact. In other words, White individuals seem to prefer to live within a historic area regardless of the designation. Consequently these programs do not seem to have segregating effects in their own right.

We also explore how historic location and the official designation impact inter-racial transactions. Does historic designation increase White to White and Nonwhite to White transactions, while decreasing White to Nonwhite exchange? Our results again suggest that White individuals have an inherent preference to live within a historic district, regardless of the official designation. White to White transactions are more likely and White to Nonwhite transactions are less likely in historic districts - regardless of the official designation.

Our results support the findings of McCabe and Ellen (2016). Historic districts do seem to be disproportionately White, but this does not seem to be the result of legal restrictions. This could be because White individuals simply prefer the amenities of the historic area or because they wish to locate in an area where the minority population is below some threshold. Regardless of the underlying reason, it is reassuring that the designation does not make segregation *worse*. However, these areas *are* segregated. An interesting avenue for future research would to explore ways in which historic areas can be diversified while maintaining their heritage. Perhaps eliminating some of the construction restrictions would help integration. Focusing more on "people-based" policies could also help diversification. Housing vouchers and loan assistance are two examples of such policies that could help integration.

References

Ahlfeldt, G. M. and N. Holman (2018). Distinctively different: A new approach to valuing architectural amenities. *The Economic Journal 128*(608), 1–33.

Ahlfeldt, G. M., K. Möller, S. Waights, and N. Wendland (2017). Game of zones: The political economy of conservation areas. *The Economic Journal 127*(605), F421–F445.

Ambekar, A., C. Ward, J. Mohammed, S. Male, and S. Skiena (2009). Name-ethnicity classification from open sources. In *Proceedings of the 15th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pp. 49–58.

Anginer, D., A. Donmez, H. N. Seyhun, and R. Zhang (2020). Global economic impact of COVID-19: Evidence from insider trades. *Available at SSRN 3624403*.

Been, V., I. G. Ellen, M. Gedal, E. Glaeser, and B. J. McCabe (2016). Preserving history or restricting development? The heterogeneous effects of historic districts on local housing markets in New York City. *Journal of Urban Economics 92*, 16–30.

Bertrand, M. and S. Mullainathan (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review 94*(4), 991–1013.

Boustan, L. P. (2013). Racial residential segregation in American cities. Technical report, National Bureau of Economic Research.

Boustan, L. P. and R. A. Margo (2009). Race, segregation, and postal employment: New evidence on spatial mismatch. *Journal of Urban Economics 65*(1), 1–10.

City and County of Denver (2019a). Census Neighborhood Demographics (2010). https://www.denvergov.org/opendata/dataset/city-and-county-of-denver-census-neighborhood-demographics-2010. [Online; accessed 28-September-2020].

City and County of Denver (2019b). Historic Landmark Districts. https://www.denvergov.

org/opendata/dataset/city-and-county-of-denver-historic-landmark-districts. [Online; accessed 12-June-2019].

City and County of Denver Assessor's Office (2019). Real Property. https://www.denvergov.org/content/denvergov/en/assessors-office/real-property.html. [Online; accessed 12-June-2019].

Coldman, A. J., T. Braun, and R. P. Gallagher (1988). The classification of ethnic status using name information. *Journal of Epidemiology & Community Health 42*(4), 390–395.

Cook, L. D., T. D. Logan, and J. M. Parman (2014). Distinctively Black names in the American past. *Explorations in Economic History 53*, 64–82.

Cook, L. D., T. D. Logan, and J. M. Parman (2016). The mortality consequences of distinctively Black names. *Explorations in Economic History 59*, 114–125.

Cutler, D. M. and E. L. Glaeser (1997). Are ghettos good or bad? *The Quarterly Journal of Economics 112*(3), 827–872.

Cutler, D. M., E. L. Glaeser, and J. L. Vigdor (1999). The rise and decline of the American ghetto. *Journal of Political Economy 107*(3), 455–506.

Cutler, D. M., E. L. Glaeser, and J. L. Vigdor (2008). When are ghettos bad? Lessons from immigrant segregation in the United States. *Journal of Urban Economics 63*(3), 759–774.

Durlauf, S. N. (2004). Neighborhood effects. In *Handbook of Regional and Urban Economics*, Volume 4, pp. 2173–2242. Elsevier.

Ellen, I. G. and M. A. Turner (1997). Does neighborhood matter? Assessing recent evidence. *Housing Policy Debate 8*(4), 833–866.

Fiscella, K. and A. M. Fremont (2006). Use of geocoding and surname analysis to estimate race and ethnicity. *Health Services Research 41*(4p1), 1482–1500.

Gill, P. S., R. Bhopal, S. Wild, and J. Kai (2005). Limitations and potential of country of birth as proxy for ethnic group. *BMJ 330*(7484), 196.

Heintzelman, M. D. and J. A. Altieri (2013). Historic preservation: Preserving value? *The Journal of Real Estate Finance and Economics 46*(3), 543–563.

History Colorado (2019). Official Website. https://www.historycolorado.org. [Online; accessed 12-June-2019].

Humphreys, B. R., A. Nowak, and Y. Zhou (2019). Superstition and real estate prices: Transaction-level evidence from the US housing market. *Applied Economics 51*(26), 2818–2841.

