

## **Evidence for the Persistent Effects of Racial Covenants from San Jose**

Jake Wilde

URBP 298B

May 10, 2026

## Contents

|                   |     |
|-------------------|-----|
| Tables            | ii  |
| Figures           | iii |
| Executive Summary | 1   |
| Introduction      | 2   |
| Background        | 5   |
| Data              | 14  |
| Methods           | 23  |
| Results           | 25  |
| Discussion        | 28  |
| Conclusion        | 34  |

## Tables

|   |                                                                                               |    |
|---|-----------------------------------------------------------------------------------------------|----|
| 1 | Descriptive Statistics . . . . .                                                              | 22 |
| 2 | Effects of Racial Covenant Presence on Neighborhood Racial<br>Composition, 1940-2020. . . . . | 26 |

## Figures

|   |                                                                                        |    |
|---|----------------------------------------------------------------------------------------|----|
| 1 | Racial Covenant Prevalence per 100 People by City in Santa Clara County, 2020. . . . . | 15 |
| 1 | Study Area: Covenant Density . . . . .                                                 | 18 |
| 3 | Racial Composition of Study Area, 1940-2020. . . . .                                   | 19 |
| 4 | Racial Composition of San Jose, 1940-2020. . . . .                                     | 19 |
| 5 | Covenant Effect Over Time. . . . .                                                     | 29 |
| 6 | Average Covenants per Acre by Neighborhood Grade. . . . .                              | 33 |

## Executive Summary

Following the demise of enforceable residential segregation by racial zoning in the early 20th century, racially restrictive covenants—contractual property agreements prohibiting homeowners from selling or leasing to non-white buyers—emerged as the preeminent tool to perpetuate and reinforce racial segregation in the United States. Although rendered unconstitutional by the Supreme Court’s 1948 ruling in *Shelley v. Kraemer*, this report finds the spatial regime of the racial covenant to be remarkably durable, continuing to exert influence over demographic settlement well into the twenty-first century.

This report uses quantitative methods to examine the long-run effects of restrictive racial covenants on the racial composition of neighborhoods over time in San Jose, California. The report uses spatial modeling, along with a set of 57 neighborhoods observed across nine decades, to estimate differences in racial composition between covenanted and non-covenanted areas during each period.

Based on the analysis, this report finds significant demographic divergence between covenanted and non-covenanted neighborhoods. Compared to neighborhoods lacking racial restrictions, those areas with restrictions tend to have smaller Asian and Black populations. Notably, divergence between these areas did not emerge until 1980, over three decades after racial covenants were deemed unenforceable. In 2020, neighborhoods with covenants had an estimated 6.54 percentage point lower share of Asian residents than neighborhoods without covenants. Although these covenants have not been enforceable for

78 years, 2020 marks the largest difference in Asian population shares between covenanted and non-covenanted areas.

## Introduction

Residential racial segregation is a persistent, inescapable facet of the built environment of the United States, having been constructed and reinforced by a multitude of instruments over the last two centuries. This study focuses on one such instrument: restrictive racial covenants—contracts prohibiting homeowners from selling to anyone not of the White race. These agreements were typically inserted into property documents and can still be found in the deeds of homes from virtually every US city. However, despite the known ubiquity of racial covenants, quantitative documentation of their impacts on demographic patterns remains limited. What scant research exists tends to focus on cities along the East Coast and in the Midwest interior. The purpose of this report is to expand our understanding of racial covenants in a Western demographic context by examining their effects on neighborhood-level racial composition over nine decades in San Jose, California.

This report examines the long-term consequences of restrictive racial covenants using recently aggregated data documenting the locations of such covenants in Santa Clara County, California. The focus of this analysis is the City of San Jose. San Jose is a suitable study area for several reasons. The first reason is that the necessary demographic and covenant data for the area and time periods required are readily available. The second reason is that San Jose presents a unique or understudied application of restrictive racial covenants.

In contrast to cities on the East Coast and in the Midwest, San Jose has very different historic racial demographics. Studies examining the effects of covenants in North and Midwest US cities tend to focus on how covenants impacted the distribution of the Black population. For example, in one study of racial covenants from Chicago, researchers found that 99.6 percent of racial covenants applied exclusively to Black residents, while the remaining 1.4 percent applied to all other minorities.<sup>1</sup> During the time frame of this study, Chicago’s Black population numbered 277,731.<sup>2</sup> San Jose, however, had an extremely small Black population during the same time frame; roughly only 291 individuals.<sup>3</sup> At its peak, San Jose’s Black population rose to 36,397 in 1990, a much lower figure than the city’s Midwest and Northeast peers.<sup>4</sup> Given this difference in demographic settlement patterns and strong historical anti-Asian discrimination in California, the practice of recording racial covenants likely has distinct foundations and impacts in San Jose.

Additionally, while the broad strokes of the legal and societal narrative histories of racial covenants are well documented in academic and popular literature, significantly less is known about the direct and indirect consequences of racial covenants on demographic settlement patterns. Research on the quantitative aspects of racial covenants is lacking; up until the 21st century, quantitative approaches to understanding the long-term effects of

---

1. Herman H. Long and Charles Spurgeon Johnson, *People vs. Property: Race Restrictive Covenants in Housing* (Nashville, Tenn: Fisk University Press, 1947), 21.

2. Long and Johnson, 14.

3. Steven Ruggles et al., “IPUMS Ancestry Full Count Restricted Data,” 1940 100% Population Database, version 4, Minneapolis, MN: IPUMS, 2024, <https://doi.org/10.18128/D014.V4.0R>.

4. Jonathan Schroeder et al., “IPUMS National Historical Geographic Information System,” 1990 Census: STF 1 - 100% Data, version 20, Minneapolis, MN: IPUMS, 2025, <https://doi.org/10.18128/D050.V20.0>.

racial covenants were nonexistent.<sup>5</sup> More recent research has shed new light on the true impact of racial covenants on the demographic characteristics in the cities of Chicago, Philadelphia, Minneapolis, and St. Louis.<sup>6</sup> However, all these cities remain outside the West Coast context. Quantitative research regarding covenant practices in southern and western cities of the United States remains lacking, a problem this study addresses.<sup>7</sup>

This report builds on the work of scholars studying 20th-century segregation and situates restrictive racial covenants within the broader landscape of discriminatory housing practices. By examining San Jose, this report adds to our understanding of how these instruments functioned in the West Coast's unique demographic context.

## Organization

Section II of this report describes the origins of racial covenants and their development within a California-specific context, as well as recent efforts to record, document, and understand the effects of restrictive racial covenants. Section III covers the data used by this report and discusses the construction of a longitudinal demographic

---

5. Kevin Fox Gotham, "Urban Space, Restrictive Covenants and the Origins of Racial Residential Segregation in a US City, 1900–50," *International Journal of Urban and Regional Research* 24, no. 3 (September 2000): 618, <https://doi.org/10.1111/1468-2427.00268>.

6. Yana Kucheva and Richard Sander, "The Misunderstood Consequences of Shelley v. Kraemer," *Social Science Research* 48 (November 2014): 212–33, <https://doi.org/10.1016/j.ssresearch.2014.06.007>; Larry Santucci, "How Prevalent Were Racially Restrictive Covenants in 20th Century Philadelphia? A New Spatial Data Set Provides Answers," *A New Spatial Data Set Provides Answers (2019-11-18)*. FRB of Philadelphia Payment Cards Center Discussion Paper, nos. 19–5 (2019); Aradhya Sood, William Speagle, and Kevin Ehrman-Solberg, "Long Shadow of Racial Discrimination: Evidence from Housing Covenants of Minneapolis," preprint, October 16, 2023, <https://doi.org/https://dx.doi.org/10.2139/ssrn.3468520>; Colin Gordon, "Dividing the City: Race-Restrictive Covenants and the Architecture of Segregation in St. Louis," *Journal of Urban History* 49, no. 1 (January 2023): 160–82, <https://doi.org/10.1177/0096144221999641>.

7. Jermaine Toney, James Kelly, and Alex Hoffman, *Racial Housing Covenants: The Case of a Southern U.S. City*, 2023, <https://doi.org/10.2139/ssrn.4607196>.



dataset for the San Jose study area. Section IV touches on report methodology. Section V presents the analysis results, and Section VI reviews future research prospects and the limitations of this report.

## Background

Restrictive covenants are clauses recorded in property deeds that restrict how one may use the property they own. These types of agreements are said to run with the land, as the agreements are passed down from buyer to seller with the property. Typical covenant agreements are generally benign, regulating architecture, building height, or fence color.<sup>8</sup> However, covenants can contain more malicious obligations, such as restrictions prohibiting the transfer of property to or the occupation of by non-white individuals. This type of covenant is known as a racially restrictive covenant or racial covenant and typically reads as follows:

No part of the land now owned by the parties hereto, a more detailed description of said property, being given after the respective signatures hereto, shall ever be used or occupied by, or sold, conveyed, leased, rented, or given to, negroes, or any person or persons of the negro race or blood. This covenant shall run with the land and bind the respective heirs and assigns of the parties hereto for the period of twenty-one (21) years from and after the date of these presents.<sup>9</sup>

This excerpt is from a covenant recorded in the Washington DC area in 1921.

Around this time, racial covenants emerged as the preeminent tool for enforcing residential segregation across the United States. However, racial covenants originated much earlier than the 1920s, with the earliest known example dating back to *Gandolfo v. Hartman*, a

---

8. D. Benjamin Barros and Anna P Hemingway, *Property Law*, Aspen Casebook Series (New York: Wolters Kluwer, 2015), 636–37.

9. *Corrigan et al. v. Buckley*, 271 U.S. 323 (Supreme Court of the United States, 1926).

1892 California court case.<sup>10</sup> In *Gandolfo v. Hartman*, the court was concerned with the following covenant targeting Chinese immigrants in Ventura County:

It is also understood and agreed by and between the parties hereto, their heirs and assigns, that the party of the first part shall never, without the consent of the party of the second part, his heirs or assigns, rent any of the buildings or ground owned by said party of the first, and fronting on said East Main Street, to a Chinaman or Chinamen.<sup>11</sup>

Both this excerpt and the DC examples identify specific prohibited racial groups, but other covenants use more encompassing racial language. In San Jose, a racial clause bars “no persons not of the Caucasian Race” from occupying the property which it protects.<sup>12</sup> These “not of the Caucasian Race” style covenants usually made some exceptions for non-white residents, provided they were “in the employ as a servant of the person occupying said property.”<sup>13</sup>

### Origins and Legal History

The origins of restrictive racial covenants are typically explained as a reaction to the end of racial zoning as a constitutional practice. Much like regular zoning, racial zoning used municipal ordinances to partition cities into zones; but rather than prescribing land use, it demarcated race-based districts. Many cities adopted racial zoning ordinances to confine non-white residents to specific areas, while white residents were free to travel as

---

10. Michael Jones-Correa, “The Origins and Diffusion of Racial Restrictive Covenants,” *Political Science Quarterly* 115, no. 4 (2000): 548, JSTOR, <https://doi.org/10.2307/2657609>.

11. *Gandolfo v. Hartman*, 49 F. 181 (C.C.S.D. Cal. 1892).

12. Jean Stevens, “Restrictive Covenants Challenged in Court, Prof Tells Local Setup,” *Spartan Daily* (San Jose), February 16, 1948, 2, <https://scholarworks.sjsu.edu/spartandaily/10044/>.

13. Stevens, 2.

they pleased. By 1915, most large US cities had adopted racial zoning ordinances, including Louisville, Baltimore, Richmond, and Atlanta.<sup>14</sup> Louisville's racial zoning ordinance would go on to become the most well-known ordinance, as it led to the practice's downfall in *Buchanan v. Warley*. In the wake of racial zoning's demise, segregationists sought to revitalize tools both old and new to reassert residential racial segregation. Racial covenants, which had existed for decades, surged in popularity.

Covenants became even more popular in 1926, when the Supreme Court upheld their constitutionality in *Corrigan et al. v. Buckley*. Writing for the court, Justice Sanford determined that covenants were a valid legal tool, as "the prohibitions of the Fourteenth Amendment have reference to State action exclusively, and not to any action of private individuals."<sup>15</sup> Sanford's ruling clarifies that the recording of covenants is a matter of individual choice and that, even though enforcing a covenant requires state action by the courts, such action does not violate the Fourteenth Amendment. The contradiction in Sanford's ruling was noted by legal scholars at the time, some of whom pointed to *Gandolfo v. Hartman* as a prior federal ruling that reached findings directly contrary to Sanford's.

However, the events affirming covenants nationally with *Buchanan v. Warley* and *Corrigan et al. v. Buckley* had occurred in microcosm decades earlier in California. In 1890, San Francisco became the first US city to adopt a racial zoning ordinance.<sup>16</sup> Known as the Bingham Ordinance in the press, Ordinance No. 2190 designated the areas "in which

---

14. Jones-Correa, "The Origins and Diffusion of Racial Restrictive Covenants," 548.

15. *Corrigan v. Buckley*, 271 U.S. 323 (1926).

16. Charles J. McClain, "In Re Lee Sing: The First Residential-Segregation Case," *Western Legal History* 3 (June 1990): 179, <https://lawcat.berkeley.edu/record/1113811/files/fulltext.pdf>.

Chinese shall reside and carry on business” in the city and county of San Francisco.<sup>17</sup> The ordinance was adopted in response to White fears of Chinese immigration and growing concern regarding the city’s Chinatown, described in a report that same year as a “moral cancer on the city.”<sup>18</sup> The Bingham ordinance, although short-lived—having been ruled unconstitutional only a few months after its adoption—demonstrates the role of anti-Chinese prejudice in hastening the foundations of residential racial segregation in California, a fact recognized by California planners even during the early 20th century.<sup>19</sup> Remarking on the legal status of land-use controls in 1925, the City Attorney of Berkeley wrote that California is “ahead of most states in our court decisions, maybe because we have been at it longer, thanks to the persistent proclivity of the ‘heathen Chinese.’”<sup>20</sup> Rather than developing back East, racial covenants were affirmed as an instrument of racial segregation due to legal proceedings in California arising from anti-Chinese sentiment.

Once developed in California, the racial covenant spread outwards, championed by local governments and real estate developers alike. Ultimately, it was the federal government that proved to be the greatest champion of racial covenants. In 1931, the President’s National Conference on Home Building and Home Ownership advised that all new neighborhoods should have “appropriate restrictions,” demonstrated by a set of 40

---

17. *In re Lee Sing*, 43 F. 359 (9th Cir. 1890)

18. McClain, “In Re Lee Sing: The First Residential-Segregation Case,” 186.

19. W. L. Pollard, “Outline of the Law of Zoning in the United States,” *The Annals of the American Academy of Political and Social Science* (Thousand Oaks, CA) 155, no. 2 (1931): 17, <https://doi.org/10.1177/000271623115500203>.

20. Frank Cornish, “The Legal Status of Zone Ordinances,” *Berkeley Civic Bulletin* 3, no. 10 (May 1915): 175.

exemplary developments equipped with the recommended clauses barring African Americans from ownership.<sup>21</sup>

The Federal Housing Administration (FHA) later codified this recommendation as official policy, requiring a developer to record racial covenants to obtain a federally insured loan. According to the FHA underwriting manual, deed restrictions should include a prohibition “of the occupancy of properties except by the race for which they are intended.” The FHA held racial covenants and zoning ordinances as the best tool for the job, preventing the “infiltration” of “inharmonious racial groups” into homogeneous, White neighborhoods.<sup>22</sup> This provision enshrined racial covenants as a feature of federal housing policy over the following decades.

Covenants remained the accepted tool for enforcing residential segregation until 1948, when the Supreme Court again returned to the topic of racial covenants in *Shelley v. Kraemer*. In *Shelley*, the court addressed two covenants: one, a 1911 covenant from St. Louis, and another, a 1934 covenant from the city of Detroit. Both racial covenants were of identical intent. Analyzed on its own, the court found this covenant agreement constitutionally valid, mirroring the language adopted by the court in *Corrigan et al. v. Buckley* decades earlier. However, where this Supreme Court differed was over the matter of enforcement. In a unanimous opinion, Justice Fred Vinson wrote that these are not cases “in which the States have merely abstained from action, leaving private individuals

---

21. Richard Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America*, First edition., *Forgotten History of How Our Government Segregated America* (New York, NY: Liveright Publishing Corporation, a division of W.W. Norton & Company, 2017), 83.

22. Federal Housing Administration, *Underwriting Manual: Underwriting and Valuation Procedure Under Title II of the National Housing Act* (Washington, D.C.: U.S. Government Printing Office, 1936), 211.

free to impose such discriminations as they see fit.”<sup>23</sup> Rather, in enforcement of these individual agreements, the States grant individuals “the full coercive power of government.”<sup>24</sup> This, the court argued, was a clear violation of the Fourteenth Amendment, and their decision ultimately rendered racial covenants unenforceable—a ruling the court would reassert and extend in 1953 with *Barrows v. Jackson*.