Ihlanfeldt, K. R. and B. Scafidi (2002). Black self-segregation as a cause of housing segregation: Evidence from the multi-city study of urban inequality. *Journal of Urban Economics 51*(2), 366–390.

Kain, J. F. (1992). The spatial mismatch hypothesis: Three decades later. *Housing Policy Debate 3*(2), 371–460.

Kim, B., M. R. Thomsen, R. M. Nayga Jr, D. Fang, and A. Goudie (2020). Move more, gain less: Effect of a recreational trail system on childhood bmi. *Contemporary Economic Policy 38*(2), 270–288.

Koster, H. R. and J. Rouwendal (2017). Historic amenities and housing externalities: Evidence from the Netherlands. *The Economic Journal 127*(605), F396–F420.

Koster, H. R., J. N. van Ommeren, and P. Rietveld (2016). Historic amenities, income and sorting of households. *Journal of Economic Geography 16*(1), 203–236.

Krysan, M. and R. Farley (2002). The residential preferences of Blacks: Do they explain persistent segregation? *Social Forces 80*(3), 937–980.

Li, H., H. Campbell, and S. Fernandez (2013). Residential segregation, spatial mismatch and economic growth across US metropolitan areas. *Urban Studies 50*(13), 2642–2660.

Logan, T. D. and J. M. Parman (2017). The national rise in residential segregation. *The Journal of Economic History 77*(1), 127–170.

McCabe, B. J. and I. G. Ellen (2016). Does preservation accelerate neighborhood change? Examining the impact of historic preservation in New York City. *Journal of the American Planning Association 82*(2), 134–146.

Microsoft (2018). Bing Maps Locations API. https://docs.microsoft.com/en-us/bingmaps/rest-services/locations/l. [Online; accessed 12-June-2019].

National Park Service (2014). National Register of Historic Places - Public, Non-restricted Data Depicting National Register Spatial Data Processed by the Cultural Resources GIS Facility. https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466. [Online; accessed 12-June-2019].

National Park Service (2019a). National Register of Historic Places - Data Downloads. https://www.nps.gov/subjects/nationalregister/data-downloads.htm. [Online; accessed 12-June-2019].

National Park Service (2019b). NPGallery Digital Asset Management System. https://npgallery.nps.gov/. [Online; accessed 12-June-2019].

Noel, T. J. and N. J. Wharton (2016). *Denver Landmarks and Historic Districts*. Boulder, CO: University Press of Colorado.

Noonan, D. S. and D. J. Krupka (2011). Making-or picking-winners: Evidence of internal and external price effects in historic preservation policies. *Real Estate Economics 39*(2), 379–407.

Nowak, A. and J. Sayago-Gomez (2018). Homeowner preferences after September 11th, a microdata approach. *Regional Science and Urban Economics 70*, 330–351.

Parasurama, P., A. Ghose, and P. G. Ipeirotis (2020). Gender and race preferences in hiring in the Age of Diversity Goals: Evidence from Silicon Valley tech firms. *Available at SSRN 3672484*.

Reaney, P. H. (2005). *A Dictionary of English Surnames*. New York: Oxford University Press.

Rothwell, J. and D. S. Massey (2009). The effect of density zoning on racial segregation in US urban areas. *Urban Affairs Review 44*(6), 779–806.

Rothwell, J. T. and D. S. Massey (2010). Density zoning and class segregation in US metropolitan areas. *Social Science Quarterly 91*(5), 1123–1143.

Shertzer, A., T. Twinam, and R. P. Walsh (2016). Race, ethnicity, and discriminatory zoning. *American Economic Journal: Applied Economics 8*(3), 217–46.

Shertzer, A., T. Twinam, and R. P. Walsh (2021). Zoning and segregation in urban economic history. *Regional Science and Urban Economics*, 103652.

Shertzer, A. and R. P. Walsh (2019). Racial sorting and the emergence of segregation in American cities. *The Review of Economics and Statistics 101*(3), 415–427.

Sood, G. (2017). Florida voter registration data. *Harvard Dataverse. https://dataverse.harvard.edu/dataset.xhtml*.

Sood, G. and S. Laohaprapanon (2018). Predicting race and ethnicity from the sequence of characters in a name. *arXiv preprint arXiv:1805.02109*.

Stoll, M. A. and K. Covington (2012). Explaining racial/ethnic gaps in spatial mismatch in the us: The primacy of racial segregation. *Urban Studies 49*(11), 2501–2521.

The Denver Channel (2017). Report: Large Race Gaps Persist in Home Ownership Rates in Denver Metro. https://www.thedenverchannel.com/news/local-news/report-large-race-gaps-persist-in-home-ownership-rates-in-denver-metro#:~:text=Home%20ownership%20rates%20in%20metro,29.1%20percent%20for%20black%20households. [Online; accessed 28-September-2020].

Troesken, W. (2002). The limits of Jim Crow: Race and the provision of water and sewerage services in American cities, 1880-1925. *The Journal of Economic History*, 734–772.

Troesken, W. and R. Walsh (2019). Collective action, white flight, and the origins of racial zoning laws. *The Journal of Law, Economics, and Organization 35*(2), 289–318.

Weinberg, B. A. (2000). Black residential centralization and the spatial mismatch hypothesis. *Journal of Urban Economics 48*(1), 110–134.

Xu, D. (2019). Surname-based ethnicity and ethnic segregation in the early twentieth century US. *Regional Science and Urban Economics 77*, 1–19.