Recent scholarship has identified that *Shelley* played “a key role, breaking the white cartel,” ultimately allowing Black residents to move into formerly restricted neighborhoods.<sup>25</sup> Sood and Ehrman-Solberg find that neighborhoods with covenants built during the era of constitutional enforceability remained measurably whiter than identically covenanted neighborhoods built after *Shelley*.<sup>26</sup> Kucheva and Sanders study of Chicago and St. Louis found evidence similarly supportive of *Shelley*’s impact; the presence of covenants is associated with a small but statistically significant increase in the Black population from 1949 to 1950.<sup>27</sup>

Notably, *Shelley* and *Barrows* did not ban or prohibit the practice of recording racial covenants. The federal government itself continued to encourage racial covenants until 1950, when the FHA announced it would stop insuring properties protected by racial

---

23. *Shelley v. Kraemer*, 334 U.S. 1 (1948).

24. *Shelley v. Kraemer*, 334 U.S. 1 (1948).

25. Kucheva and Sander, “The Misunderstood Consequences of *Shelley v. Kraemer*,” 220.

26. Sood, Speagle, and Ehrman-Solberg, “Long Shadow of Racial Discrimination: Evidence from Housing Covenants of Minneapolis,” 25.

27. Kucheva and Sander, “The Misunderstood Consequences of *Shelley v. Kraemer*,” 220.

covenants.<sup>28</sup> Even after the FHA’s announcement, many home builders continued to record racial covenants well into the 1960s under the belief that buyers would pay a premium for racially protected neighborhoods.<sup>29</sup> It was not until *Mayers v. Ridley* in 1972 that the Supreme Court outlawed the practice of recording racial covenants.

### Prevalence

Despite the intense scrutiny and end of the racial covenant’s dominance during the second half of the twentieth century, few efforts were ever made during this period to rigorously quantify the prevalence or effects of racial clauses. Except for some notably early studies, efforts to investigate and document covenants did not begin in a policy or academic context until the 21st century. Additionally, even though racial covenants are now firmly unconstitutional and unenforceable, they still remain present in property deeds across the country. This is because the covenants “run with the land,” and are passed on each time the property changes hands. Removing the language requires explicit redaction from each deed, a tremendous undertaking given the large volume of property documents that any municipality considering such an effort would have to examine.

Early estimates regarding the prevalence of racial covenants in San Jose are of a speculative nature. A 1927 survey of San Jose conducted by the California Real Estate Association asserts that practically “all subdivisions are provided with restrictions to

---

28. Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985), 208.

29. Faiz Surani et al., “AI for Scaling Legal Reform: Mapping and Redacting Racial Covenants in Santa Clara County,” *Stanford RegLab Working Paper*, 2024, 21, <https://dho.stanford.edu/wp-content/uploads/Covenants.pdf>.

protect them from future depreciation as far as possible through encroachment of a foreign race,” but provides no definite figure.<sup>30</sup> According to a 1948 interview with Claude N. Settles, a sociology instructor at San Jose State University, “the only non-restricted area in San Jose, is that area east of Third street, and north of Santa Clara street. All the most popular residential districts, he said, are restricted, such as, Naglee Park, Willow Glen, Burbank, Hester, and south of Willow Glen.”<sup>31</sup> Like the prior figure, Settles also omits any quantitative figure.

The availability of covenant data has grown during the twenty-first century due to a number of state-led and grassroots movements across the United States. In 2021, the California State legislature passed Assembly Bill (AB) 1466, which added Section 12956.3 to the California Government Code (GC §12956.3). This section requires all counties to establish a program to proactively locate, identify, and redact covenants containing racially restrictive language. Notably, the redaction process does not completely obscure the presence of racial covenants. The language of AB 1466 requires that counties maintain a “nonredacted record for future reference.”<sup>32</sup> The procedures established by AB 1466 preserve a non-redacted version of each covenant for historical significance and documentation purposes while removing the offending language from active circulation.

At the county level, implementing AB 1466 is a time-consuming process that requires reviewing millions of property documents. In 2024, the Santa Clara County Clerk

---

30. Serena B. Preusser, “Color Question in California Reveals Many Problems,” *Official Journal of California Real Estate Association* VII, no. 10 (July 1927): 35.

31. Stevens, “Restrictive Covenants Challenged in Court, Prof Tells Local Setup,” 2.

32. Cal. Gov. Code §12956.3(c)



Recorder’s office partnered with Surani et al. to expedite the process by using a Large Language Model (LLM) to analyze documents for racial clauses. Assessing only records between 1902 and 1980, Surani et al. found that the earliest covenants appeared in 1907, with the latest in 1974.<sup>33</sup> Overall, they identified 7,500 deeds containing racial covenants which covered a total of 24,522 lots—roughly one in four properties by 1950.<sup>34</sup> The majority of Santa Clara County’s covenants were recorded between 1927 and 1938, which tracks with the surge of attention *Corrigan v. Buckley* is assumed to have generated for racial covenants.<sup>35</sup> Prior to 1915, most covenants recorded in Santa Clara County applied specifically to Black and Asian residents. After 1915, “only Caucasian” language became vastly more common.<sup>36</sup>

The methods employed in this report cannot directly isolate *Shelley*’s effect from the broader civil rights era of the postwar decades. Nor can these methods discern whether covenants operating as legal mechanisms, informal social signals, or other spatially located policies, such as urban renewal or highway construction, reinforced covenant-era segregation. Instead, this study offers an account of whether covenant status predicts minority representation across eight census decades and whether that representation persists or reverses as the temporal distance from *Shelley* increases.

---

33. Surani et al., “AI for Scaling Legal Reform: Mapping and Redacting Racial Covenants in Santa Clara County,” 8.

34. Surani et al., 23.

35. Surani et al., 20.

36. Surani et al., 22.

## Data

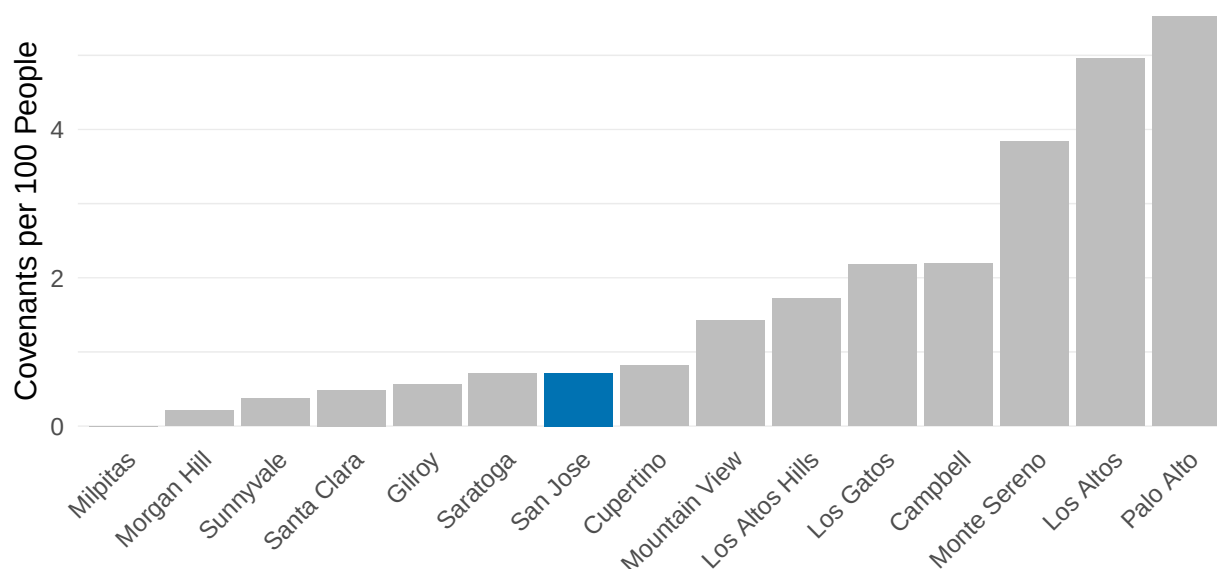
### Covenants

To estimate the effects of racial covenants on neighborhood demographics in San Jose, I integrate publicly available racial covenant data compiled by the Santa Clara County Clerk-Recorder's Office in collaboration with Stanford's RegLab. The initial data documents 22,639 racial covenants recorded between 1908 and 1965. I assign each individual covenant record a point in space representing a historic neighborhood. For example, a coordinate pair point representing the Palm Haven neighborhood of San Jose records 60 instances of racial covenants.

Figure 1 presents the number of racial restrictive covenants per 100 people for each city in Santa Clara County. Examining the raw counts of racial covenants by municipality reveals that San Jose has 7,079 covenants, followed by Palo Alto with 3,716, Los Altos with 1,522, Mountain View with 1,191, and Campbell with 938. All remaining municipalities have under 800 covenants. The remaining 4,864 racial covenants lie within unincorporated areas of the county. Although San Jose has the highest count of covenants, it has only 0.72 covenants per 100 population. Palo Alto has the highest covenant density at 5.53 covenants per 100 people.

There is one important limitation on the covenant data relevant to this study. The covenant dataset does not provide the date each individual covenant was recorded, so I cannot account for how the timing of covenant recording may affect neighborhood outcomes.

Figure 1. Racial Covenant Prevalence per 100 People by City in Santa Clara County, 2020.



### Study Area and Unit of Analysis

To study how racial covenants affect demographic change in San Jose neighborhoods over time, I construct a geospatial longitudinal dataset by integrating US Census variables from 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, and 2020, as well as variables indicating covenant presence and intensity from the dataset described in the Covenants section. I use Geographic Information System (GIS) software to address challenges with matching census geographies across time. I compile all variables and associated GIS geometries, except for 1940 geometries, from the Integrated Public Use Microdata Series (IPUMS) and National Historical Geographic Information System (NHGIS). Census data integrated from 1980, 1990, 2000, 2010, and 2020 include variables for the proportions of the population by race at the block level. Census data for 1950, 1960, and 1970 include variables for population proportions by race at the tract level.

Demographic variables for 1940 are drawn from the US Census full count dataset provided by IPUMS. Each entry in the full count dataset represents an individual with personally identifying information removed, recorded in the 1940 census rolls. Additionally, each entry indicates the census enumeration district (ED) in which the individual resides. The ED is the most granular areal unit assigned to an individual in the IPUMS full count dataset. The geography of an ED is roughly equivalent to the area a single census taker could cover on foot. I group and sum individuals from the full count dataset by their assigned ED, then join these counts to a spatial dataset representing the geometry of San Jose's 1940 EDs.

I create the 1940 ED geometries in ArcGIS Pro by vectorizing digitized ED maps of San Jose sourced from the National Archives. I draw polygons representing each ED by hand in ArcGIS Pro using the ED maps as a reference. To validate my work, I use accompanying descriptions of each ED's cardinal bounding streets to verify polygon accuracy. The resulting 57 EDs cumulatively represent the study area shown in Figure . Once vectorized, I assign each ED polygon the unique numeric identifier indicated on the original ED map.

I use the 1940 EDs as a consistent geography to which all data from the 1950 to 2020 census datasets are aggregated. To join the block-level demographic variables from the 1980, 1990, 2000, 2010, and 2020 census datasets, I perform a spatial join to assign each block to an ED and then sum the demographic variables across blocks within each district. I assign a block to an ED if its centroid lies within the ED's bounds. The spatial join matches 1,058 blocks from the 1980 dataset, 1,169 from the 1990 dataset, 1,262 from the 2000 dataset, 1,212 from the 2010 dataset, and 1,239 from the 2020 dataset.

Because demographic variables from the 1950, 1960, and 1970 census datasets are only readily available at the tract level, I employ a weighting method using a parcel dataset provided by the City of San Jose to estimate and distribute demographic variables for these years at the 1940 ED level. The parcel dataset includes the assessor's parcel number, the number of units per parcel, and a land-use identifier. I first filter the dataset to include only parcels designated as residential and remove any properties outside the study area. Applying these filters results in a parcel dataset with 25,043 observations. I assign a 1940 ED identifier to each remaining parcel by performing a spatial join using the parcel's centroid. I then perform a series of subsequent spatial joins—also using parcel centroids—to assign each parcel a tract identifier from the 1950, 1960, and 1970 geographies. I then calculate the population weight used to distribute the demographic variables across the 1940 EDs by dividing each parcel's total housing units by the sum of housing units for each tract in each year. I estimate ED demographics for each parcel by multiplying the weight by the demographic group; these values are then summed by assigned ED identifier. This method matches 1940 EDs with 57 tracts from the 1950 dataset, 30 from the 1960 dataset, and 32 from the 1970 dataset.

I reflect the covenant status of each ED using a binary indicator; an ED must have at least one covenant to be considered covenanted. I determine covenant status by first intersecting and summing the total number of covenants within each ED using the covenant point data described in the Covenants section. Figure presents the distribution of racial restrictive covenants throughout the study area. The highest concentration of covenants is in West San Jose, specifically around the Willow Glen and Rose Garden neighborhoods.

**Santa Clara**

Cory

The Alameda Park

College Park

Shasta/Hanchett Park

Burbank

Buena Vista

Glenside-Riviera

Willow Glen

Rincon South

Hyde Park

Vendome

Little Italy

Delmas Park

Gardner

North Willow Glen

Modern Ice  
Madera  
Horning

Northside

Hensley Historic

St. James

**San Jose**

Market-Almaden

Guadalupe Washington

Tamien

Julian/St. James

Horace Mann

Naglee Park/Campus Community

South University

Spartan/Keyes

Goodyear Mastic

Alma

Anne Darling

Wooster

Little Portugal North

Five Wounds  
Brookwood Terrace

Roosevelt Park

Olinder

McKinley-Bonita

Plata Arroyo

**FIGURE 2**

# Study Area: Covenant Density

## Number of Racial Covenants

- 0 - 1 Covenants
- 2 - 34 Covenants
- 35 - 455 Covenants

## City

Neighborhood

1 Mile  
1 Kilometer



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, OpenStreetMap, GIS User Community, and IPUMS

## Demographics

I include population proportions for the Black, Other, and White populations for all relevant periods from the base year of 1940 to 2020, and the Asian population for 1940, 1970, 1980, 1990, 2000, 2010, and 2020. Figure 3 presents the racial composition of the study area from 1940 to 2020. For comparison, Figure 4 presents the racial composition of the entire city of San Jose during the same time span.

Figure 3. Racial Composition of Study Area, 1940-2020.

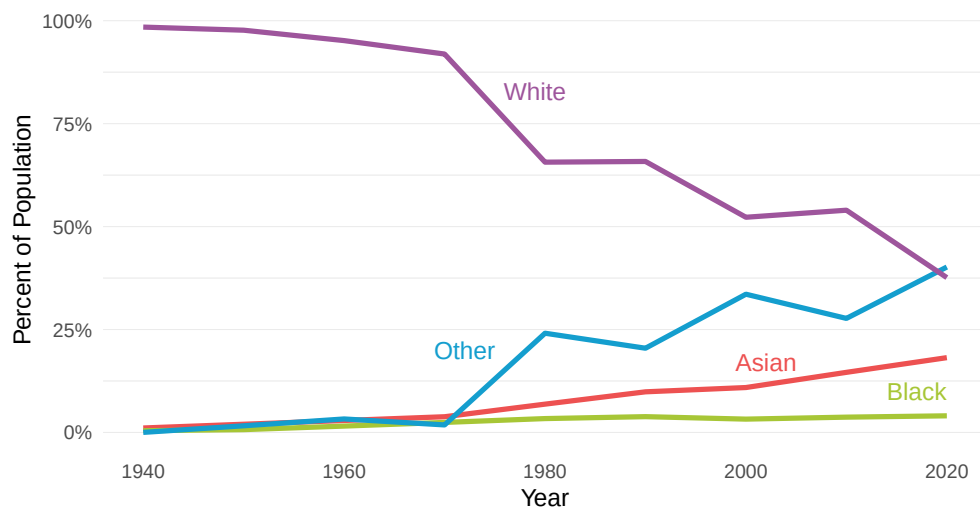
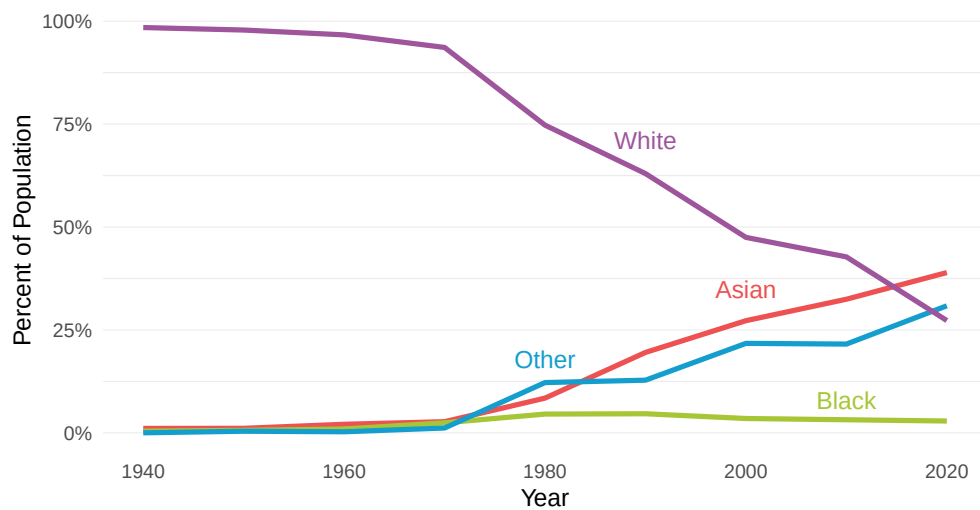


Figure 4. Racial Composition of San Jose, 1940-2020.