Zhou, Y. (2021). The political economy of historic districts: The private, the public, and the collective. *Regional Science and Urban Economics 86*, 103583.

Figures and Tables

Figure 1: Historic Districts and Census Tracts in Denver

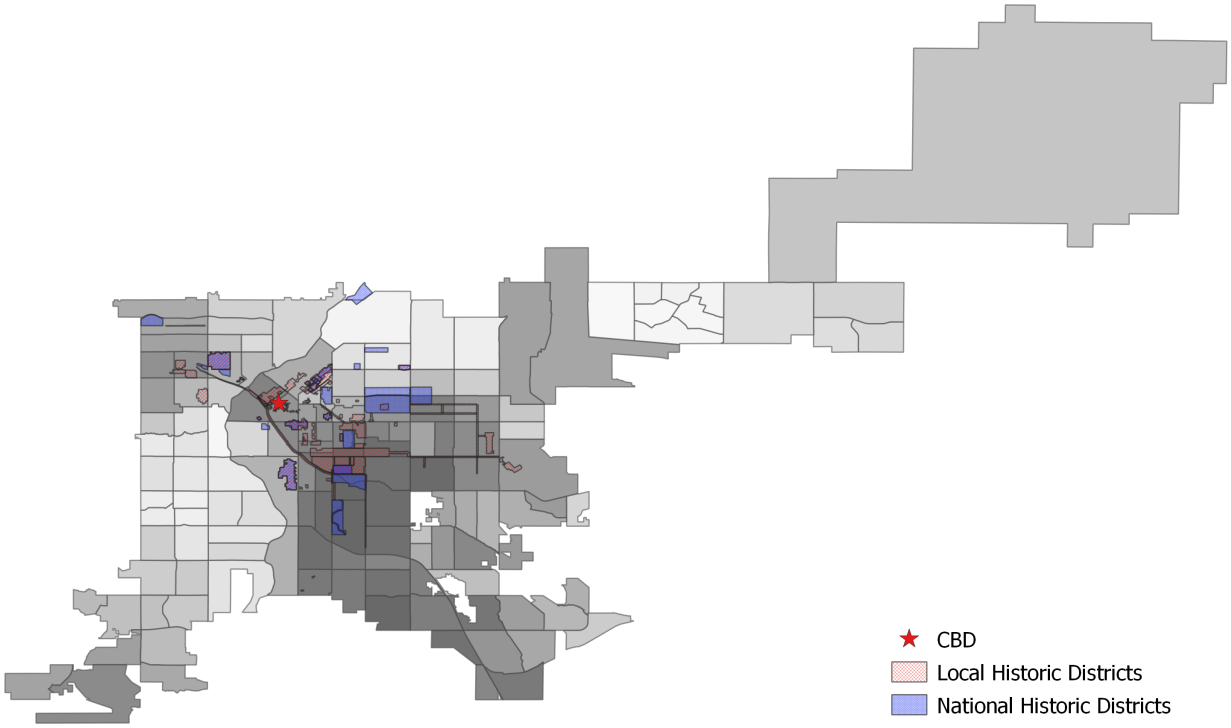

Figure 1 shows all the current historic districts and the 2010 census tracts in Denver. The darker a census tract is the higher percentage of White population in that census tract. The lowest in 2010 is 7.26%, and the highest is 92.56%. The large census tract on the top right is where the Denver International Airport is located.