In 1940, the study area's population was 98.45 percent White and 1.09 percent Asian; Black residents accounted for less than 0.5 percent of the population. The demographics remain relatively stable until 1980, when the White population declines to 65.65 percent, and the Other population increases from 1.83 percent to 24.10 percent. All populations except the White population continue to increase through 2020. From 1940 to 1980, the city of San Jose as a whole followed trends similar to those of the study area. The most significant departure from the city-wide population in the study area is the lower share of Asian residents, accounting for just 18.17 percent of the study area's population versus 38.95 percent of the entire city's population in 2020.

I do not include Asian population figures for 1950 and 1960 in the study area dataset due to data availability issues. I include Asian in the Other variable for both 1950 and 1960, as the dataset I use does not differentiate between Asian and Other for this time frame. For 1990, the Asian variable provided by IPUMS groups Asian or Pacific Islander respondents into a single category. I use the same grouping for all years in which Asian demographics are reported to maintain consistency.

I do not include the Hispanic population in this analysis for several reasons. Prior to 1980, the US Census Bureau lacked a consistent definition of Hispanic. The 1930 census marked the Census Bureau's first attempt to quantify the Hispanic population, introducing "Mexican" as a discrete race category. However, it was removed from the 1940 Census. In lieu of a proper survey question, the Census Bureau attempted to identify the population of Spanish origin in 1940 by marking whether an individual's first language was Spanish. In 1950, the Census Bureau again changed its methodology, instead quantifying the Hispanic population by comparing an individual's last name to a list of known Spanish



surnames. In 1960, the Census Bureau introduced a self-reported racial identity question; prior to this, race was determined by the survey enumerator rather than the individual. The 1970 Census introduced the Hispanic origin question, which the Bureau modified in 1980 and has included in substantially the same form for every decennial Census since.<sup>37</sup> Because of these inconsistencies with reporting Hispanic identity, this study cannot accurately analyze Hispanic population shifts over time.

Table 1 presents the mean and standard deviations for the 57 enumeration districts split by covenant status. There are 40 covenanted EDs and 17 uncovenanted EDs. Regardless of covenant status, the mean population proportions of all groups except White rose steadily between 1940 and 1990. Since 1990, the share of the population identifying as Asian or Other has continued to grow. In 2020, the mean Asian population proportion in racially restricted neighborhoods was 7.79 percent compared to 11.06 percent in unrestricted neighborhoods. The Black population proportion follows the same trend; in covenanted neighborhoods, Black residents make up only 1.77 percent of the population on average, compared to 2.83 percent in uncovenanted areas.

---

37. Karen Humes and Howard Hogan, "Measurement of Race and Ethnicity in a Changing, Multicultural America," *Race and Social Problems* (New York) 1, no. 3 (September 2009): 117–20, ABI/INFORM Collection; Ethnic NewsWatch Collection; Sociological Abstracts (883592091), <https://doi.org/10.1007/s12552-009-9011-5>.

Table 1. Descriptive Statistics

| Year | % Black     |             | % Asian      |             | % Other      |              | % White      |              |
|------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|
|      | No Cov.     | Cov.        | No Cov.      | Cov.        | No Cov.      | Cov.         | No Cov.      | Cov.         |
| 1940 | 0.28 (0.40) | 0.20 (0.24) | 0.71 (1.53)  | 0.43 (1.18) | 0.01 (0.02)  | 0.02 (0.07)  | 49.01 (1.70) | 49.36 (1.21) |
| 1950 | 0.42 (0.40) | 0.31 (0.30) | —*           | —           | 1.14 (1.46)  | 0.59 (0.88)  | 48.44 (1.73) | 49.10 (1.05) |
| 1960 | 0.92 (0.78) | 0.84 (0.83) | —*           | —           | 1.99 (1.54)  | 1.52 (1.70)  | 47.09 (2.12) | 47.64 (2.28) |
| 1970 | 1.63 (0.71) | 1.22 (0.85) | 2.34 (1.73)  | 1.68 (1.46) | 1.13 (0.44)  | 0.95 (0.48)  | 44.90 (2.29) | 46.15 (2.30) |
| 1980 | 2.54 (1.59) | 1.35 (1.13) | 4.76 (4.74)  | 2.34 (2.76) | 11.03 (4.64) | 13.65 (6.93) | 31.67 (5.01) | 32.66 (7.50) |
| 1990 | 3.01 (1.89) | 1.74 (1.29) | 6.42 (5.30)  | 3.50 (3.09) | 8.42 (3.89)  | 10.48 (6.41) | 32.16 (6.84) | 34.28 (7.46) |
| 2000 | 2.34 (1.26) | 1.38 (0.99) | 8.81 (6.34)  | 4.30 (2.84) | 14.22 (6.19) | 17.12 (8.58) | 24.63 (6.51) | 27.19 (8.71) |
| 2010 | 3.06 (2.14) | 1.60 (1.10) | 10.71 (4.85) | 6.04 (3.76) | 11.22 (4.34) | 15.23 (6.98) | 25.01 (5.69) | 27.13 (7.28) |
| 2020 | 2.83 (1.77) | 1.77 (1.34) | 11.06 (5.01) | 7.79 (3.74) | 17.70 (7.45) | 21.67 (8.72) | 18.42 (6.24) | 18.76 (7.64) |

Mean (SD). No Cov. = No Covenant (n = 17); Cov. = Covenant (n = 40).

\* Asian population not recorded separately in 1950 and 1960.

## Methods

This section explains the methods used to estimate the long-run effects of racial covenants on the demographic trajectories of 57 San Jose neighborhoods from 1940 to 2020. Using a panel of 57 neighborhoods across nine decades, I compare the racial composition of covenanted and non-covenanted neighborhoods. To isolate the effect of restrictive racial covenants, I construct a treatment and control group. I represent San Jose neighborhoods using census enumeration districts. The treatment group is made up of 40 EDs with racial covenants. The control group consists of the remaining 17 districts with no recorded covenants.

I estimate the effect of covenant presence on neighborhood racial composition using a series of cross-sectional regressions, one per racial group per decade:

$$\text{Share}_{it} = \alpha + \beta \cdot \text{Covenant}_i + \varepsilon_{it}$$

where  $\text{Share}_{it}$  is the population share of a given racial group—either Asian, Black, Other or White—in district  $i$  in year  $t$ , and  $\text{Covenant}_i = 1$  if the district contains any racial restrictive covenant. The coefficient  $\beta$  captures the mean difference in racial composition between covenanted and non-covenanted districts. Because covenant status is not randomly assigned,  $\beta$  reflects an association rather than a causal effect, and interpretation assumes that the demographics of the two groups would have followed similar trends if not for the presence of covenants.

Additionally, the racial composition of a given collection of areal units tends to exhibit a property known as spatial autocorrelation.<sup>38</sup> In practical geographic terms, detecting positive spatial autocorrelation within the data means racial groups in nearby areas tend to be more similar than in distant areas. Put another way, “everything is related to everything else, but near things are more related than distant things.”<sup>39</sup> To account for the spatial relationship between EDs, I test OLS residuals using Moran’s I; a Moran’s I value closer to positive 1 represents spatial clustering, while a value closer to negative 1 represents dispersion among OLS residuals.<sup>40</sup> A value closer to zero represents randomness. Determining Moran’s I requires constructing neighborhoods of proximate units using spatial weights. I assign each ED a spatial weight using Queen contiguity—a method that considers all EDs with a shared edge or vertex as neighbors—resulting in a weight matrix for all 57 districts with an average of 5.37 neighbors. When spatial autocorrelation is significant in the OLS residuals, as assessed by Moran’s I, I use a spatial model in place of standard OLS. I use a Rao Score Lagrange Multiplier test to select the appropriate spatial model: either a spatial lag model or a spatial error model.

Spatial lag models capture spillover effects between neighboring EDs; these models account for the effects one neighborhood may have on the variable of an adjacent

---

38. Douglas S. Massey and Nancy A. Denton, “The dimensions of residential segregation,” *Social Forces* (University of North Carolina Press) 67 (December 1988): 293, Social Sciences Full Text (H.W. Wilson) (508286555), <https://doi.org/10.2307/2579183>.

39. W. R. Tobler, “A Computer Movie Simulating Urban Growth in the Detroit Region,” *Economic Geography* 46 (1970): 236, JSTOR, <https://doi.org/10.2307/143141>.

40. Lauren M. Scott and Arthur Getis, “Spatial Statistics,” in *Encyclopedia of Geographic Information Science*, ed. Karen K. Kemp (Los Angeles: SAGE Publications, 2008), 427, <https://doi.org/https://doi.org/10.4135/9781412953962>.

neighborhood.<sup>41</sup> Spatial error models capture correlation in unobserved factors, accounting for scenarios in which omitted variables, such as proximity to amenities, affect neighboring EDs similarly. When both error and lag models are found to be significant, I report the model specification with the lower Rao Score test p-value; for models in which Moran's I returns insignificant values, I report standard OLS estimates instead.

As a check on the results of the repeated cross-sectional model, I estimate a pooled spatial lag difference-in-differences (DiD) model for each racial group to compare the racial composition of covenanted and non-covenanted neighborhoods with 1940 serving as the base year. In contrast to the cross-sectional model, the DiD model's covenant  $\times$  year interaction term specifically tests whether the racial composition of covenanted and non-covenanted neighborhoods diverged relative to the 1940 baseline. As with the cross-sectional models, I apply a Queen contiguity spatial weights matrix within each time period to account for spillovers between neighboring districts.

## Results

The results for selected models are presented in Table 2. Table coefficients represent the “covenant effect,” or the estimated difference in racial group population share, expressed as percentage points, between covenanted and uncovenanted neighborhoods.

This report compares mean home values between covenanted and non-covenanted districts to address parallel trends and baseline comparability. The mean home value in racially protected neighborhoods was \$3,459, while the mean value in the uncovenanted

---

41. Paul Voss, “Spatial Econometrics,” in *Encyclopedia of Geographic Information Science*, ed. Karen K. Kemp (Los Angeles: SAGE Publications, 2008), 412, <https://doi.org/https://doi.org/10.4135/9781412953962>.

districts was \$3,409. Both groups had comparable pre-*Shelley* home values ( $p = 0.87$ ). The spatial lag DiD models concur with this finding. The earliest available covenant  $\times$  year interaction terms for each racial group are near zero and statistically insignificant.

Table 2. Effects of Racial Covenant Presence on Neighborhood Racial Composition, 1940-2020.

| Year | Covenant Effect      |                      |                     |                     |
|------|----------------------|----------------------|---------------------|---------------------|
|      | % Black              | % Asian              | % Other             | % White             |
| 1940 | -0.126<br>(0.163)    | -0.538<br>(0.721)    | 0.017<br>(0.034)    | 0.549<br>(0.676)    |
| 1950 | -0.241<br>(0.170)    | —                    | -0.950**<br>(0.419) | 1.205***<br>(0.467) |
| 1960 | 0.279<br>(0.239)     | —                    | -0.319<br>(0.471)   | -0.022<br>(0.479)   |
| 1970 | 0.026<br>(0.264)     | -0.518<br>(0.506)    | -0.037<br>(0.182)   | 0.420<br>(0.658)    |
| 1980 | -1.469**<br>(0.653)  | -2.812*<br>(1.527)   | 6.404***<br>(2.477) | -2.066<br>(2.184)   |
| 1990 | -1.469**<br>(0.748)  | -2.415<br>(1.622)    | 5.617**<br>(2.469)  | -1.622<br>(2.589)   |
| 2000 | -1.910***<br>(0.622) | -5.721***<br>(2.164) | 4.281<br>(3.676)    | 0.066<br>(3.008)    |
| 2010 | -2.266***<br>(0.805) | -5.047**<br>(2.045)  | 5.970**<br>(3.000)  | -1.219<br>(2.403)   |
| 2020 | -2.111**<br>(0.854)  | -6.536**<br>(2.405)  | 5.141<br>(3.693)    | -1.775<br>(2.832)   |

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$

### Black Population

In 1940, there was no statistically significant difference in the Black population of covenanted and non-covenanted neighborhoods (-0.126,  $p = 0.441$ ). The covenant effect remains near zero throughout the 1950 to 1970 period. However, the direction of the covenant effect reverses after 1950, leading to a slight, but still statistically insignificant

increase in the Black population of covenanted neighborhoods in 1960 ( $p = 0.243$ ) and 1970 ( $p = 0.922$ ). In 1980, the direction of the Black covenant effect reverses to -1.47 percentage points, meaning covenanted neighborhoods had fewer Black residents on average than non-covenanted areas ( $p = 0.024$ ). From this point on, the covenant effect continues to grow, reaching a peak of -2.27 percentage points in 2010 ( $p = 0.005$ ) before falling to -2.11 percentage points in 2020 ( $p = 0.017$ ).

### Asian Population

While not statistically significant, the covenant effect on the Asian population is greater than the effect on the Black population in 1940 (-0.538,  $p = 0.455$ ). Asian population figures are not available for 1950 and 1960. In 1970, the covenant effect is negative, contrasting with the positive effect for the Black population. From 1980 onward, the Asian covenant effect parallels trends observed in the Black covenant effect. By 2000, covenanted neighborhoods were 5.72 percentage points less Asian than non-covenanted areas ( $p = 0.008$ ). The covenant effect falls briefly to -5.05 percentage points in 2010, but rises to a peak of -6.54 percent in 2020, meaning neighborhoods that were historically racially protected have 6.54 percentage points fewer Asian residents than non-protected neighborhoods. This is the largest covenant effect of any racial group assessed by this study.

### Other Population

Like with the Asian and Black covenant effects in 1940, the Other covenant effect is also near zero and statistically insignificant (0.017,  $p = 0.617$ ).

The models for 1950 and 1960 have an important caveat; the datasets provided by the NHGIS and used in this report have three race variables for White, Black, and Other. For 1950 and 1960, the 'Other' category captures the Asian population. This limitation of the data likely explains the statistically significant covenant effect observed in 1950 ( $-0.950$ ,  $p = 0.023$ ). After 1950, the Other covenant effect remains insignificant and negative until 1980, where it inverts the negative trend observed in the Asian and Black covenant effects. In 1980, the Other covenant effect peaks at 6.40 percentage points. This means that in 1980, covenanted neighborhoods had Other populations that were, on average, 6.40 percent larger than those in non-covenanted neighborhoods. The Other covenant effect remains high and positive for the rest of the study period.

### White Population

The White covenant effect is small and statistically insignificant in 1940 ( $0.549$ ,  $p = 0.417$ ), but a brief positive effect emerges in 1950 at 1.2 percentage points ( $p = 0.010$ ). From 1960 onward, the White covenant effect is statistically insignificant. The covenant  $\times$  year interaction terms of the DiD model provide no evidence to indicate a difference in the rate of White population decline between covenanted and non-covenanted districts.

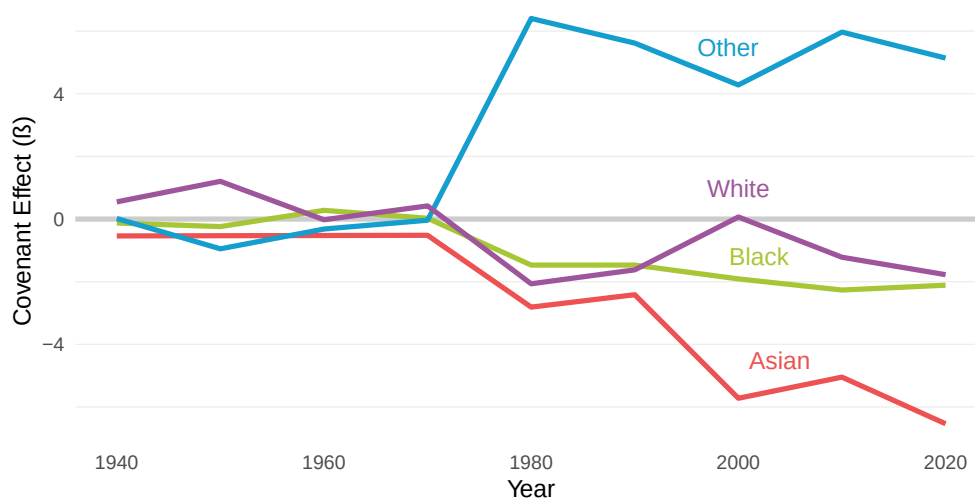
## Discussion

Seventy-two years after *Shelley* and 50 years on from the Fair Housing Act, there is evidence of a greater racial disparity between covenanted and non-covenanted neighborhoods in 2020 than at any time before. Covenant status is associated with Asian and Black exclusion, and this association has only grown over time. Yet detectable



exclusion did not emerge during the period of enforceability or immediately following *Shelley*—it emerged decades later. To better visualize this trend, Figure 5 plots the Asian, Black, Other, and White covenant effects from 1940 to 2020 to track how historically covenanted neighborhoods compare to non-covenanted neighborhoods. The dashed line at zero on the Y-axis represents no difference between covenanted and uncovenanted neighborhoods. Values placed above the line mean covenanted neighborhoods have a higher share of residents from a given group; values below zero indicate a lower share.

Figure 5. Covenant Effect Over Time.