Figure 2: Historic Districts and House Transactions in Denver

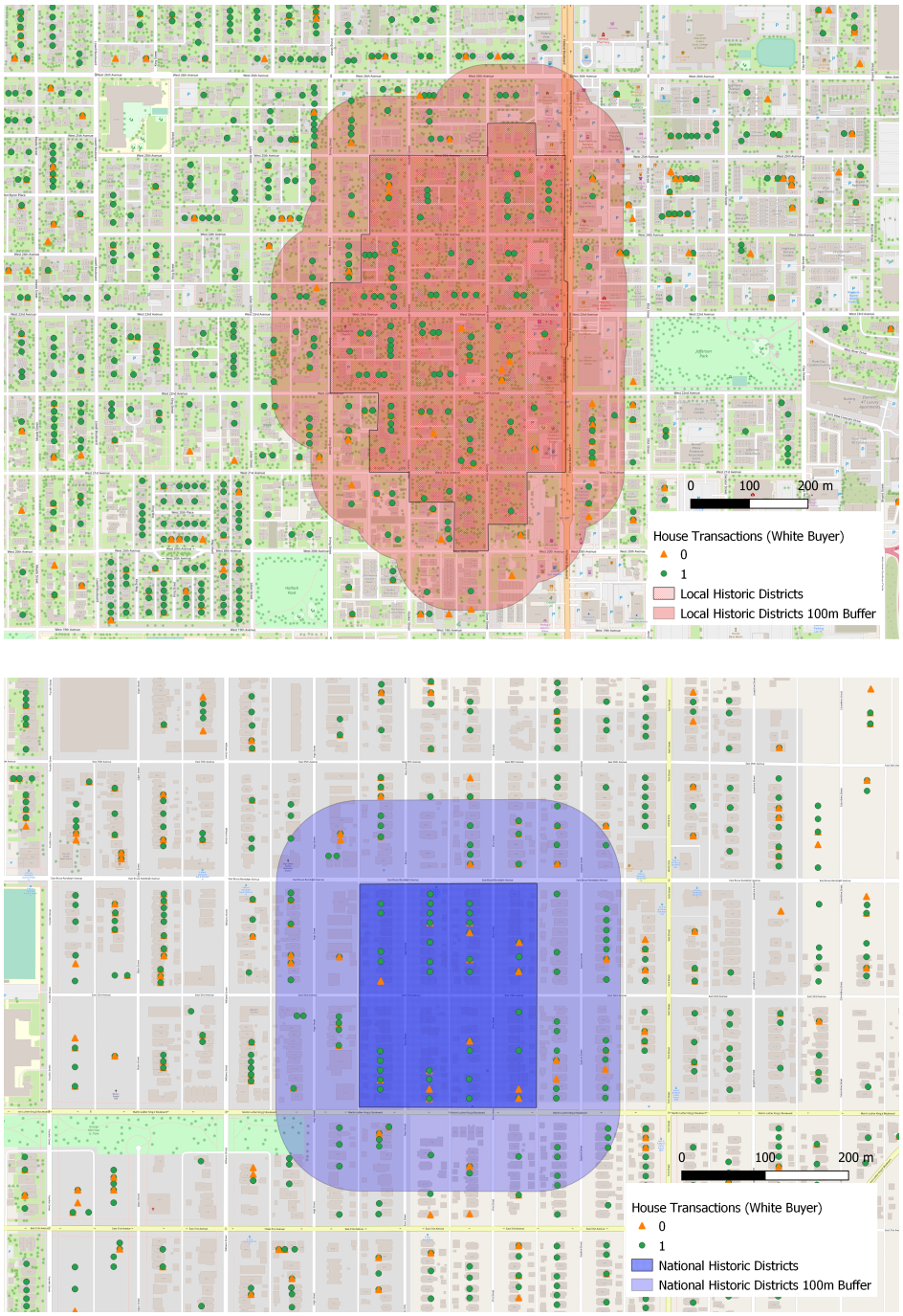

Figure 2 gives an example of historic districts and house transactions (White or Nonwhite buyers) in Denver, one for local historic districts (top panel) and one for natinal historic districts (bottom panel). The local historic district in the top panel is Witter-Cofield Historic District. The national historic district in the bottom panel is Cole Neighborhood Historic District. Note that some houses are transacted more than once, and the ones transacted later are labeled on top of the former ones.

Figure 3: Historic Districts and Placebos (Southerly 1000m)

Figure 3 shows historic districts and one set of corresponding placebos (moving 1000m to the South) in Denver, one for local historic district (top panel) and one for national historic district (bottom panel).

Table 1: Summary Statistics - House Transactions

Statistic	Mean	St. Dev.	Min	Max
Sale Price	269,748	248,328	50,000	5,700,000
Home Size (log ft^2)	1,500	781.462	226	12,433
Bedrooms	2.778	0.812	1	9
Full Bathrooms	1.993	0.882	1	7
Half Bathrooms	0.321	0.503	0	4
Year Sold	2004	6.622	1990	2016
Year Built	1951	34.330	1874	2015
Distance to CBD (km)	8.542	5.139	1.022	22.990
Local Historic District	0.030	0.171	0	1
Local Historic District Buffer 100m	0.035	0.184	0	1
Local Historic Heritage	0.041	0.199	0	1
Local Historic Heritage Buffer 100m	0.044	0.206	0	1
National Historic District	0.021	0.145	0	1
National Historic District Buffer 100m	0.018	0.132	0	1
National Historic Heritage	0.024	0.154	0	1
National Historic Heritage Buffer 100m	0.019	0.137	0	1

N=174,779

Table 2: Local and National Historic Districts

Statistic	N	Mean	St. Dev.	Min	Max
Local Historic District Designation Year	77	1997	10.319	1973	2018
Local Historic District Size (km^2)	77	0.127	0.202	0.0013	1.157
National Historic District Designation Year	32	1985	9.159	1973	2006
National Historic District Size (km^2)	32	0.251	0.305	0.0033	1.279

Table 3: Race of Buyers, Sellers, the Transaction Flows - Florida Voter Full Name Prediction

Statistic	Mean	St. Dev.	Min	Max
Buyer White	0.770	0.421	0	1
Buyer Black	0.043	0.202	0	1
Buyer Asian	0.028	0.166	0	1
Buyer Hispanic	0.159	0.366	0	1
Seller White	0.810	0.392	0	1
Seller Black	0.058	0.235	0	1
Seller Asian	0.038	0.192	0	1
Seller Hispanic	0.093	0.291	0	1
White - White	0.656	0.475	0	1
White - Nonwhite	0.155	0.362	0	1
Nonwhite - White	0.115	0.318	0	1
Nonwhite - Nonwhite	0.075	0.264	0	1

N=174,779

Table 4: Main Results - Florida Voter Full Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.245*		−0.200		−0.413		−0.209	
	(0.098)		(0.164)		(0.274)		(0.129)	
Local Dist. Heritage×Designation	0.010		0.062		0.154		−0.172	
	(0.100)		(0.166)		(0.277)		(0.135)	
National Dist. Heritage		0.426*		−0.121		0.060		−0.840*
		(0.191)		(0.253)		(0.400)		(0.391)
National Dist. Heritage×Designation		−0.021		−0.100		−0.149		0.207
		(0.204)		(0.275)		(0.430)		(0.403)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table 5: Interpretation of Main Results - Florida Voter Full Name Prediction, without LogPrice