In 1940, all four lines are near zero, meaning the demographics of covenanted and non-covenanted neighborhoods were very similar. This does not mean that San Jose was racially integrated, just that the racial composition of covenanted and non-covenanted areas was, on average, about the same. Except for a brief spike in the White population of covenanted areas in 1950, the makeup of covenanted and non-covenanted areas remains roughly similar up to 1970. In 1980, the lines for all four races begin to diverge from zero. The Black and Asian lines drop sharply and decline continuously in each subsequent

period. By 2020, the Asian population gap is the largest of any group at any period; covenanted neighborhoods had, on average, Asian population shares 6.5 percentage points lower than non-covenanted neighborhoods despite covenants having been unenforceable for 70 years. While not as large a gap, the Black population is still affected by covenants in 2020. Racially restricted areas tend to have Black population shares 2.11 percentage points lower than areas without restrictions. These trends suggest that the legal reforms of the mid-20th century did little to abate the differences caused by covenant status.

The delayed 1980 covenant effect is difficult to explain if racial covenants are thought of purely as legally enforceable tools. In the run-up to *Shelley v. Kraemer*, both the promoters of covenants and civil rights activists alike believed that racial covenants were the driving force of residential segregation in America.<sup>42</sup> Two years before the *Shelley* decision, future Secretary of Housing and Urban Development Robert C. Weaver remarked that of all instruments which drive racial segregation, “race restrictive covenants are the most dangerous.”<sup>43</sup> Others believed that if covenants fell in the courts, “segregation in the North would be nearly doomed.”<sup>44</sup> Segregation has increased since *Shelley*, but at least in northern cities, segregation has not occurred along covenant lines. In Chicago, Researchers have found that in the years immediately following *Shelley*, the Black population of

---

42. Long and Johnson, *People vs. Property: Race Restrictive Covenants in Housing*; Horace R. Cayton and St. Clair Drake, *Black Metropolis*, with Richard Wright and William Julius Wilson (Harcourt, 1946; repr., Chicago, IL: University of Chicago Press, 1993); Preusser, “Color Question in California Reveals Many Problems.”

43. Robert C. Weaver, “Chicago: A City of Covenants,” *The Crisis*, February 28, 1946, 76.

44. Gunnar Myrdal, *An American Dilemma: The Negro Problem and Modern Democracy* (New York: Harper & Brothers, 1944), 624.

covenanted areas increased 26 percentage points compared to non-covenanted areas.<sup>45</sup>

Analysis of covenants in St. Louis reveals similar findings; areas with covenants experience a significant increase in black presence in 1950.<sup>46</sup>

In both Chicago and St. Louis, Black residents moved into covenanted areas as soon as the legal mechanisms barring them from entry fell away. The evidence from San Jose does not point toward a similar trajectory. It's possible, and likely, that the difference in covenant effect stems from the distinct demographic context. San Jose's Black population in 1940 and 1950 was a fraction of what it was in its mid-20th century counterparts. In 1940, San Jose had 295 Black residents; by 1950, it had 591—hardly comparable to the likes of St. Louis or Chicago. Even the Asian population of San Jose accounted for only about one percent of the total population during this period. The small pre-1980 minority population makes it difficult to discern a measurable impact from covenant boundaries. Overall, it seems San Jose kept minority groups out of the city as a whole.

However, the city's demographic composition changed dramatically in the decades following 1950. San Jose's population grew rapidly, increasing from just over 200,000 in 1960 to 445,000 in 1970, and 629,000 in 1980. Within the study area, the black population grew from less than 1 percent in 1950 to 3.37 percent by 1980. There is no data for the study area Asian population in 1950, but it increased from 1.09 percent in 1940 to 6.88 percent in 1980. This demographic shift generated the residential demand necessary to

---

45. Richard R. W. Brooks, "Covenants without Courts: Enforcing Residential Segregation with Legally Unenforceable Agreements," *American Economic Review* 101, no. 3 (2011): 364, <https://doi.org/10.1257/aer.101.3.360>.

46. Kucheva and Sander, "The Misunderstood Consequences of *Shelley v. Kraemer*," 220–21.

detect covenant boundaries. Covenants had little work to do when the non-white population was excluded from the entirety of San Jose; exclusion occurred at city limits rather than at the curb. As time went on, racial exclusion at such a scale became unsustainable, and residential sorting began to occur at the neighborhood level, adhering to the contours established by covenants. In San Jose, racial covenants seem to matter more as a social signal than as a hard legal mechanism.

The presence of racial covenants may also have been captured by other instruments of racial exclusion, such as redlining. Although the Homeowners' Loan Corporation did not invent redlining, the residential security maps it produced as part of its City Survey Program are among the most widely known symbols of the practice.<sup>47</sup> Figure 6 highlights the degree of overlap between the HOLC residential security map for San Jose and racial covenants, the vast majority of which were recorded prior to the map's circulation in 1937.<sup>48</sup> A quick comparison of neighborhoods graded by HOLC surveyors and their corresponding covenant intensity reveals that the highest-quality "A" grade neighborhoods had an average of 1.18 racial covenants per acre, while the lowest-grade "D" neighborhoods had only 0.23 per acre.

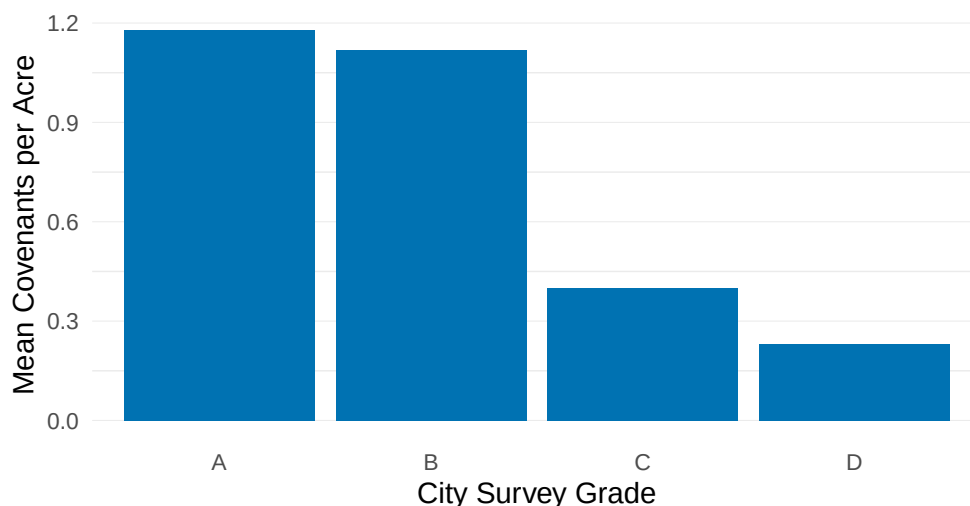
These other instruments reinforced racial covenants and directed investment, resulting in better schools, infrastructure, and home values in protected areas. Covenants likely interacted with a slew of other policies. In addition to redlining, urban renewal,

---

47. Amy E. Hillier, "Redlining and the Home Owners' Loan Corporation," *Journal of Urban History* 29, no. 4 (May 2003): 398, <https://doi.org/10.1177/0096144203029004002>.

48. T. H. Bowden, "Descriptions of Areas Shown on Security Map No. 1 of San Jose, California," Washington, D.C., September 15, 1937, Record Group 195, City Survey Files, San Jose, CA, Master File, National Archives and Records Administration, <https://catalog.archives.gov/id/417204462>.

Figure 6. Average Covenants per Acre by Neighborhood Grade.



highway construction, and exclusionary zoning were major programs developed during the first half of the 20th century that tended to reinforce existing patterns of segregation. This study cannot fully disentangle the covenant effect from these other instruments.

### Limitations

Several limitations hamper the conclusions of this study. The first and most significant is that of causality. Racial covenants were not randomly recorded as assumed here; they were assigned to homes based on unobserved factors. Although this study finds that home values were comparable between covenanted and non-covenanted districts in 1940, there remain other measures not captured. Additionally, the covenant dataset lacks variables for covenant recordation, making it impossible to account for the timing of covenants or assess which covenants were recorded pre- or post-*Shelley*. As mentioned above, this study is also unable to disentangle the covenant from coincident policies such as redlining, urban renewal, and exclusionary zoning. Doing so would require additional data outside the scope of this study.

The second major limitation is imposed by the demographic data and the parcel weighting procedure used to distribute tract-level variables for 1950, 1960, and 1970 to the 1940 EDs. This procedure assumes that the population distribution matches the distribution of housing units, an assumption that would likely lead to errors in areas that saw substantial new construction or major demolitions, such as for highway construction or in the Guadalupe Gardens area of San Jose. The demographic dataset also lacks 1950 and 1960 variables for the Asian population, making it impossible to identify any post-*Shelley* effects for this group, even if covenant placement were accounted for.