Mean Probability	White Local	White National	Black Local	Black National	Asian Local	Asian National	Hispanic Local	Hispanic National
Heritage = 0 & Heritage×Designation = 0	0.7692	0.7691	0.0428	0.0428	0.0286	0.0285	0.1595	0.1598
Heritage = 1 & Heritage×Designation = 0	0.8029	0.8256	0.0354	0.0382	0.0192	0.0301	0.1389	0.0880
Heritage = 1 & Heritage×Designation = 1	0.8042	0.8231	0.0375	0.0347	0.0223	0.0261	0.1233	0.1029

Table 6: Buffer Zones - Florida Voter Full Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.222*		−0.179		−0.459		−0.162	
	(0.099)		(0.166)		(0.276)		(0.131)	
Local Dist. Heritage×Designation	0.017		0.060		0.151		−0.185	
	(0.100)		(0.166)		(0.277)		(0.135)	
Local Dist. Heritage 100m Buffer	−0.151		0.091		−0.107		0.258*	
	(0.092)		(0.147)		(0.240)		(0.126)	
Local Dist. Heritage 100m Buffer×Designation	0.130		−0.049		−0.040		−0.212	
	(0.100)		(0.159)		(0.256)		(0.139)	
National Dist. Heritage		0.412*		−0.115		0.053		−0.810*
		(0.191)		(0.253)		(0.401)		(0.392)
National Dist. Heritage×Designation		−0.043		−0.086		−0.119		0.203
		(0.204)		(0.276)		(0.430)		(0.404)
National Dist. Heritage 100m Buffer		−0.164		−0.004		−1.023		0.527*
		(0.203)		(0.347)		(1.008)		(0.248)
National Dist. Heritage 100m Buffer×Designation		0.042		0.081		1.133		−0.448
		(0.210)		(0.357)		(1.016)		(0.260)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Local Dist. Heritage* 100*m Buffer* is an indicator for a house transaction being in the 100m buffer zone of a district identified with *Local Dist. Heritage*, and *National Dist. Heritage* 100*m Buffer* is an indicator for a house transaction being in the 100m buffer zone of a district identified with *National Dist. Heritage*. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table 7: Interpretation of Results When with Buffer Zone Specifications, without LogPrice

Mean Probability	White Local	White National	Black Local	Black National	Asian Local	Asian National	Hispanic Local	Hispanic National
Heritage = 0 & Heritage×Designation = 0	0.7692	0.7692	0.0428	0.0428	0.0287	0.0285	0.1594	0.1597
Heritage = 1 & Heritage×Designation = 0	0.7999	0.8239	0.0361	0.0384	0.0184	0.0299	0.1433	0.0900
Heritage = 1 & Heritage×Designation = 1	0.8021	0.8186	0.0382	0.0353	0.0213	0.0267	0.1263	0.1049

Table 8: Inter Race Transactions - Florida Voter Full Name Prediction

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	0.222**		−0.252*		−0.146		−0.287	
	(0.074)		(0.110)		(0.095)		(0.190)	
Local Dist. Heritage×Designation	0.077		0.113		−0.131		−0.397	
	(0.075)		(0.111)		(0.098)		(0.208)	
National Dist. Heritage		0.295*		−0.302		−0.110		−1.395
		(0.133)		(0.197)		(0.170)		(0.719)
National Dist. Heritage×Designation		0.092		0.060		−0.153		0.649
		(0.143)		(0.213)		(0.182)		(0.731)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table 9: Interpretation of Inter Race Flow Results, without LogPrice

Mean Probability	White Local	White National	Black Local	Black National	Asian Local	Asian National	Hispanic Local	Hispanic National
Local Dist. Heritage = 0 & Local Dist. Heritage×Designation = 0	0.6538	0.6539	0.1551	0.1551	0.1155	0.1153	0.0757	0.0759
Local Dist. Heritage = 1 & Local Dist. Heritage×Designation = 0	0.6938	0.7066	0.1268	0.1216	0.1017	0.1048	0.0598	0.0223
Local Dist. Heritage = 1 & Local Dist. Heritage×Designation = 1	0.7072	0.7222	0.1389	0.1278	0.0906	0.0915	0.0425	0.0403

Table 10: Sub-samples for the Effect of Designation on Buyer's Races - Florida Voter Full Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage×Designation	0.042		−0.145		0.279		−0.093	
	(0.073)		(0.236)		(0.377)		(0.193)	
National Dist. Heritage×Designation		−0.273		−0.082		−0.108		0.439
		(0.289)		(0.397)		(0.637)		(0.580)
Num. obs.	7194	4269	7194	4269	7194	4269	7194	4269

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table 11: Sub-samples for the Effect of Designation on Inter Race Transactions - Florida Voter Full Name Prediction

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage×Designation	0.166		0.018		−0.189		−0.550	
	(0.107)		(0.156)		(0.139)		(0.307)	
National Dist. Heritage×Designation		−0.268		0.224		0.198		0.446
		(0.207)		(0.303)		(0.261)		(1.011)
Num. obs.	7194	4269	7194	4269	7194	4269	7194	4269

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table 12: Placebo Test - Southerly 1000m - Florida Voter Full Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.052		0.104		0.277		−0.214	
	(0.107)		(0.168)		(0.250)		(0.153)	
Local Dist. Heritage×Designation	−0.041		−0.088		−0.178		0.122	
	(0.117)		(0.180)		(0.267)		(0.170)	
National Dist. Heritage		−0.013		0.421		−0.401		0.170
		(0.172)		(0.252)		(0.478)		(0.255)
National Dist. Heritage×Designation		0.139		−0.414		0.388		−0.420
		(0.179)		(0.262)		(0.487)		(0.265)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table 13: Placebo Test - Southerly 1000m - Inter Race Transactions - Florida Voter Full Name Prediction

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	−0.024		−0.074		0.086		−0.058	
	(0.080)		(0.118)		(0.102)		(0.222)	
Local Dist. Heritage×Designation	0.068		0.093		−0.141		−0.033	
	(0.088)		(0.128)		(0.112)		(0.244)	
National Dist. Heritage		−0.088		−0.004		0.190		0.256
		(0.132)		(0.186)		(0.179)		(0.402)
National Dist. Heritage×Designation		0.175		0.005		−0.206		−0.778
		(0.137)		(0.192)		(0.185)		(0.418)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

A Appendix: Census Last Name Race Prediction

Table A.1: Race of Buyers, Sellers, the Transaction Flows - Census Last Name Model

Statistic	Mean	St. Dev.	Min	Max
Buyer White	0.764	0.425	0	1
Buyer Black	0.013	0.112	0	1
Buyer Asian	0.042	0.200	0	1
Buyer Hispanic	0.181	0.385	0	1
Seller White	0.813	0.390	0	1
Seller Black	0.012	0.110	0	1
Seller Asian	0.059	0.237	0	1
Seller Hispanic	0.115	0.319	0	1
White - White	0.655	0.475	0	1
White - Nonwhite	0.158	0.365	0	1
Nonwhite - White	0.109	0.311	0	1
Nonwhite - Nonwhite	0.078	0.269	0	1

N=174,779

Table A.2: Main Results (Logit Model) - Census Last Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.201^{*}		-0.186		-0.372		-0.108	
	(0.095)		(0.291)		(0.203)		(0.112)	
Local Dist. Heritage×Designation	-0.110		0.508		0.366		-0.158	
	(0.097)		(0.292)		(0.203)		(0.119)	
National Dist. Heritage		0.654^{**}		0.068		-0.585		-0.887^{*}
		(0.217)		(0.364)		(0.421)		(0.346)
National Dist. Heritage×Designation		-0.269		-0.417		0.356		0.422
		(0.228)		(0.429)		(0.436)		(0.357)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table A.3: Buffer Zones (Logit Model) - Census Last Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.183		−0.150		−0.422*		−0.056	
	(0.096)		(0.293)		(0.204)		(0.115)	
Local Dist. Heritage×Designation	−0.108		0.525		0.369		−0.170	
	(0.097)		(0.292)		(0.203)		(0.119)	
Local Dist. Heritage 100m Buffer	−0.084		−0.095		−0.224		0.268*	
	(0.090)		(0.248)		(0.195)		(0.108)	
Local Dist. Heritage 100m Buffer×Designation	0.051		0.308		0.101		−0.201	
	(0.098)		(0.270)		(0.205)		(0.120)	
National Dist. Heritage		0.646**		0.067		−0.615		−0.859*
		(0.217)		(0.365)		(0.421)		(0.346)
National Dist. Heritage×Designation		−0.280		−0.394		0.371		0.417
		(0.228)		(0.431)		(0.437)		(0.357)
National Dist. Heritage 100m Buffer		−0.099		−0.173		−10.728		0.512*
		(0.210)		(0.592)		(59.072)		(0.230)
National Dist. Heritage 100m Buffer×Designation		0.035		0.254		10.695		−0.440
		(0.217)		(0.613)		(59.072)		(0.240)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Local Dist. Heritage* $100m\ Buffer$ is an indicator for a house transaction being in the 100m buffer zone of a district identified with *Local Dist. Heritage*, and *National Dist. Heritage* $100m\ Buffer$ is an indicator for a house transaction being in the 100m buffer zone of a district identified with *National Dist. Heritage*. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table A.4: Inter Race Transactions (Logit Model) - Census Last Name Prediction

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	0.231**		−0.092		−0.172		−0.510**	
	(0.072)		(0.106)		(0.094)		(0.183)	
Local Dist. Heritage×Designation	−0.018		0.132		−0.124		−0.001	
	(0.075)		(0.107)		(0.098)		(0.200)	
National Dist. Heritage		0.493**		−0.575*		−0.227		−1.100
		(0.152)		(0.226)		(0.200)		(0.722)
National Dist. Heritage×Designation		−0.014		0.351		−0.183		0.406
		(0.161)		(0.239)		(0.211)		(0.733)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