## Conclusion

This report uses quantitative methods to examine the long-run effects of restrictive racial covenants on the racial composition of neighborhoods in San Jose, California, from 1940 to 2020. The report uses spatial modeling, along with a panel of 57 enumeration districts observed across nine decades, to estimate differences in racial composition between covenanted and non-covenanted areas. The analysis provides evidence of an association between a neighborhood's covenant status and its racial composition, finding that neighborhoods with racial protections have significantly lower shares of Black and Asian residents and that the difference has only grown larger with the passage of time. A significant finding of this report is that the Black and Asian covenant effect first emerges in 1980, 30 years after *Shelley v. Kraemer* and 15 years after the last racial covenant in Santa Clara County was recorded. In 1980, covenanted neighborhoods had Asian population shares 2.81 percentage points lower, and Black population shares 1.47 percentage points

lower than non-covenanted areas. By 2020, the covenant effect rose to 6.54 percentage points and 2.11 percentage points for Asian and Black residents, respectively.

Although the findings presented in this report are not causally conclusive, they demonstrate the need for further research to better understand the legacy of restrictive racial covenants at the individual municipal level. Other mechanisms of racial exclusion, such as redlining, highway construction, and blockbusting, have been widely studied, yet relatively little research documents the quantitative impacts of racial covenants. Every city has a unique demographic context that likely influences the formation and coverage of covenants; no two cities may be exactly alike. The evidence this report provides indicates that the legacy effects of racial covenants are strong, durable, and, at least in the context of San Jose, far from historic.

## Bibliography

- Barros, D. Benjamin, and Anna P Hemingway. *Property Law*. Aspen Casebook Series. New York: Wolters Kluwer, 2015.
- Bowden, T. H. "Descriptions of Areas Shown on Security Map No. 1 of San Jose, California." Washington, D.C., September 15, 1937. Record Group 195, City Survey Files, San Jose, CA, Master File. National Archives and Records Administration. <https://catalog.archives.gov/id/417204462>.
- Brooks, Richard R. W. "Covenants without Courts: Enforcing Residential Segregation with Legally Unenforceable Agreements." *American Economic Review* 101, no. 3 (2011): 360–65. <https://doi.org/10.1257/aer.101.3.360>.
- Cayton, Horace R., and St. Clair Drake. *Black Metropolis*. With Richard Wright and William Julius Wilson. Harcourt, 1946. Reprint, Chicago, IL: University of Chicago Press, 1993.
- Cornish, Frank. "The Legal Status of Zone Ordinances." *Berkeley Civic Bulletin* 3, no. 10 (May 1915): 173–79.
- Federal Housing Administration. *Underwriting Manual: Underwriting and Valuation Procedure Under Title II of the National Housing Act*. Washington, D.C.: U.S. Government Printing Office, 1936.
- Gordon, Colin. "Dividing the City: Race-Restrictive Covenants and the Architecture of Segregation in St. Louis." *Journal of Urban History* 49, no. 1 (January 2023): 160–82. <https://doi.org/10.1177/0096144221999641>.
- Gotham, Kevin Fox. "Urban Space, Restrictive Covenants and the Origins of Racial Residential Segregation in a US City, 1900–50." *International Journal of Urban and Regional Research* 24, no. 3 (September 2000): 616–33. <https://doi.org/10.1111/1468-2427.00268>.
- Hillier, Amy E. "Redlining and the Home Owners' Loan Corporation." *Journal of Urban History* 29, no. 4 (May 2003): 394–420. <https://doi.org/10.1177/0096144203029004002>.
- Humes, Karen, and Howard Hogan. "Measurement of Race and Ethnicity in a Changing, Multicultural America." *Race and Social Problems* (New York) 1, no. 3 (September 2009): 111–31. ABI/INFORM Collection; Ethnic NewsWatch Collection; Sociological Abstracts (883592091). <https://doi.org/10.1007/s12552-009-9011-5>.
- Jackson, Kenneth T. *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press, 1985.



- Jones-Correa, Michael. "The Origins and Diffusion of Racial Restrictive Covenants." *Political Science Quarterly* 115, no. 4 (2000): 541–68. JSTOR. <https://doi.org/10.2307/2657609>.
- Kucheva, Yana, and Richard Sander. "The Misunderstood Consequences of Shelley v. Kraemer." *Social Science Research* 48 (November 2014): 212–33. <https://doi.org/10.1016/j.ssresearch.2014.06.007>.
- Long, Herman H., and Charles Spurgeon Johnson. *People vs. Property: Race Restrictive Covenants in Housing*. Nashville, Tenn: Fisk University Press, 1947.
- Massey, Douglas S., and Nancy A. Denton. "The dimensions of residential segregation." *Social Forces (University of North Carolina Press)* 67 (December 1988): 281–315. Social Sciences Full Text (H.W. Wilson) (508286555). <https://doi.org/10.2307/2579183>.
- McClain, Charles J. "In Re Lee Sing: The First Residential-Segregation Case." *Western Legal History* 3 (June 1990): 179–79. <https://lawcat.berkeley.edu/record/1113811/files/fulltext.pdf>.
- Myrdal, Gunnar. *An American Dilemma: The Negro Problem and Modern Democracy*. New York: Harper & Brothers, 1944.
- Pollard, W. L. "Outline of the Law of Zoning in the United States." *The Annals of the American Academy of Political and Social Science* (Thousand Oaks, CA) 155, no. 2 (1931): 15–33. <https://doi.org/10.1177/000271623115500203>.
- Preusser, Serena B. "Color Question in California Reveals Many Problems." *Official Journal of California Real Estate Association* VII, no. 10 (July 1927).
- Rothstein, Richard. *The Color of Law: A Forgotten History of How Our Government Segregated America*. First edition. *Forgotten History of How Our Government Segregated America*. New York, NY: Liveright Publishing Corporation, a division of W.W. Norton & Company, 2017.
- Ruggles, Steven, Matt A. Nelson, Matthew Sobek, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Evan Roberts, and J. Robert Warren. "IPUMS Ancestry Full Count Restricted Data." 1940 100% Population Database. Version 4. Minneapolis, MN: IPUMS, 2024. <https://doi.org/10.18128/D014.V4.0R>.
- Santucci, Larry. "How Prevalent Were Racially Restrictive Covenants in 20th Century Philadelphia? A New Spatial Data Set Provides Answers." *A New Spatial Data Set Provides Answers (2019-11-18)*. *FRB of Philadelphia Payment Cards Center Discussion Paper*, nos. 19–5 (2019).

- Schroeder, Jonathan, David Van Riper, Steven Manson, Katherine Knowles, Tracy Kugler, Finn Roberts, and Steven Ruggles. "IPUMS National Historical Geographic Information System." 1990 Census: STF 1 - 100% Data. Version 20. Minneapolis, MN: IPUMS, 2025. <https://doi.org/10.18128/D050.V20.0>.
- Scott, Lauren M., and Arthur Getis. "Spatial Statistics." In *Encyclopedia of Geographic Information Science*, edited by Karen K. Kemp, 436–40. Los Angeles: SAGE Publications, 2008. <https://doi.org/https://doi.org/10.4135/9781412953962>.
- Sood, Aradhya, William Speagle, and Kevin Ehrman-Solberg. "Long Shadow of Racial Discrimination: Evidence from Housing Covenants of Minneapolis." Preprint, October 16, 2023. <https://doi.org/https://dx.doi.org/10.2139/ssrn.3468520>.
- Stevens, Jean. "Restrictive Covenants Challenged in Court, Prof Tells Local Setup." *Spartan Daily* (San Jose), February 16, 1948. <https://scholarworks.sjsu.edu/spartandaily/10044/>.
- Surani, Faiz, Mirac Suzgun, Vyoma Raman, Christopher D. Manning, Peter Henderson, and Daniel E. Ho. "AI for Scaling Legal Reform: Mapping and Redacting Racial Covenants in Santa Clara County." *Stanford RegLab Working Paper*, 2024. <https://dho.stanford.edu/wp-content/uploads/Covenants.pdf>.
- Tobler, W. R. "A Computer Movie Simulating Urban Growth in the Detroit Region." *Economic Geography* 46 (1970): 234–40. JSTOR. <https://doi.org/10.2307/143141>.
- Toney, Jermaine, James Kelly, and Alex Hoffman. *Racial Housing Covenants: The Case of a Southern U.S. City*. 2023. <https://doi.org/10.2139/ssrn.4607196>.
- Voss, Paul. "Spatial Econometrics." In *Encyclopedia of Geographic Information Science*, edited by Karen K. Kemp, 409–12. Los Angeles: SAGE Publications, 2008. <https://doi.org/https://doi.org/10.4135/9781412953962>.
- Weaver, Robert C. "Chicago: A City of Covenants." *The Crisis*, February 28, 1946.