B Appendix: Probit Models & Florida Voter Full Name Prediction

Table B.1: Main Results (Probit Model) - Florida Voter Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.127*		−0.082		−0.162		−0.115	
	(0.051)		(0.071)		(0.105)		(0.062)	
Local Dist. Heritage×Designation	−0.003		0.023		0.047		−0.047	
	(0.051)		(0.072)		(0.106)		(0.064)	
National Dist. Heritage		0.204*		−0.050		0.036		−0.339*
		(0.092)		(0.111)		(0.156)		(0.152)
National Dist. Heritage×Designation		0.005		−0.049		−0.075		0.036
		(0.099)		(0.121)		(0.168)		(0.160)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table B.2: Buffer Zones (Probit Model) - Florida Voter Full Name Prediction

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.116*		−0.072		−0.180		−0.096	
	(0.051)		(0.072)		(0.106)		(0.063)	
Local Dist. Heritage×Designation	0.001		0.022		0.045		−0.052	
	(0.051)		(0.072)		(0.106)		(0.064)	
Local Dist. Heritage 100m Buffer	−0.080		0.042		−0.037		0.114	
	(0.047)		(0.065)		(0.093)		(0.060)	
Local Dist. Heritage 100m Buffer×Designation	0.070		−0.022		−0.022		−0.093	
	(0.051)		(0.070)		(0.099)		(0.066)	
National Dist. Heritage		0.196*		−0.047		0.033		−0.324*
		(0.092)		(0.111)		(0.156)		(0.152)
National Dist. Heritage×Designation		−0.008		−0.041		−0.063		0.040
		(0.099)		(0.122)		(0.168)		(0.160)
National Dist. Heritage 100m Buffer		−0.067		−0.015		−0.364		0.245
		(0.111)		(0.158)		(0.350)		(0.129)
National Dist. Heritage 100m Buffer×Designation		−0.004		0.052		0.408		−0.188
		(0.115)		(0.163)		(0.354)		(0.134)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Local Dist. Heritage* 100*m Buffer* is an indicator for a house transaction being in the 100m buffer zone of a district identified with *Local Dist. Heritage*, and *National Dist. Heritage* 100*m Buffer* is an indicator for a house transaction being in the 100m buffer zone of a district identified with *National Dist. Heritage*. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table B.3: Inter Race Transactions (Probit Model) - Florida Voter Full Name Prediction

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	0.127**		−0.124*		−0.079		−0.125	
	(0.042)		(0.054)		(0.049)		(0.083)	
Local Dist. Heritage×Designation	0.038		0.059		−0.065		−0.149	
	(0.043)		(0.055)		(0.051)		(0.088)	
National Dist. Heritage		0.162*		−0.141		−0.055		−0.487*
		(0.072)		(0.093)		(0.085)		(0.245)
National Dist. Heritage×Designation		0.058		0.023		−0.086		0.148
		(0.079)		(0.102)		(0.092)		(0.252)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

C Appendix: Placebo Tests

Figure C.1: Historic Districts and Placebos (Easterly 1000m)

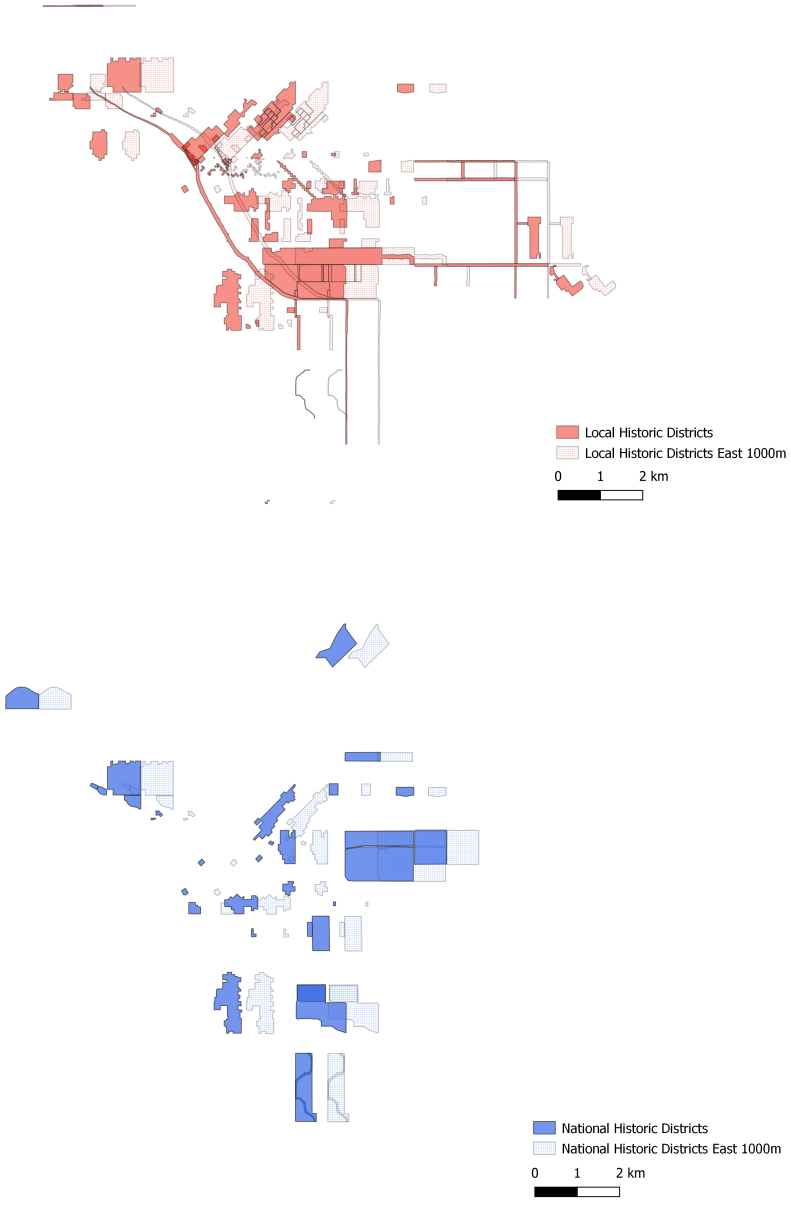

Figure C.1 shows historic districts and one set of corresponding placesbos (moving 1000m to the East) in Denver, one for local historic district (top panel) and one for natinal historic district (bottom panel).

Table C.1: Placebo Test - Florida Voter Full Name Prediction & Easterly 1000m

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.387***		−0.063		−0.144		−0.512***	
	(0.087)		(0.144)		(0.230)		(0.113)	
Local Dist. Heritage×Designation	−0.235*		0.108		0.259		0.028	
	(0.096)		(0.156)		(0.245)		(0.131)	
National Dist. Heritage		0.504**		−0.247		−0.294		−0.562**
		(0.153)		(0.255)		(0.413)		(0.205)
National Dist. Heritage×Designation		−0.200		0.220		0.142		0.026
		(0.159)		(0.262)		(0.423)		(0.214)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table C.2: Inter Race Transactions - Florida Voter Full Name Prediction & Easterly 1000m

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	0.307***		−0.264**		−0.108		−0.556***	
	(0.067)		(0.097)		(0.086)		(0.161)	
Local Dist. Heritage×Designation	−0.191*		0.316**		0.036		−0.262	
	(0.074)		(0.106)		(0.096)		(0.190)	
National Dist. Heritage		0.356**		−0.330*		−0.091		−1.191**
		(0.116)		(0.162)		(0.156)		(0.413)
National Dist. Heritage×Designation		−0.115		0.195		−0.021		0.477
		(0.120)		(0.168)		(0.161)		(0.423)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table C.3: Placebo Test - Florida Voter Full Name Prediction & Westerly 1000m

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.320*		−0.132		−0.064		−0.496*	
	(0.136)		(0.215)		(0.302)		(0.203)	
Local Dist. Heritage×Designation	−0.264		0.090		0.073		0.414	
	(0.142)		(0.222)		(0.314)		(0.213)	
National Dist. Heritage		−0.155		0.542		−9.272		0.031
		(0.390)		(0.618)		(93.826)		(0.439)
National Dist. Heritage×Designation		0.163		−0.564		9.357		−0.051
		(0.395)		(0.625)		(93.826)		(0.449)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table C.4: Inter Race Transactions - Florida Voter Full Name Prediction & Westerly 1000m

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	0.326**		−0.364*		−0.304*		−0.250	
	(0.101)		(0.146)		(0.137)		(0.346)	
Local Dist. Heritage×Designation	−0.306**		0.325*		0.328*		0.169	
	(0.105)		(0.151)		(0.142)		(0.363)	
National Dist. Heritage		−0.130		0.668		0.042		−1.338
		(0.362)		(0.401)		(0.493)		(1.022)
National Dist. Heritage×Designation		0.111		−0.695		−0.007		1.388
		(0.365)		(0.407)		(0.497)		(1.030)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table C.5: Placebo Test - Florida Voter Full Name Prediction & Northerly 1000m

	White	White	Black	Black	Asian	Asian	Hispanic	Hispanic
Local Dist. Heritage	0.156		−0.475*		0.213		−0.049	
	(0.109)		(0.203)		(0.252)		(0.142)	
Local Dist. Heritage×Designation	−0.092		0.366		−0.196		−0.014	
	(0.117)		(0.214)		(0.269)		(0.157)	
National Dist. Heritage		0.142		−0.239		0.665		0.002
		(0.164)		(0.268)		(0.371)		(0.234)
National Dist. Heritage×Designation		−0.075		0.254		−1.102**		−0.049
		(0.172)		(0.278)		(0.397)		(0.246)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.

Table C.6: Inter Race Transactions - Florida Voter Full Name Prediction & Northerly 1000m

	White-White	White-White	White-Nonwhite	White-Nonwhite	Nonwhite-White	Nonwhite-White	Nonwhite-Nonwhite	Nonwhite-Nonwhite
Local Dist. Heritage	0.088		−0.216		−0.025		−0.047	
	(0.080)		(0.120)		(0.103)		(0.225)	
Local Dist. Heritage×Designation	−0.046		0.169		0.018		−0.051	
	(0.087)		(0.130)		(0.112)		(0.245)	
National Dist. Heritage		−0.057		−0.246		0.277		0.223
		(0.120)		(0.189)		(0.150)		(0.285)
National Dist. Heritage×Designation		0.177		0.188		−0.416**		−0.289
		(0.126)		(0.197)		(0.158)		(0.300)

N=174,779. $^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. All regressions include hedonic controls, census tract FE, year sold FE, and year built FE. *Local Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a local historic district in the sample, and *National Dist. Heritage* is an indicator for a house transaction being in a district with historic heritage which has been designated or will be designated later as a national historic district in the sample. *Designation* is an indicator for official historic district designation. × represents the interaction.